California Consents

KAISER FOUNDATION HOSPITALS PARTICIPANT'S NAME_____

SOUTHERN CALIFORNIA PERMANENTE MEDICAL GROUP MR # _____

INFORMED CONSENT TO PARTICIPATE IN RESEARCH STUDY OF DIABETES INCIDENCE, COMPLICATIONS, AND QUALITY OF CARE SEARCH FOR DIABETES IN YOUTH (SEARCH), PHASE 3

Parent/Guardian Consent for Cohort Visit
For Persons with Diabetes less than 18 years of age

SPONSOR: Centers for Disease Control and Prevention

INVESTIGATOR: Jean M. Lawrence, ScD, MPH, MSSA
Kaiser Permanente Southern California
Department of Research & Evaluation
100 S. Los Robles, 2nd Floor
Pasadena CA 91101

TELEPHONE: (626) 564-3106

Your child is being invited to be in a research study. The purpose of this form is to give you detailed information about this study. Our goal is for you to understand:

- the reason we are doing the study,
- what will happen to your child if you decide to be in the study, and
- what will happen to your child if you decide not to be in the study.

You can ask the study staff any questions at any time. You can take this form home to think about the study or talk to family and friends about it.

Your doctor or health care provider may be working on this research study. He or she is interested in your healthcare as well as the conduct of this study. If that makes you feel the doctor can't be objective about the best care for you, you may ask for another doctor or staff member who is not involved in this research.

Kaiser Permanente is being reimbursed by the study sponsor, Centers for Disease Control and Prevention, to conduct this study.

PURPOSE AND BACKGROUND

The purpose of this research study being conducted by Kaiser Permanente, and in four other locations in the United States, is to improve our understanding of the incidence, natural history, complications, and quality of care for children, adolescents, and young adults with diabetes. You and your child were asked to take part in the SEARCH study because your child has diabetes. Dr. Jean Lawrence is the lead investigator for this study for Kaiser Permanente. This study is sponsored by the Centers for Disease Control and the National Institute of Diabetes and Digestive and Kidney Diseases.

Diabetes is the third most common life-long disease in people under 20 years of age. The total number of persons with diabetes in this age group is increasing. In addition, types of diabetes that have not been seen in young people are now being seen. These changes have resulted in gaps in knowledge about the total number of persons and types of diabetes in the United States, the type of care young people with diabetes receive, and the effect diabetes has on their lives. This research study will collect information to answer these questions.

This study will include over 5,000 children and young adults with diabetes who were members of Kaiser Permanente Southern California when they were diagnosed with diabetes. A member of the SEARCH research team has discussed the requirements for participating in this study with you and your child. Before agreeing to participate in this research study, it is important that you and your child read and understand this form or have a member of the study staff read it to you.

If you or your child have personal, religious, cultural, or ethical beliefs that you think might limit the types of tests you would agree to have your child receive, please discuss them fully with your/your child's physicians or appropriate members of the research team before entering this study.

This consent form may contain some words that are not familiar to you or to your child. Please discuss any questions you or your child may have about this study with the research staff members before you sign this form.

STUDY PROCEDURES

This visit includes a brief physical exam, collecting blood and urine samples, being tested for various complications associated with diabetes and completing several questionnaires. You and your child can agree to participate in all or only some parts of the study.

A research team member has/will set up an appointment for your child. The appointment will be in the morning or early afternoon. Your child will come to the appointment after not having anything to eat or drink other than water for 10 hours. Your child will not take his or her usual diabetes medications until after his or her blood has been drawn. The study visit will take approximately 5-6hours.

PHYSICAL EXAMINATION

The physical examination includes measurements of height, weight, waist, heart rate, blood pressure, and examination of the skin on the neck. The time to complete this part of the visit is approximately 30 minutes. If your child requests numbing cream before his or her blood is drawn, it will add about 30 minutes to the visit.

COLLECTION OF BLOOD AND URINE SAMPLES

Blood will be taken to measure blood sugar, hemoglobin Alc (a measure of long-term blood sugar control), C-peptide (a measure of internal insulin production), different types of cholesterol (fat), and diabetes autoantibodies (markers in the blood for type 1 diabetes). Two genetic markers for diabetes (HLA and ZNT8) will also be tested. The total amount of blood drawn for these tests is based on your child's weight but will not exceed 3 tablespoons.

Before your scheduled appointment, you were mailed a container with instructions on how to collect a sample of your child's urine when your child wakes up in the morning. You were asked to bring this container of urine with you on the day of your child's visit. Your child's urine will be tested for microalbumin (small particles of protein) to see how well his or her kidneys are working.

Another urine sample will requested at the day of your child's visit and will be tested to see if diabetes is affecting your child's kidneys. After these tests are done, your child will be given a snack and something to drink or you may eat food that you brought from home. After the snack , your child will take his or her usual diabetes medicine and have his or her medicines recorded by trained staff.

RELEASE OF TEST RESULTS

The results of tests that may be important to your child's health will be mailed to you once the samples are tested at the laboratory. If your child turns 18 years before the test results become available, the results will only be mailed to your child. Some participants like their child's physician to have copies of these test results as well. Please check one of the two boxes below to give the study permission to release test results to your child's physician if you would like us to do this.

☐ I agree to have the test results sent to my child's physician. _____ Initials

☐ I do not agree to have the test results sent to my child's physician. _____ Initials

SAVING / STORAGE OF BLOOD AND URINE

If you agree, your child's blood and urine will be saved for the duration of the study and used in the future as new tests are developed to learn more about the types of diabetes and when someone has or is at risk to get the complications of diabetes. If the results of the tests affect your child's health, you will be informed of the test results.

☐ I agree to have my child's blood and urine saved and used in the future for new tests as they are developed to learn more about the types of diabetes and the risk of developing the complications of diabetes. _____ Initials

☐ I do not agree to have my child's blood or urine saved and used in the future for new tests as they are developed to learn more about the types of diabetes and the risk of developing the complications of diabetes. _____ Initials

SAVING / STORAGE OF DNA

DNA is found in all cells. DNA makes up genes. Genes determine height, hair color, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences may be why some people are more likely to get certain diseases like diabetes.

If you agree, DNA will be saved and used in the future as new tests are developed to tell your child's type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and being overweight. DNA is found in all of your child's cells. DNA makes up your child's genes. Your child's genes decide how tall your child is, what color hair you child has, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences may explain why some people are more likely to get certain diseases like diabetes. The total amount of blood required is approximately 1¾ teaspoons (8.5 cc).

☐ I agree to have my child's DNA stored for the duration of the study and used in the future as new tests are developed to define the type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and obesity. _____ Initials

☐ I do not agree to have my child's DNA stored for the duration of the study and used in the future as new tests are developed to define the type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and obesity. _____ Initials

If you agree, a sample of your child's DNA may be analyzed to identify a complete picture of your child's genetic makeup. This information would then be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease, and may lead to better methods to select the best treatment options. When your child's DNA and clinical information are sent to the storage center, no personal information will be included, such as your child's name, date of birth, or address. Thus, researchers will not be able to link this information back to your child.

☐ I agree to have the results of my child's DNA analysis sent to a national storage center.
_____ Initials

☐ I do not agree to have the results of my child's DNA analysis sent to a national storage center.
_____ Initials

PHOTOGRAPHS OF YOUR CHILD'S EYES

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will be taking two pictures of each of your child's eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for any unusual changes.

Your child will be asked to sit in a darkened room in front of a special camera with his or her chin in a chin rest. After your child's pupils have dilated, we will take two photographs of the back of each eye (the retinas). No drops will be put in your child's eyes; and the camera will not touch your child's eyes. After each picture is taken, your child may see a blue or red spot that will disappear within 5 to 7 minutes but this will not cause damage to your child's eye. We will pause for approximately 3-5 minutes between photographs to allow your child's eyes time to re-adjust so your child's pupils will dilate once again.

You will also be asked for the name and phone number of your child's eye doctor, and whether or not your child has ever had laser treatments on the back of his or her eyes. Doing the eye photographs will take about 20 minutes. We will send you the results of your child's eye photographs.

☐ I agree to have photos taken of my child's eyes today. _____ Initials

☐ I agree to have photos taken of my child's eyes on a future date when I can schedule an appointment in a location where there is a retinal camera. _____ Initials

☐ I do not agree to have photos taken of my child's eyes. _____ Initials

NERVE TEST

Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking your child to complete a short questionnaire, doing a physical examination of your child's feet, and doing an electrocardiogram (ECG) test. We will ask your child to answer 15 questions about foot sensation including pain, numbness, and temperature sensitivity. We will examine your child's feet to measure his or her ability to feel vibrations, his or her reflexes, and his or her ability to feel light touches to the feet. The examiner will test your child's vibration sense by placing a vibrating instrument on your child's big toe. The examiner will use a rubber "hammer" to test the reflexes in your child's ankle. To test your child's sense of touch, the examiner will touch your child's toe several times with a thin piece of plastic. The nerve tests will take about 10 minutes.

HEART RATE VARIABLITY TEST

The Heart Rate Variability test, or HRV, is a tool used to assess the health of heart nerves. The test uses an electrocardiogram. This is a machine that doctors routinely use to study the heart; your child's doctor may have used it with your child before. It involves placing three patches on your child's chest/abdomen or legs/arms. These patches will record your child's heartbeat and blood pressure. The examiner will also take your child's blood pressure with a blood pressure cuff at least once during this exam. During the exam, your child will simply breathe normally for ten minutes while the electrocardiogram records his or her heartbeat and blood pressure. The electrocardiogram machine will also record your child's heartbeat and blood pressure during this minute and compare it to his or her heartbeat and blood pressure at rest. This test should take about 20 minutes.

BLOOD VESSEL TEST

We will perform an arterial stiffness test to measure how your child's blood vessels function. Your child will be asked to remove his or her outer clothing and to put on a gown if he or she is not wearing shorts. A trained member of the research team will check your child's pulse on the upper, inner thigh, but will not expose your child's private parts. At your or your child's request, you or a chaperone will be present during this test.

After a 5-minute rest period, your child's blood pressure and heart rate will be measured using a blood pressure cuff placed on the upper arm. This test will be repeated 3 times.

A staff member will then measure the distance from your child's neck to the bottom of his or her sternum (breastbone), from the sternum to the wrist, from the sternum to the top of the leg, and from your child's thigh to his or her foot. Electrode pads (special stickers that help transmit information) will then be placed on your child's chest or on your child's legs/arms.

Your child's wrist will be touched with a small instrument shaped like a pen, and the stiffness of his or her blood vessels will be measured. This instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is

shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test will be repeated 3 times.

Then the same pen-shaped instrument will be touched on the side of your child's neck, the top of his or her leg, and on his or her foot to measure the speed of the pulse. This test will be repeated 3 times.

This test will take about one hour.

All of these tests are designed to be short, simple, and painless. They are tests that doctors use every day, and they are not dangerous. However, if you or your child feels uncomfortable at any time during any of these tests, please tell the person doing the tests and he or she will stop.

QUESTIONNAIRES

You may have received some questionnaires in the mail before your child's visit. If you have, we will collect the completed surveys from you during the visit. You and your child will be asked a written series of questions about current medications, personal and family medical history, medical care, diabetes training, education, family income level, health insurance, the cost of diabetes supplies, and how your child takes care of his or her diabetes.

Additional Questions

Young people aged 10 years or older will also be asked to answer a separate series of questions about physical activity, smoking, alcohol, eating, and depression. This information will not be shared with you unless health issues are identified that need to be treated. The reason why this information will not be shared is to increase the likelihood that your child will answer the questions honestly.

☐ I do **give** permission for my child to complete this series of questions.

_____ Initials

☐ I **do not** give permission for my child to complete this series of questions.
_____ Initials

If your child is 8 years of age or older, she or he will be asked to complete a short form about his or her stage of physical development. The form shows pictures of how the body develops.

☐ I **agree** to have my child complete a short form on physical development.

_____ Initials

☐ I **do not agree** to have my child complete a short form on physical development

____ Initials

MEDICAL RECORDS REVIEW

It may be necessary to review your child's diabetes-related inpatient and outpatient medical records. These records may include but are not limited to visit notes, progress notes, discharge summaries, consultation notes, medication records, history and physical, emergency room records, and laboratory and other test results.

CONTACT BY THE SEARCH STUDY IN THE FUTURE

The researchers conducting the SEARCH study may wish to call you as new studies are developed to let you know about these new studies and ask you if your child would like to participate. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to have your child take part in any future study. If a future study is developed after your child turns 18 years, we may contact your child directly.

☐ **I agree** to be called in the future. _____ Initials

☐ **I do not agree** to be called in the future. _____ Initials

RISKS, DISCOMFORTS, AND PRECAUTIONS

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, blood will be drawn by experienced medical staff and, if your child wishes, a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

The blood tests require that your child not eat any food overnight (the child may drink water). In order to prevent low or high blood sugars, your child's blood sugar will be checked by finger-stick and diabetes medicine will be given as needed to control your child's blood sugar.

Some of the tests will look for the presence of or risk of developing the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you or your child anxious. If this happens, you or your child will be given referrals to local mental health professionals for evaluation and treatment.

There are no known risks associated with taking a photograph of the eye. Although your child will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last.

There are no majors risks associated with the nerve test procedures. All of the devices

used (a reflex hammer, a tuning fork, and a monofilament) are used daily in doctors' offices. They may, however, cause a slight agitation or discomfort in some people.

There are no major risks associated with the heart rate variability procedure. No electrical current is sent through the body, so there is no risk of electrical shock. Application of the patches may feel cold, and in very rare cases, a patient may develop a skin rash or irritation where the patches were applied. The procedure may cause a slight agitation in some patients.

This research study includes genetic testing of blood samples that we ask you to provide. You are free to refuse to take part in this genetic testing. It is your choice. A federal law called the Genetic Information Nondiscrimination Act (GINA) limits the use of genetic information by employers with 15 or more employees and by health insurers and group or individual health plans. GINA generally makes it illegal to discriminate against you based on your genetic information. If you agree to have your child take part in genetic testing, the genetic information we collect or obtain through this research will not affect your child's eligibility for future medical care, membership in Kaiser Foundation Health Plan, or the cost of your premiums or benefits.

The researchers have taken steps to minimize the risks of this study, and it is not expected that your child will experience any adverse effects. However, your child may still encounter problems or side effects. If this happens, please tell the researchers about any injuries, side effects, or other problems that your child has during this study. You should also tell your child's regular doctors.

BENEFITS

There are no direct benefits to you or your child from participating in this study. However, this study may more clearly define your child's type of diabetes and the presence or absence of some of the complications of diabetes. If you give permission, this information will be shared with your child's health care professionals and may allow them to change the management of your child's diabetes and any complications that may be present.

ALTERNATIVES

There are no treatments involved in this study, and participation is entirely voluntary. You may choose not to participate or not to have your child participate in this study. Your decision to participate or not to participate will not affect your future medical care or your child's future medical care. You may withdraw your child from this study at any time.

COST

There is no cost to you/your child to participate in this study.

COMPENSATION

To reimburse you for your time to complete the Cohort visit, you and your child will receive up to $120.00 in gift certificates. You will receive $30.00 for the pictures of your child's eyes, $30.00 for the heart rate variability and blood vessel test, $20.00 for completing the surveys, $20.00 for completing the physical examination and other tests, and $20 for having your child's blood drawn and urine collected.

CONFIDENTIALITY

A certificate of confidentiality has been issued for this study. Certificates of Confidentiality are issued by the National Institutes of Health (NIH) to protect identifiable research information from forced disclosure. They allow the investigator and others who have access to research records to refuse to disclose identifying information on research participants in any civil, criminal, administrative, legislative, or other proceeding, whether at the federal, state, or local level. By protecting researchers and institutions from being compelled to disclose information that would identify research subjects, Certificates of Confidentiality help achieve the research objectives and promote participation in studies by helping assure confidentiality and privacy to participants.

Under the law, we must report if you tell us you are planning to cause serious harm to yourself or others.

A special number will be assigned to your child upon entering the study. This number will be used instead of your child's name to identify the information and laboratory tests collected during the study. The list containing the special number assigned to your child will be kept in a password-protected database in the Department of Research & Evaluation at Kaiser Permanente Southern California. Thus, no one other than the research staff will be able to link any of the information collected in the study to you or your child.

It is possible that members of the research team might use email to contact you for study purposes, for example to remind you of your child's scheduled visit. We will not do this if you do not give us permission, and we will never put your private health information or your child's in an email. However if you give us permission to contact you using email, Kaiser Permanente cannot guarantee that the message will get to you or that the message will not go to someone else by mistake.

The information from the research study may be presented or published; however, your child will not be identified in such publications. When the study is over, your child's information will be kept in a computer database for a period required by the funding agency and then will be destroyed.

RIGHT TO WITHDRAWAL

You and your child may leave this study at any time. Leaving the study will have no effect on your ability or your child's ability to get medical care or health insurance, nor will it have any effect on the kind of care your health care professionals are giving to you and your child. In order to withdraw from this study, please contact the Principal Investigator whose contact information is on the signature page. If you withdraw your child from this study, no further tests will be done on the stored samples that your child provided. However, survey data and other tests conducted on samples collected at the visit will still be included in the dataset to be used for future studies. You will no longer be contacted to participate in this study.

WHAT DOES MY SIGNATURE ON THIS FORM MEAN?

My signature on this form would mean that I acknowledge:

1. Personal information about me/my child that is collected in this study will be protected to the full extent of the law. No information from this study that could be linked to me will be released without my consent.

2. The results of this study may be reported in articles, books or at meetings. My and my child's identity will not be revealed at any time. Research records will be kept confidential to the extent provided by law. All study records will be kept in a locked room and accessed only by staff working on this research study.

3. Being in this study is my choice. I may decide to have my child leave this study at any time. If I choose not to be in the study or leave the study, it will not affect our insurance benefits or our future medical care at Kaiser Permanente.

4. My child may be asked to leave the study at any time for medical reasons, if the researcher feels that it is in my child's best interest, or if the study is stopped. My child may be withdrawn from the study if I lose my Kaiser Permanente Southern California insurance coverage.

5. My questions regarding this study have been answered. If I have any questions about this study or if my child experiences a study-related injury, I may contact

   Jean M. Lawrence, ScD, MPH, SEARCH Study Principal Investigator
   (626) 564-3106 or Jean.M.Lawrence@kp.org

   If I have any questions about my rights as a research subject, I may contact

Armida Ayala, PhD, Director, Human Research Subjects Protection Office at 626-405-3665 or armida.ayala@kp.org

6. If my child is injured by being in this study, the physicians and/or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals will provide medical care and treatment according to the terms of my plan benefits. These benefits are described in my Evidence of Coverage or Summary Plan Description. I may have to pay co-payments, coinsurance and/or deductibles. No additional financial payment is available.

I have read the entire consent, including the Supplemental HIPAA Authorization and Experimental Subject's Bill of Rights and voluntarily consent to participate in this research study conducted by the physicians or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals.

Your signature shows that the research study has been explained to you and all of your questions have been answered. ***If you still have questions or do not understand what this study is about, do not sign this form.*** Give this form back to the study staff and get more information.

A copy of this signed and dated Informed Consent Form will be given to me for my records

_____
First and Last Name of Parent of Legal Guardian (print)

_____ _____
Signature of Parent or Legal Guardian Date

_____
Child's First and Last Name (print)

_____ _____
Assent of Child Date

AUTHORIZATION TO USE YOUR CHILD'S PRIVATE HEALTH INFORMATION

What is private health information?

Private health information is any information that can be traced back to you or your child. We need your authorization (permission) to use your child's private health information in this research study. The private health information that we will use and share for this study includes:

- Your child's past, present and future health information is used by the SEARCH study but is not disclosed with identifiers;
- Your child's date of birth is used by the SEARCH study and disclosed to collaborating researchers at Wake Forest University;
- Your address is used by the SEARCH study local research staff;
- Your phone number is used by the SEARCH study local research staff;
- Your child's medical record number is used by the SEARCH staff, but it is not disclosed;
- The results of your child's medical tests and lab work done for this research study are disclosed to Wake Forest University but without identifiers. Laboratory tests performed by collaborating researchers at the University of Washington and the genetics laboratory in the United Kingdom are completed without identifiers.

Who else will see my child's information?

This information may be shared with the following:

- The study sponsor, the Centers for Disease Control and Prevention and National Institute of Diabetes and Digestive and Kidney Diseases
- The Kaiser Permanente Southern California Institutional Review Board (IRB)
- Kaiser Permanente Principal Investigator, co-Investigators, research project manager and other research staff (research assistants and associates);

Once we have shared your child's information we cannot be sure that it will stay private. If ***you*** share your child's information with people outside the research team, it will no longer be private. Your child's name will not be

used in any report that is written. Your child's name will not be used in any report or publication that is written.

How long will Kaiser Permanente researchers and the affiliated researchers noted above use and share my child's information?

Your child's information will be used until the research is completed. This authorization will expire on December 31, 2015.

What if I change my mind about sharing my child's research information?

If you decide not to share your child's information anymore:

- The research team can continue to use any of the private information that they already have.
- You will no longer be contacted as part of this research study.
- Decisions about sharing your child's research information will not affect your child's medical care or health care coverage.
- You must write to the study Principal Investigator and tell her that you no longer want to share your child's information. Write to the study principal investigator at:

Jean M. Lawrence, ScD, MPH
Department of Research and Evaluation
Southern California Permanente Medical Group
100 South Los Robles, 2nd Floor
Pasadena, California 91101

Do I have the right to see and copy my child's research information?

The results of your child's laboratory tests will be sent to you (except for genetic test results other than monogenic forms of diabetes) and, if you have provided written authorization, copies of the test results sent to you will also be sent to your child's health care provider, including specific genetic test results for monogenic diabetes. In addition, you and your physician must be notified if your child's laboratory test results are above alert values described in the study protocol.

If you agree to share your child's information, you should sign this form below. You will be given a copy of this form.

I agree to share my child's information as described in this form

_____ _____

Print your name Date

_____

Sign your name

If you have questions or concerns about your privacy or your child's privacy and the use of your child's personal medical information, contact the investigator at the telephone number listed in the consent form.

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

Any person who is requested to consent to participate as a subject in a research study involving a medical experiment, or who is requested to consent on behalf of another, has the right to:

1. Be informed of the nature and purpose of the experiment.

2. Be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be used.

3. Be given a description of any attendant discomforts and risks reasonably to be expected from the experiment.

4. Be given an explanation of any benefits to the subject reasonably to be expected from the experiment, if applicable.

5. Be given a disclosure of any appropriate alternative procedures, drugs, or devices that might be advantageous to the subject, and their relative risks and benefits.

6. Be informed of the avenues of medical treatment, if any, available to the subject after the experiment if complications should arise.

7. Be given an opportunity to ask any questions concerning the experiment or the procedures involved.

8. Be instructed that consent to participate in the medical experiment may be withdrawn at any time, and the subject may discontinue participation in the medical experiment without prejudice.

9. Be given a copy of a signed and dated written consent form when one is required.

10. Be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion, or undue influence on the subject's decision.

Original – Chart or Study Copy - Patient

KAISER FOUNDATION HOSPITALS PARTICIPANT'S NAME_____

SOUTHERN CALIFORNIA PERMANENTE MEDICAL GROUP MR # _____

INFORMED CONSENT TO PARTICIPATE IN RESEARCH STUDY OF DIABETES INCIDENCE, COMPLICATIONS, AND QUALITY OF CARE SEARCH FOR DIABETES IN YOUTH (SEARCH), PHASE 3

Consent for Cohort Visit
For Persons with Diabetes 18 years of age and older

SPONSOR: **Centers for Disease Control and Prevention**

INVESTIGATOR: **Jean M. Lawrence, ScD, MPH, MSSA**
Kaiser Permanente Southern California
Department of Research & Evaluation
100 S. Los Robles, 2nd Floor
Pasadena CA 91101

TELEPHONE: **(626) 564-3106**

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This study will include over 5,000 children and young adults with diabetes who were members of Kaiser Permanente Southern California when they were diagnosed with diabetes. A member of the SEARCH research team has discussed the requirements for participating in this study with you. Before agreeing to participate in this research study, it is important that you read and understand this form or have a member of the study staff read it to you.

If you have personal, religious, cultural, or ethical beliefs that you think might limit the types of tests you would agree to have, please discuss them fully with your physicians or appropriate members of the research team before entering this study.

This consent form may contain some words that are not familiar to you. Please discuss any questions you may have about this study with the research staff members before you sign this form.

STUDY PROCEDURES

This visit includes a brief physical exam, collecting blood and urine samples, being tested for various complications associated with diabetes and completing several questionnaires. You can agree to participate in all or only some parts of the study.

A research team member has/will set up an appointment for you. The appointment will be in the morning or early afternoon. You will come to the appointment after not having anything to eat or drink other than water for 10 hours. You will not take your usual diabetes medications until after your blood has been drawn. The study visit will take approximately 5-6 hours.

PHYSICAL EXAMINATION

The physical examination includes measurements of height, weight, waist, heart rate, blood pressure, and examination of the skin on the neck. The time to complete this part of the visit is approximately 30 minutes. If you request numbing cream before your blood is drawn, it will add about 30 minutes to the visit.

COLLECTION OF BLOOD AND URINE SAMPLES

Blood will be taken to measure blood sugar, hemoglobin Alc (a measure of long-term blood sugar control), C-peptide (a measure of internal insulin production), different types of cholesterol (fat), and diabetes autoantibodies (markers in the blood for type 1 diabetes). Two genetic markers for diabetes (HLA and ZNT8) will also be tested. The total amount of blood drawn for these tests is based on your weight but will not exceed 1.5 tablespoons.

Before your scheduled appointment, you were mailed a container with instructions on how to collect a sample of your urine sample when you first wake up in the morning. You were asked to bring this container of urine with you on the day of your visit. Your urine will be tested for microalbumin (small particles of protein) to see how well your kidneys are working.

Another urine sample will requested at the day of your visit and will be tested to see if diabetes is affecting your kidneys. After these tests are done, you will be given a snack and something to drink or you may eat food that you brought from home. After the snack, you will take your usual diabetes medicine and have your medicines recorded by trained staff.

RELEASE OF TEST RESULTS

The results of tests that may be important to your health will be mailed to you once the samples are tested at the laboratory. Some participants like their physician to have copies of these test results as well. Please check one of the two boxes below to give the study permission to release test results to your physician if you would like us to do this.

☐ I agree to have the test results sent to my physician. _____ Initials

☐ I do not agree to have the test results sent to my physician. _____ Initials

SAVING / STORAGE OF BLOOD AND URINE

If you agree, your blood and urine will be saved for the duration of the study and used in the future as new tests are developed to learn more about the types of diabetes and when someone has or is at risk to get the complications of diabetes. If the results of the tests affect your health, you will be informed of the test results.

☐I agree to have my blood and urine saved and used in the future for new tests as they are developed to learn more about the types of diabetes and the risk of developing the complications of diabetes. _____ Initials

☐I do not agree to have my blood or urine saved and used in the future for new tests as they are developed to learn more about the types of diabetes and the risk of developing the complications of diabetes. _____ Initials

SAVING / STORAGE OF DNA

DNA is found in all cells. DNA makes up genes. Genes determine height, hair color, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences may be why some people are more likely to get certain diseases like diabetes.

If you agree, DNA will be saved and used in the future as new tests are developed to tell your type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and being overweight. DNA is found in all of your cells. DNA makes up your genes. Your genes decide how tall you are, what color hair you have, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences may explain why some people are more likely to get certain diseases like diabetes. The total amount of blood required is approximately 1¾ teaspoons (8.5 cc).

☐I agree to have my DNA stored for the duration of the study and used in the future as new tests are developed to define the type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and obesity. _____ Initials

☐I do not agree to have my DNA stored for the duration of the study and used in the future as new tests are developed to define the type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and obesity. _____ Initials

If you agree, a sample of your DNA may be analyzed to identify a complete picture of your genetic makeup. This information would then be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease, and may lead to better methods to select the best treatment options. When your DNA and clinical information are sent to the storage center, no personal information will be included, such as your name, date of birth, or address. Thus, researchers will not be able to link this information back to you.

☐ I agree to have the results of my DNA analysis sent to a national storage center.
_____ Initials

☐ I do not agree to have the results of my DNA analysis sent to a national storage center.
_____ Initials

PHOTOGRAPHS OF YOUR EYES

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will be taking two pictures of each of your eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for any unusual changes.

You will be asked to sit in a darkened room in front of a special camera with your chin in a chin rest. After your pupils have dilated, we will take two photographs of the back of each eye (the retinas). No drops will be put in your eyes; and the camera will not touch your eyes. After each picture is taken, you may see a blue or red spot that will disappear within 5 to 7 minutes but this will not cause damage to your eye. We will pause for approximately 3-5 minutes between photographs to allow your eyes time to re-adjust to the darkened room so your pupils will dilate once again.

You will also be asked for the name and phone number of your eye doctor, and whether or not you have ever had laser treatments on the back of your eyes. Doing the eye photographs will take about 20 minutes. We will send you the results of your eye photographs.

☐ I agree to have photos taken of my eyes today. _____ Initials

☐ I agree to have photos taken of my eyes on future date when I can schedule an appointment in a location where there is a retinal camera. _____ Initials

☐ I do not agree to have photos taken of my eyes. _____ Initials

NERVE TEST

Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking you to complete a short questionnaire, doing a physical examination of your feet, and doing an electrocardiogram (ECG) test. We will ask you to answer 15 questions about foot sensation including pain, numbness, and temperature sensitivity. We will examine your feet to measure your ability to feel vibrations, your reflexes, and your ability to feel light touches to the feet. The examiner will test your vibration sense by placing a vibrating instrument on your big toe. The examiner will use a rubber "hammer" to test the reflexes in your ankle. To test your sense of touch, the examiner will touch your toe several times with a thin piece of plastic. The nerve tests will take about 10 minutes.

HEART RATE VARIABLITY TEST

The Heart Rate Variability test, or HRV, is a tool used to assess the health of heart nerves. The test uses an electrocardiogram test. This is a machine that doctors routinely use to study the heart; your doctor may have used it with you before. It involves placing three patches on your chest/abdomen or legs/arms. These patches will record your heartbeat and blood pressure. The examiner will also take your blood pressure with a blood pressure cuff at least once during this exam. During the exam, you will breathe normally for ten minutes while the electrocardiogram records your heartbeat and blood pressure. The electrocardiogram machine will also record your heartbeat and blood pressure during this minute and compare it to your heartbeat and blood pressure at rest. This test should take about 20 minutes.

BLOOD VESSEL TEST

We will perform an arterial stiffness test to measure how your blood vessels function. You will be asked to remove your outer clothing and to put on a gown if you are not wearing shorts. A trained member of the research team will check your pulse on the upper, inner thigh but will not expose your private parts. At your request, a chaperone will be present during this test.

After a 5-minute rest period, your blood pressure and heart rate will be measured, using a blood pressure cuff placed on the upper arm. This test will be repeated 3 times.

A staff member will then measure the distance from your neck to the bottom of your sternum (breastbone), from the sternum to the wrist, from the sternum to the top of the leg, and from your thigh to your foot. Electrode pads (special stickers that help transmit information) will then be placed on your chest or on your legs/arms.

Your wrist will be touched with a small instrument shaped like a pen, and the stiffness of your blood vessels will be measured. This instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test will be repeated 3 times.

Then the same pen-shaped instrument will be touched on the side of your neck, the top of your leg, and on your foot to measure the speed of the pulse. This test will be repeated 3 times.

This test will take about one hour.

All of these tests are designed to be short, simple, and painless. They are tests that doctors use every day, and they are not dangerous. However, if you feel uncomfortable at any time during any of these tests, please tell the person doing the tests and he or she will stop.

QUESTIONNAIRES

You may have received some questionnaires in the mail before your visit. If you have, we will collect the completed surveys from you during the visit. You will be asked a written series of questions about current medications, personal and family medical

history, medical care, diabetes training, education, family income level, health insurance, the cost of diabetes supplies, and how you take care of your diabetes. You will also be asked to answer questions about your physical activity, smoking, alcohol, eating, and depression. This information will not be shared with you unless health issues are identified that need to be treated.

MEDICAL RECORDS REVIEW

It may be necessary to review your diabetes-related inpatient and outpatient medical records. These records may include, but are not limited to visit notes, progress notes, discharge summaries, consultation notes, medication records, history and physical, emergency room records, and laboratory and other test results.

CONTACT BY THE SEARCH STUDY IN THE FUTURE

The researchers conducting the SEARCH study may wish to call you as new studies are developed to let you know about these new studies and ask you if you would like to participate. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study.

☐ I agree to be called in the future. _____ Initials

☐ I do not agree to be called in the future. _____ Initials

RISKS, DISCOMFORTS, AND PRECAUTIONS

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, blood will be drawn by experienced medical staff and, if you wish, a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

The blood tests require that you do not eat any food overnight (you may drink water). In order to prevent low or high blood sugars, your blood sugar will be checked by finger-stick and diabetes medicine will be given as needed to control your blood sugar.

Some of the tests will look for the presence of or risk of developing the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you anxious. If this happens, you will be given referrals to local mental health professionals for evaluation and treatment.

There are no known risks associated with taking a photograph of the eye. Although you will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last.

There are no majors risks associated with the nerve test procedures. All of the devices used (a reflex hammer, a tuning fork, and a monofilament) are used daily in doctors' offices. They may, however, cause a slight agitation or discomfort in some people.

There are no major risks associated with the heart rate variability procedure. No electrical current is sent through the body, so there is no risk of electrical shock. Application of the patches may feel cold, and in very rare cases, a patient may develop a skin rash or irritation where the patches were applied. The procedure may cause a slight agitation in some patients.

This research study includes genetic testing of blood samples that we ask you to provide. You are free to refuse to take part in this genetic testing. It is your choice. A federal law called the Genetic Information Nondiscrimination Act (GINA) limits the use of genetic information by employers with 15 or more employees and by health insurers and group or individual health plans. GINA generally makes it illegal to discriminate against you based on your genetic information. If you agree to take part in genetic testing, the genetic information we collect or obtain through this research will not affect your eligibility for future medical care, membership in Kaiser Foundation Health Plan, or cost of your premiums or benefits.

The researchers have taken steps to minimize the risks of this study, and it is not expected that you will experience any adverse effects. However, you may still encounter problems or side effects. If this happens, please tell the researchers about any injuries, side effects, or other problems that you have during this study. You should also tell your regular doctors.

BENEFITS

There are no direct benefits to you from participating in this study. However, this study may more clearly define your type of diabetes and the presence or absence of some of the complications of diabetes. If you give permission, this information will be shared with your health care professionals and may allow them to change the management of your diabetes and any complications that may be present.

ALTERNATIVES

There are no treatments involved in this study, and participation is entirely voluntary. You may choose not to participate. Your decision to participate or not to participate will not affect your future medical care. You may withdraw from this study at any time.

COST

There is no cost to you to participate in this study.

COMPENSATION

To reimburse you for your time to complete the Cohort visit, you will receive up to $120.00 in gift certificates. You will receive $30 for the pictures of your eyes, $30.00 for the heart rate variability and blood vessel test, $20.00 for completing the surveys,

$20.00 for completing the physical examination and other tests, and $20.00 for having your blood drawn and urine collected.

CONFIDENTIALITY

A certificate of confidentiality has been issued for this study. Certificates of Confidentiality are issued by the National Institutes of Health (NIH) to protect identifiable research information from forced disclosure. They allow the investigator and others who have access to research records to refuse to disclose identifying information on research participants in any civil, criminal, administrative, legislative, or other proceeding, whether at the federal, state, or local level. By protecting researchers and institutions from being compelled to disclose information that would identify research subjects, Certificates of Confidentiality help achieve the research objectives and promote participation in studies by helping assure confidentiality and privacy to participants.

Under the law, we must report if you tell us you are planning to cause serious harm to yourself or others.

A special number was assigned to you when you entered the study. This number will be used instead of your name to identify the information and laboratory tests collected during the study. The list containing the special number assigned to you is kept in a password-protected database in the Department of Research & Evaluation at Kaiser Permanente Southern California. Thus, no one other than the research staff will be able to link any of the information collected in the study to you.

It is possible that members of the research team might use email to contact you for study purposes, for example to remind you of your scheduled visit. We will not do this if you do not give us permission, and we will never put your private health information in an email. However if you give us permission to contact you using email, Kaiser Permanente cannot guarantee that the message will get to you or that the message will not go to someone else by mistake.

The information from the research study may be presented or published; however, you will not be identified in such publications. When the study is over, your information will be kept in a computer database for a period required by the funding agency and then will be destroyed.

RIGHT TO WITHDRAWAL

You may leave this study at any time. Leaving the study will have no effect on your ability to get medical care or health insurance nor will it have any effect on the kind of care your health care professionals are giving to you. In order to withdraw from this study, please contact the Principal Investigator whose contact information is on the signature page. If you withdraw from this study, no further tests will be done on the stored samples that you provided. However, survey data and other tests conducted on

samples collected at the visit will still be included in the dataset to be used for future studies. You will no longer be contacted to participate in this study.

The Centers for Medicare and Medicaid Services requires compliance with Section 111 of the Medicare, Medicaid and SCHIP Extension Act of 2007 (the MMSEA) which amended the Medicare Secondary Payer statute. Section II J requires sponsors of clinical trials to report payments made to Medicare beneficiaries for treatment, complications, and injuries that arise from clinical trials. When required, information about Medicare beneficiaries' participation in a research study, medical services received, Medicare claims, and other information, will be released to the Centers for Medicare and Medicaid Services and its agents and/or contractors. Information disclosed may be re-disclosed by the recipient and may no longer be protected by law.

WHAT DOES MY SIGNATURE ON THIS FORM MEAN?

My signature on this form would mean that I acknowledge:

1. Personal information about me that is collected in this study will be protected to the full extent of the law. No information from this study that could be linked to me will be released without my consent.

2. The results of this study may be reported in articles, books or at meetings. My identity will not be revealed at any time. Research records will be kept confidential to the extent provided by law. All study records will be kept in a locked room and accessed only by staff working on this research study.
3. I will be notified if there is important new information discovered during the course of the study.

4. Being in this study is my choice. I may decide to leave this study at any time. If I choose not to be in the study or leave the study, it will not affect my insurance benefits or my future medical care at Kaiser Permanente.

5. I may be asked to leave the study at any time for medical reasons, if the researcher feels that it is in my best interest or if the study is stopped.

6. My questions regarding this study have been answered. If I have any questions about this study of if I experience a study-related injury, I may contact

   Jean M. Lawrence, ScD, MPH, SEARCH Study Principal Investigator
   (626) 564-3106 or Jean.M.Lawrence@kp.org

   If I have any questions about my child's rights as a research subject, I may contact

Armida Ayala, PhD, Director, Human Research Subjects Protection Office at 626-405-3665 or armida.ayala@kp.org

7. If I am injured by being in this study, the physicians and/or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals will provide medical care and treatment according to the terms of my plan benefits. These benefits are described in my Evidence of Coverage or Summary Plan Description. I may have to pay co-payments, coinsurance and/or deductibles. No additional financial payment is available

I have read the entire consent, including the Supplemental HIPAA Authorization and Experimental Subject's Bill of Rights and voluntarily consent to participate in this research study conducted by the physicians or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals.

Your signature shows that the research study has been explained to you and all of your questions have been answered. ***If you still have questions or do not understand what this study is about, do not sign this form***. Give this form back to the study staff and get more information.

A copy of this signed and dated Informed Consent Form will be given to me for my records

_____
First and Last Name of Participant (print)

_____ _____
Date Signature of Participant

_____ _____
Date Name of Person Obtaining Consent

AUTHORIZATION TO USE YOUR PRIVATE HEALTH INFORMATION

What is private health information?

Private health information is any information that can be traced back to you. We need your authorization (permission) to use your private health information in this research study. The private health information that we will use and share for this study includes:

- Your past, present and future health information is used by the SEARCH study but is not disclosed with identifiers;
- Your date of birth is used by the SEARCH study and disclosed to collaborating researchers at Wake Forest University and our contractor, Anderson, Niebuhr & Associates, Inc. ;
- Your address is used by the SEARCH study local research staff and disclosed to Anderson, Niebuhr & Associates, Inc. to send out letters and cards for the study only;
- Your phone number is used by the SEARCH study local research staff and disclosed to Anderson, Niebuhr & Associates, Inc. only;
- Your medical record number is used by the SEARCH staff, but it is not disclosed;
- The results of your medical tests and lab work done for this research study are disclosed to Wake Forest University but without identifiers. Laboratory tests performed by collaborating researchers at the University of Washington and the genetics laboratory in the United Kingdom are completed without identifiers.

Who else will see my information?

This information may be shared with the following:

- The study sponsor, the Centers for Disease control and Prevention and National Institute of Diabetes and Digestive and Kidney Diseases
- The Kaiser Permanente Southern California Institutional Review Board (IRB)
- Kaiser Permanente Principal Investigator, co-Investigators, research project manager and other research staff (research assistants and associates);

Once we have shared your information we cannot be sure that it will stay private. If ***you*** share your information with people outside the research team, it will no longer be private. Your name will not be used in any report that is written. Your name will not be used in any report or publication that is written.

How long will Kaiser Permanente researchers and the affiliated researchers noted above use and share my information?

Your information will be used until the research is completed. This authorization will expire on December 31, 2015.

What if I change my mind about sharing my research information?

If you decide not to share your information anymore:

- The research team can continue to use any of the private information that they already have.
- You will no longer be contacted as part of this research study.
- Decisions about sharing your research information will not affect your medical care or health care coverage.
- You must write to the study Principal Investigator and tell her that you no longer want to share your information. Write to the study principal investigator at:

Jean M. Lawrence, ScD, MPH
Department of Research and Evaluation
Southern California Permanente Medical Group
100 South Los Robles, 2nd Floor
Pasadena, California 91101

Do I have the right to see and copy my research information?

The results of your laboratory tests will be sent to you (except for genetic test results other than monogenic forms of diabetes) and, if you have provided written authorization, copies of the test results sent to you will also be sent to your health care provider, including specific genetic test results for monogenic diabetes. In addition, you and your physician must be notified if your laboratory test results are above alert values described in the study protocol.

If you agree to share your information, you should sign this form below. You will be given a copy of this form.

I agree to share my information as described in this form

_____ _____

Print your name Date

_____

Sign your name

If you have questions or concerns about your privacy and the use of your personal medical information, contact the investigator at the telephone number listed in the consent form.

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

Any person who is requested to consent to participate as a subject in a research study involving a medical experiment, or who is requested to consent on behalf of another, has the right to:

1. Be informed of the nature and purpose of the experiment.

2. Be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be used.

3. Be given a description of any attendant discomforts and risks reasonably to be expected from the experiment.

4. Be given an explanation of any benefits to the subject reasonably to be expected from the experiment, if applicable.

5. Be given a disclosure of any appropriate alternative procedures, drugs, or devices that might be advantageous to the subject, and their relative risks and benefits.

6. Be informed of the avenues of medical treatment, if any, available to the subject after the experiment if complications should arise.

7. Be given an opportunity to ask any questions concerning the experiment or the procedures involved.

8. Be instructed that consent to participate in the medical experiment may be withdrawn at any time, and the subject may discontinue participation in the medical experiment without prejudice.

9. Be given a copy of a signed and dated written consent form when one is required.

10. Be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion, or undue influence on the subject's decision.

Original – Chart or Study Copy - Patient

KAISER FOUNDATION HOSPITALS PATIENT'S NAME_____

SOUTHERN CALIFORNIA PERMANENTE MEDICAL GROUP M.R. #_____

INFORMED CONSENT TO PARTICIPATE IN RESEARCH STUDY ON DIABETES INCIDENCE, COMPLICATIONS, AND QUALITY OF CARE SEARCH FOR DIABETES IN YOUTH (SEARCH), PHASE 3

Consent for Retinal Photographs
(If done in a separate visit before the Cohort Visit)
For persons ≥ 18 years with diabetes ("you") or parents/guardians of children < 18 years ("your child")

SPONSOR: **Centers for Disease Control and Prevention**

INVESTIGATOR: **Jean M. Lawrence, ScD, MPH, MSSA**
Kaiser Permanente Southern California
Department of Research & Evaluation
100 S. Los Robles, 2nd Floor
Pasadena CA 91101

TELEPHONE: **(626) 564-3106**

You and your child are being invited to be in a research study. The purpose of this form is to give you detailed information about this study. Our goal is for you to understand:

- **the reason we are doing the study,**
- **what will happen to you and your child if you decide to be in the study, and**
- **what will happen to you and your child if you decide not to be in the study.**

You can ask the study staff any questions at any time. You can take this form home to think about the study or talk to family and friends about it.

Your child's doctor or health care provider may be working on this research study. He or she is interested in your child's healthcare as well as the conduct of this study. If that makes you feel the doctor can't be objective about the best care for your child, you may ask for another doctor or staff member who is not involved in this research.

Kaiser Permanente is being reimbursed by the study sponsor, for Disease Control and Prevention, to conduct this study.

PURPOSE AND BACKGROUND

The purpose of this research study being conducted by Kaiser Permanente, and in four other locations in the United States, is to improve our understanding of the incidence, natural history, complications, and quality of care for children, adolescents, and young adults with diabetes. You/your child were asked to take part in the SEARCH study because you/your child have diabetes. Dr. Jean Lawrence is the lead investigator for this study for Kaiser Permanente. This study is sponsored by the Centers for Disease Control and the National Institute of Diabetes and Digestive and Kidney Diseases.

Diabetes is the third most common life-long disease in people under 20 years of age. The total number of persons with diabetes in this age group is increasing. In addition, types of diabetes that have not been seen in young people are now being seen. These changes have resulted in gaps in knowledge about the total number of persons and types of diabetes in the United States, the type of care young people with diabetes receive, and the effect diabetes has on their lives. This research study will collect information to answer these questions.

This study will include over 5,000 children and young adults with diabetes who were members of Kaiser Permanente Southern California when they were diagnosed with diabetes. A member of the SEARCH research team has discussed the requirements for participating in this study with you. Before agreeing to participate in this research study, it is important that you read and understand this form or have a member of the study staff read it to you.

If you have personal, religious, cultural, or ethical beliefs that you think might limit the types of tests you/your child would agree to have, please discuss them fully with your physicians or appropriate members of the research team before entering this study.

This consent form may contain some words that are not familiar to you. Please discuss any questions you may have about this study with the research staff members before you sign this form.

PHOTOGRAPHS OF YOUR/YOUR CHILD'S EYES

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will be taking two pictures of each of your/your child's eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for any unusual changes.

1. You/your child will be asked to sit in a darkened room before a special camera with your/your child's chin in a chin rest.

2. After your/your child's pupils have dilated, we will take two photographs of the back of each eye (the retinas).
3. No drops will be put in your/your child's eyes; and the camera will not touch your/your child's eyes.
4. After each picture is taken, you/your child may see a blue or red spot that will disappear within 5 to 7 minutes and cause no damage to the eye. We will pause for approximately 3-5 minutes between photographs to allow your/your child's eyes time to re-adjust to the darkened room so the pupils will dilate once again.
5. You will also be asked for the name and phone number of your/your child's eye doctor, and whether or not you have ever had laser treatments on the back of your eyes.
6. Doing the eye photographs will take about 20 minutes. We will send you the results of your eye photographs.

RELEASE OF THE RETINAL PHOTOGRAPH RESULTS

The results of the findings from the review of the retinal photographs will be sent to you. If your child turns 18 years before the test results become available, the results will only be mailed to your child. Some participants like their/their child's physician to have a copy of the results from retinal photograph. Others do not. Please check one of the two boxes below to let us know whether you are giving the study permission to release (your/your child's) results to (you/your child's) physician.

☐ I agree to have the results shared with my/my child's physician. _____
Initials
☐ I do not agree to have the results shared with my/my child's physician. _____
Initials

RISKS, DISCOMFORTS, AND PRECAUTIONS

There are no known risks associated with taking a photograph of the eye. Although you/your child will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last.

This assessment looks for the presence of or risk of developing the complications of diabetes. If the photographs identify complications of diabetes or risk of developing the complications, the results may make you/your child anxious. If this happens, you/your child will be given referrals to local mental health professionals for evaluation and treatment.

The researchers have taken steps to minimize the risks of this study, and it is not expected that you/your child will experience any adverse effects. However,

you/your child may still encounter problems or side effects. If this happens, please tell the researchers about any injuries, side effects, or other problems that you/your child have/has during this study. You should also tell your/your child's regular doctors.

BENEFITS

A benefit of having these photos taken is that you/your child will be given a free evaluation andinformation about any clinically significant retinal problems that are detected. Test results are available to you/your child and to your/your child's health care provider if you/your child choose to have us release the results. The eye test will provide information only on a portion of the back of the eyes and does not take the place of a visit to your/your child's own personal physician nor does it replace routine eye examinations.

ALTERNATIVES

There are no treatments involved in this study, and participation is voluntary. You may choose not to participate or not to let your child participate. The decision to participate or not to participate will not affect your/your child's future medical care. You may withdraw yourself or your child from this study at any time.

COST

There is no cost to you/your child to participate in this study.

COMPENSATION

To reimburse you/your child for your time to have your/your child's retinal photos taken you/your child will receive $40 in gift cards. In addition, gasoline gift cards will be provided for if you/your child need/s to travel more than 10 miles (each way) to have photos taken of your/your child's eyes. If you/your child have to travel 10-39 miles, you/your child will receive one gift card ($10), if you/your child travel/s 40-79 miles, you/your child will get two gift cards ($20), and if you/your child travel/s 80 miles or more, you/your child will receive three gift cards ($30).

CONFIDENTIALITY

Only SEARCH project staff will be able to view the information that you/your child give/s to us. Information that would identify you/your child will not be released without your consent. This study has been given a Certificate of Confidentiality. This means that nothing you/your child tell us will have to be given to anyone, even if a court orders us to do so, unless you approve this disclosure of information. Under the law, we must report if you/your child tell/s us you are planning to cause serious harm to yourself/himself/herself or others. The information from the research study may be presented or published;

however, you/your child will not be identified in such publications. When the study is over, your/your child's information will be kept in a computer database for a period required by the funding agency and then will be destroyed.

It is possible that members of the research team will use email to contact you/your child for study purposes, for example to remind you of your/your child's scheduled visit. We will not do this if you do not give us permission, and we will never put your/your child's private health information in an email. However if you give us permission to contact you/your child using email, Kaiser Permanente cannot guarantee that the message will get to you/your child or that the message will not go to someone else by mistake.

RIGHT TO WITHDRAWAL

You may leave this study or remove your child from this study at any time. Leaving the study will have no effect on your/your child's ability to get medical care or health insurance, nor will it have any effect on the kind of care your/your child's health care professionals are giving to you/your child.

In order to withdraw or to remove your child from this study, please contact the Principal Investigator whose contact information is on the signature page. If you withdraw yourself or your child from this study, no further tests will be done on the stored samples that you provided. However, survey data and other tests conducted on samples collected at the visit will still be included in the dataset to be used for future studies. You/your child will no longer be contacted to participate in this study.

The Centers for Medicare and Medicaid Services requires compliance with Section 111 of the Medicare, Medicaid and SCHIP Extension Act of 2007 (the MMSEA) which amended the Medicare Secondary Payer statute. Section II J requires sponsors of clinical trials to report payments made to Medicare beneficiaries for treatment, complications, and injuries that arise from clinical trials. When required, information about Medicare beneficiaries' participation in a research study, medical services received, Medicare claims, and other information, will be released to the Centers for Medicare and Medicaid Services and its agents and/or contractors. Information disclosed may be re-disclosed by the recipient and may no longer be protected by law.

WHAT DOES MY SIGNATURE ON THIS FORM MEAN?

My signature on this form would mean that I acknowledge:

1. Personal information about my child that is collected in this study will be protected to the full extent of the law. No information from this study that could be linked to me will be released without my consent.

2. The results of this study may be reported in articles, books or at meetings. My child's identity will not be revealed at any time. Research records will be kept confidential to the extent provided by law. All study records will be kept in a locked room and accessed only by staff working on this research study.

3. I will be notified if there is important new information discovered during the course of the study.

4. Being in this study is my choice. I may decide to have my child leave this study at any time. If I choose not to have my child participate in the study or leave the study, it will not affect our insurance benefits or our future medical care at Kaiser Permanente.

5. My child may be asked to leave the study at any time for medical reasons, if the researcher feels that it is in my child's best interest or if the study is stopped.

6. My questions regarding this study have been answered. If I have any questions about this study of if my child experiences a study-related injury, I may contact

   Jean M. Lawrence, ScD, MPH, SEARCH Study Principal Investigator
   (626) 564-3106 or Jean.M.Lawrence@kp.org

   If I have any questions about my child's rights as a research subject, I may contact

   Armida Ayala, PhD, Director, Human Research Subjects Protection Office at 626-405-3665 or armida.ayala@kp.org

7. If my child is injured by being in this study, the physicians and/or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals will provide medical care and treatment according to the terms of my plan benefits. These benefits are described in my Evidence of Coverage or Summary Plan Description. I may have to pay co-payments, coinsurance and/or deductibles. No additional financial payment is available

I have read the entire consent, including the Supplemental HIPAA Authorization and Experimental Subject's Bill of Rights and voluntarily consent to participate in this research study conducted by the physicians or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals.

Your signature shows that the research study has been explained to you and all of your questions have been answered. ***If you still have questions or do not understand what this study is about, do not sign this form.*** Give this form back to the study staff and get more information.

If participant is < 18 years of age:

_____
First and Last Name of Parent or Legal Guardian (print)

_____ _____
Date Signature of Parent or Legal Guardian

_____
Child's First and Last Name (print)

_____ _____
Date Assent of Child

If participant is ≥ 18 years of age:

_____
First and Last Name of Participant (print)

_____ _____
Date Signature of Participant

_____ _____
Date Name of Person Obtaining Consent

AUTHORIZATION TO USE YOUR/YOUR CHILD'S PRIVATE HEALTH INFORMATION

What is private health information?

Private health information is any information that can be traced back to you/your child. We need your authorization (permission) to use your/your child's private health information in this research study. The private health information that we will use and share for this study includes:

- Your/your child's past, present and future health information is used by the SEARCH study but is not disclosed with identifiers;
- Your/your child's date of birth is used by the SEARCH study and disclosed to collaborating researchers at Wake Forest University;
- Your address is used by the SEARCH study local research staff;
- Your phone number is used by the SEARCH study local research staff;
- Your medical record number is used by the SEARCH staff, but it is not disclosed;
- The results of your/your child's retinal photographs taken for this study are disclosed to Wake Forest University but without identifiers.

Who else will see my/my child's information?

This information may be shared with the following:

- The study sponsor, the Centers for Disease Control and Prevention and National Institute of Diabetes and Digestive and Kidney Diseases
- The Kaiser Permanente Southern California Institutional Review Board (IRB)
- Kaiser Permanente Principal Investigator, co-Investigators, research project manager and other research staff (research assistants and associates);

Once we have shared your/your child's information we cannot be sure that it will stay private. If ***you*** share your/your child's information with people outside the research team, it will no longer

be private. Your/your child's name will not be used in any report that is written. Your/your child's name will not be used in any report or publication that is written.

How long will Kaiser Permanente researchers and the affiliated researchers noted above use and share my/my child's information?

Your/your child's information will be used until the research is completed. This authorization will expire on December 31, 2015.

What if I change my mind about sharing my/my child's research information?

If you decide not to share your/your child's information anymore:

- The research team can continue to use any of the private information that they already have.
- You will no longer be contacted as part of this research study.
- Decisions about sharing your research information will not affect your/your child's medical care or health care coverage.
- You must write to the study Principal Investigator and tell her that you no longer want to share your/your child's information. Write to the study principal investigator at:

Jean M. Lawrence, ScD, MPH
Department of Research and Evaluation
Southern California Permanente Medical Group
100 South Los Robles, 2nd Floor
Pasadena, California 91101

Do I have the right to see and copy my/my child's research information?

The results of your retinal photographs will be sent to you/your child and, if you have provided written authorization, a copy will also be sent to your health care provider.

If you agree to share your/your child's information, you should sign this form below. You will be given a copy of this form.

I agree to share my/my child's information as described in this form

_____ _____

Print your name Date

_____

Sign your name

If you have questions or concerns about your/child's privacy and the use of your/your child's personal medical information, contact the investigator at the telephone number listed in the consent form.

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

Any person who is requested to consent to participate as a subject in a research study involving a medical experiment, or who is requested to consent on behalf of another, has the right to:

1. Be informed of the nature and purpose of the experiment.
2. Be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be used.
3. Be given a description of any attendant discomforts and risks reasonably to be expected from the experiment.
4. Be given an explanation of any benefits to the subject reasonably to be expected from the experiment, if applicable.
5. Be given a disclosure of any appropriate alternative procedures, drugs, or devices that might be advantageous to the subject, and their relative risks and benefits.
6. Be informed of the avenues of medical treatment, if any, available to the subject after the experiment if complications should arise.
7. Be given an opportunity to ask any questions concerning the experiment or the procedures involved.
8. Be instructed that consent to participate in the medical experiment may be withdrawn at any time, and the subject may discontinue participation in the medical experiment without prejudice.
9. Be given a copy of a signed and dated written consent form when one is required.
10. Be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion, or undue influence on the subject's decision.

Original –Chart or Study Copy - Patient

KAISER FOUNDATION HOSPITALS PATIENT'S NAME_____

SOUTHERN CALIFORNIA PERMANENTE MEDICAL GROUP M.R. #_____

INFORMED CONSENT TO PARTICIPATE IN RESEARCH STUDY OF DIABETES INCIDENCE, COMPLICATIONS, AND QUALITY OF CARE SEARCH FOR DIABETES IN YOUTH (SEARCH), PHASE 3

Parent/Guardian Consent for Registry Visit
For Persons with Diabetes less than 18 years of age

SPONSOR: **Centers for Disease Control and Prevention**

INVESTIGATOR: **Jean M. Lawrence, ScD, MPH, MSSA Kaiser Permanente Southern California Department of Research & Evaluation 100 S. Los Robles, 2nd Floor Pasadena CA 91101**

TELEPHONE: **(626) 564-3106**

You and your child are being invited to be in a research study. The purpose of this form is to give you detailed information about this study. Our goal is for you to understand:

- **the reason we are doing the study,**
- **what will happen to you and your child if you decide to be in the study, and**
- **what will happen to you and your child if you decide not to be in the study.**

You can ask the study staff any questions at any time. You can take this form home to think about the study or talk to family and friends about it.

Your child's doctor or health care provider may be working on this research study. He or she is interested in your child's healthcare as well as the conduct of this study. If that makes you feel the doctor can't be objective about the best care for your child, you may ask for another doctor or staff member who is not involved in this research.

Kaiser Permanente is being reimbursed by the study sponsor, Centers for Disease Control and Prevention, to conduct this study.

PURPOSE AND BACKGROUND

The purpose of this research study being conducted by Kaiser Permanente, and in four other locations in the United States, is to improve our understanding of the incidence,

natural history, complications, and quality of care for children, adolescents, and young adults with diabetes. You and your child were asked to take part in the SEARCH study because your child has diabetes. Dr. Jean Lawrence is the lead investigator for this study for Kaiser Permanente. This study is sponsored by the Centers for Disease Control and the National Institute of Diabetes and Digestive and Kidney Diseases.

Diabetes is the third most common life-long disease in people under 20 years of age. The total number of persons with diabetes in this age group is increasing. Also, types of diabetes that have not been seen in young people are now being seen. These changes have resulted in gaps in knowledge about the total number of persons and types of diabetes in the United States, the type of care young people with diabetes receive, and the effect diabetes has on their lives. This research study will collect information to answer these questions.

This study will include over 5,000 children and youth with diabetes who were members of Kaiser Permanente Southern California when they were diagnosed with diabetes. A member of the SEARCH research team has discussed the requirements for participating in this study with you and your child. Before agreeing to participate in this research study, it is important that you/your child read and understand this form or have a member of the study staff read it to you/your child.

If you/your child have personal, religious, cultural, or ethical beliefs that you think might limit the types of tests you would agree to have your child receive, please discuss them fully with your/your child's physicians or appropriate members of the research team before entering this study.

This consent form may contain some words that are not familiar to you or to your child. Please discuss any questions you or your child may have about this study with the research staff members before you sign this form.

STUDY PROCEDURES

The SEARCH Registry visit includes a brief physical examination, collecting a blood and urine sample, and completing one or more questionnaires. You can agree to participate in all or only some parts of the study.

A research team member has set up an appointment for you. The appointment will be in the morning or early afternoon. You will come to the appointment after not having anything to eat or drink other than water for 10 hours. You will not take your usual diabetes medications until after your blood has been drawn. The study visits will take approximately 1-2hours.

PHYSICAL EXAMINATION

The physical examination includes measurements of height, weight, waist, heart rate, blood pressure, and examination of the skin on the neck. The time to complete this part of the visit is approximately 30 minutes. If your child requests numbing

cream before his or her blood is drawn, it will add about 30 minutes to the visit.

COLLECTION OF BLOOD AND URINE SAMPLES

Blood will be taken to measure blood sugar, hemoglobin Alc (a measure of long-term blood sugar control), C-peptide (a measure of internal insulin production), different types of cholesterol (fat), and diabetes autoantibodies (markers in the blood for type 1 diabetes). Two genetic markers for diabetes (HLA and ZNT8) will also be tested. The total amount of blood drawn for these tests is based on your child's weight but will not exceed 1.5 tablespoons.

A urine sample will requested and tested to see if diabetes is affecting your child's kidneys. After these tests are done, your child will be given a snack.. You may also bring your own snack to the Registry visit. After your snack, your child will take his or her usual diabetes medicine and have his or her medicines recorded by trained staff.

RELEASE OF TEST RESULTS

The results of tests that may be important to your child's health will be mailed to you once the samples are tested at the laboratory. If your child turns 18 years before the test results become available, the results will only be mailed to your child. Some participants like their child's physician to have copies of these test results as well. Please check one of the two boxes below to give the study permission to release test results to your child's physician if you would like us to do this.

☐ I agree to have the test results sent to my child's physician. _____ Initials

☐ I do not agree to have the test results sent to my child's physician. _____ Initials

SAVING / STORAGE OF BLOOD

If you agree, your child's blood will be saved for the duration of the study and used in the future, as new tests are developed to learn more about the types of diabetes and when someone has or is at risk to get the complications of diabetes. If the results of the tests affect your child's health, you will be informed of the test results.

☐ I agree to have my child's blood saved and used in the future for new tests as they are developed to learn more about the types of diabetes and the risk of developing the complications of diabetes.
_____ Initials

☐ I do not agree to have my child's blood saved and used in the future for new tests as they are developed to learn more about the types of diabetes and the risk of developing the complications of diabetes.
_____ Initials

SAVING / STORAGE OF DNA

DNA is found in all cells. DNA makes up genes. Genes determine height, hair color, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences may be why some people are more likely to get certain diseases like diabetes.

If you agree, your child's DNA will be saved and used in the future as new tests are developed to tell your child's type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and being overweight. DNA is found in all of your cells. DNA makes up your genes. Your genes decide how tall you are, what color hair you have, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences may explain why some people are more likely to get certain diseases like diabetes. The total amount of blood required is approximately 1¾ teaspoons (8.5 cc).

☐ I agree to have my child's DNA stored for the duration of the study and used in the future as new tests are developed to define the type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and obesity. _____ Initials

☐ I do not agree to have my child's DNA stored for the duration of the study and used in the future as new tests are developed to define the type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and obesity. _____ Initials

If you agree, a sample of your child's DNA may be analyzed to identify a complete picture of your genetic makeup. This information would then be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease, and may lead to better methods to select the best treatment options. When your DNA and clinical information are sent to the storage center, no personal information will be included, such as your name, date of birth, or address. Thus, researchers will not be able to link this information back to you.

☐ I agree to have the results of my DNA analysis sent to a national storage center.
_____ Initials

☐ I do not agree to have the results of my DNA analysis sent to a national storage center.
_____ Initials

CONTACT BY THE SEARCH STUDY IN THE FUTURE

The researchers conducting the SEARCH study may wish to call you as new studies are developed to let you know about these new studies and ask you if your child

would like to participate in these studies. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study. If this study is developed after your child turns 18 years, we may contact your child directly.

☐ I agree to be called in the future. _____ Initials

☐ I do not agree to be called in the future. _____ Initials

RISKS, DISCOMFORTS, AND PRECAUTIONS

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, experienced medical staff will draw blood and, if you wish, a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

The blood tests require that your child not eat any food overnight (the child may drink water). In order to prevent low or high blood sugars, your child's blood sugar will be checked by finger-stick and diabetes medicine will be given as needed to control your child's blood sugar.

Some of the tests will look for the presence of or risk of developing the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you or your child anxious. If this happens, you or your child will be referred to local mental health professionals for evaluation and treatment.

This research study includes genetic testing of blood samples that we ask you to provide. You are free to refuse to take part in this genetic testing. It is your choice. A federal law called the Genetic Information Nondiscrimination Act (GINA) limits the use of genetic information by employers with 15 or more employees and by health insurers and group or individual health plans. GINA generally makes it illegal to discriminate against you based on your genetic information. If you agree to have your child take part in genetic testing, the genetic information we collect or obtain through this research will not affect your child's eligibility for future medical care, membership in Kaiser Foundation Health Plan, or the cost of your premiums or benefits.

The researchers have taken steps to minimize the risks of this study, and it is not expected that your child will experience any adverse effects. However, your child may still encounter problems or side effects. If this happens, please tell the researchers

about any injuries, side effects, or other problems that your child has during this study. You should also tell your child's regular doctors.

BENEFITS

There are no direct benefits to you or your child from participating in this study. However, this study may more clearly define your child's type of diabetes and the presence or absence of some of the complications of diabetes. If you give permission, this information will be shared with your child's health care professionals and may allow them to change the management of your child's diabetes and any complications that may be present.

ALTERNATIVES

There are no treatments involved in this study, and participation is entirely voluntary. You may choose not to participate or not to have your child participate in this study. Your decision to participate or not to participate will not affect your future medical care or your child's future medical care. You may withdraw your child from this study at any time.

COST

There is no cost to you/your child to participate in this study.

COMPENSATION

To reimburse you for your time to complete the Registry visit, you and your child will receive up to $80.00 in gift certificates. You will receive $30.00 for completing the surveys, $30.00 for completing the physical examination, and $20.00 for having your child's blood drawn.

CONFIDENTIALITY

Only SEARCH project staff will be able to view the information that you give to us. Information that would identify you/your child will not be released without your consent. All answers that you/your child give will be kept private. This is so because this study has been given a Certificate of Confidentiality. This means that anything you or you and your child tell us will not have to be given out to anyone, even if a court orders us to do so, unless you or you and your child say it's okay. Under the law, we must report if you or your child tells us you or your child is planning to cause serious harm to yourself or others.

A special number will be assigned to your child upon entering the study. This number will be used instead of your child's name to identify the information and laboratory tests collected during the study. The list containing the special number assigned to your child will be kept in a password-protected database in the Department of Research & Evaluation at Kaiser Permanente Southern California. Thus, no one other than the research staff will be able to link any of the information collected in the study to you or your child.

It is possible that members of the research team might use e-mail to contact you for study purposes, for example to remind you of a scheduled visit. We will not do this if you

do not give us permission, and we will never put your private health information in an e-mail. However if you give us permission to contact you using e-mail, Kaiser Permanente cannot guarantee that the message will get to you or that the message will not go to someone else by mistake.

The information from the research study may be presented or published; however, your child will not be identified in such publications. When the study is over, your child's information will be kept in a computer database for a period required by the funding agency and then will be destroyed.

RIGHT TO WITHDRAWAL

You and your child may leave this study at any time. Leaving the study will have no effect on your ability or your child's ability to get medical care or health insurance nor will it have any effect on the kind of care your health care professionals are giving to you and your child. In order to withdraw from this study, please contact the Principal Investigator whose contact information is on the signature page. If you withdraw from this study, no further tests will be done on the stored samples that you provided. However, survey data and other tests conducted on samples collected at the visit will still be included in the dataset to be used for future studies. You will no longer be contacted to participate in this study.

WHAT DOES MY SIGNATURE ON THIS FORM MEAN?

My signature on this form would mean that I acknowledge:

1. Personal information about me that is collected in this study will be protected to the full extent of the law. No information from this study that could be linked to me will be released without my consent.

2. The results of this study may be reported in articles, books or at meetings. My identity will not be revealed at any time. Research records will be kept confidential to the extent provided by law. All study records will be kept in a locked room and accessed only by staff working on this research study.

3. Being in this study is my choice. I may decide to leave this study at any time. If I choose not to be in the study or leave the study, it will not affect my insurance benefits or my future medical care at Kaiser Permanente.

4. I may be asked to leave the study at any time for medical reasons, if the researcher feels that it is in my best interest, or if the study is stopped. I may be withdrawn from the study if I lose my Kaiser Permanente Southern California insurance coverage.

5. My questions regarding this study have been answered. If I have any questions about this study or if I experience a study-related injury, I may contact

Jean M. Lawrence, ScD, MPH, SEARCH Study Principal Investigator
(626) 564-3106 or Jean.M.Lawrence@kp.org

If I have any questions about my rights as a research subject, I may contact

Armida Ayala, PhD, Director, Human Research Subjects Protection Office at 626-405-3665 or armida.ayala@kp.org

6. If I am injured by being in this study, the physicians and/or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals will provide medical care and treatment according to the terms of my plan benefits. These benefits are described in my Evidence of Coverage or Summary Plan Description. I may have to pay co-payments, coinsurance and/or deductibles. No additional financial payment is available

I have read the entire consent, including the Supplemental HIPAA Authorization and Experimental Subject's Bill of Rights and voluntarily consent to participate in this research study conducted by the physicians or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals.

Your signature shows that the research study has been explained to you and all of your questions have been answered. ***If you still have questions or do not understand what this study is about, do not sign this form***. Give this form back to the study staff and get more information.

A copy of this signed and dated Informed Consent Form will be given to me for my records

_____
First and Last Name of Parent of Legal Guardian (print)

_____ _____
Signature of Parent or Legal Guardian Date

_____
Child's First and Last Name (print)

_____ _____
Assent of Child Date

AUTHORIZATION TO USE YOUR CHILD'S PRIVATE HEALTH INFORMATION

What is private health information?

Private health information is any information that can be traced back to you or your child. We need your authorization (permission) to use your child's private health information in this research study. The private health information that we will use and share for this study includes:

- Your child's past, present and future health information is used by the SEARCH study but is not disclosed with identifiers;
- Your child's date of birth is used by the SEARCH study and disclosed to collaborating researchers at Wake Forest University and our contractor, Anderson, Niebuhr & Associates, Inc. ;
- Your address is used by the SEARCH study local research staff and disclosed to Anderson, Niebuhr & Associates, Inc. to send out letters and cards for the study only;
- Your phone number is used by the SEARCH study local research staff and disclosed to Anderson, Niebuhr & Associates, Inc. only;
- Your child's medical record number is used by the SEARCH staff, but it is not disclosed;
- The results of your child's medical tests and lab work done for this research study are disclosed to Wake Forest University but without identifiers. Laboratory tests performed by collaborating researchers at the University of Washington and the genetics laboratory in the United Kingdom are completed without identifiers.

Who else will see my child's information?

This information may be shared with the following:

- The study sponsor, the Centers for Disease Control and Prevention and National Institute of Diabetes and Digestive and Kidney Diseases
- The Kaiser Permanente Southern California Institutional Review
- Board (IRB)

- Kaiser Permanente Principal Investigator, co-Investigators, research project manager and other research staff (research assistants and associates);

Once we have shared your child's information we cannot be sure that it will stay private. If ***you*** share your child's information with people outside the research team, it will no longer be private. Your child's name will not be used in any report that is written. Your child's name will not be used in any report or publication that is written.

How long will Kaiser Permanente researchers and the affiliated researchers noted above use and share my child's information?

Your child's information will be used until the research is completed. This authorization will expire on December 31, 2015.

What if I change my mind about sharing my child's research information?

If you decide not to share your child's information anymore:

- The research team can continue to use any of the private information that they already have.
- You will no longer be contacted as part of this research study.
- Decisions about sharing your child's research information will not affect your child's medical care or health care coverage.
- You must write to the study Principal Investigator and tell her that you no longer want to share your child's information. Write to the study principal investigator at:

Jean M. Lawrence, ScD, MPH
Department of Research and Evaluation
Southern California Permanente Medical Group
100 South Los Robles, 2nd Floor
Pasadena, California 91101

Do I have the right to see and copy my child's research information?

The results of your child's laboratory tests will be sent to you (except for genetic test results other than monogenic forms of diabetes) and, if you have provided written authorization, copies of the test results sent to you will also be sent to your child's health care provider, including specific genetic test results for monogenic diabetes. In addition, you and your physician must be notified if your child's laboratory test results are above alert values described in the study protocol.

If you agree to share your child's information, you should sign this form below. You will be given a copy of this form.

I agree to share my child's information as described in this form.

_____ _____

Print your name Date

_____

Sign your name

If you have questions or concerns about your privacy or your child's privacy and the use of your child's personal medical information, contact the investigator at the telephone number listed in the consent form.

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

Any person who is requested to consent to participate as a subject in a research study involving a medical experiment, or who is requested to consent on behalf of another, has the right to:

1. Be informed of the nature and purpose of the experiment.

2. Be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be used.

3. Be given a description of any attendant discomforts and risks reasonably to be expected from the experiment.

4. Be given an explanation of any benefits to the subject reasonably to be expected from the experiment, if applicable.

5. Be given a disclosure of any appropriate alternative procedures, drugs, or devices that might be advantageous to the subject, and their relative risks and benefits.

6. Be informed of the avenues of medical treatment, if any, available to the subject after the experiment if complications should arise.

7. Be given an opportunity to ask any questions concerning the experiment or the procedures involved.

8. Be instructed that consent to participate in the medical experiment may be withdrawn at any time, and the subject may discontinue participation in the medical experiment without prejudice.

9. Be given a copy of a signed and dated written consent form when one is required.

10. Be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion, or undue influence on the subject's decision.

Original – Chart or Study Copy - Patient

KAISER FOUNDATION HOSPITALS PATIENT'S NAME_____

SOUTHERN CALIFORNIA PERMANENTE MEDICAL GROUP M.R. #_____

INFORMED CONSENT TO PARTICIPATE IN RESEARCH STUDY OF DIABETES INCIDENCE, COMPLICATIONS, AND QUALITY OF CARE SEARCH FOR DIABETES IN YOUTH (SEARCH), PHASE 3

Consent for Registry Visit
For Persons with Diabetes 18 years of age or older

SPONSOR: **Centers for Disease Control and Prevention**

INVESTIGATOR: **Jean M. Lawrence, ScD, MPH, MSSA**
Kaiser Permanente Southern California Department of Research & Evaluation
100 S. Los Robles, 2nd Floor
Pasadena CA 91101

TELEPHONE: **(626) 564-3106**

You are being invited to be in a research study. The purpose of this form is to give you detailed information about this study. Our goal is for you to understand:

- **the reason we are doing the study,**
- **what will happen to you if you decide to be in the study, and**
- **what will happen to you if you decide not to be in the study.**

You can ask the study staff any questions at any time. You can take this form home to think about the study or talk to family and friends about it.

Your doctor or health care provider may be working on this research study. He or she is interested in your healthcare as well as the conduct of this study. If that makes you feel the doctor can't be objective about the best care for you, you may ask for another doctor or staff member who is not involved in this research.

Kaiser Permanente is being reimbursed by the study sponsor, Centers for Disease Control and Prevention, to conduct this study.

PURPOSE AND BACKGROUND

The purpose of this research study being conducted by Kaiser Permanente, and in four other locations in the United States, is to improve our understanding of the incidence, natural history, complications, and quality of care for children, adolescents, and young

adults with diabetes. You were asked to take part in the SEARCH study because you have diabetes. Dr. Jean Lawrence is the lead investigator for this study for Kaiser Permanente. This study is sponsored by the Centers for Disease Control and the National Institute of Diabetes and Digestive and Kidney Diseases.

Diabetes is the third most common life-long disease in people under 20 years of age. The total number of persons with diabetes in this age group is increasing. Also, types of diabetes that have not been seen in young people are now being seen. These changes have resulted in gaps in knowledge about the total number of persons and types of diabetes in the United States, the type of care young people with diabetes receive, and the effect diabetes has on their lives. This research study will collect information to answer these questions.

This study will include over 5,000 children and youth with diabetes who were members of Kaiser Permanente Southern California when they were diagnosed with diabetes. A member of the SEARCH research team has discussed the requirements for participating in this study with you. Before agreeing to participate in this research study, it is important that you understand this form or have a member of the study staff read it to you.

Before agreeing to participate in this research study, it is important that you read and understand this form or have a member of the study staff read it to you.

If you have personal, religious, cultural, or ethical beliefs that you think might limit the types of tests you would agree to receive, please discuss them fully with your physicians or appropriate members of the research team before entering this study.

This consent form may contain some words that are not familiar to you. Please discuss any questions you have about this study with the research staff members before you sign this form.

STUDY PROCEDURES

The SEARCH Registry visit includes a brief physical examination, collecting a blood and urine sample, and completing one or more questionnaires. You can agree to participate in all or only some parts of the study.

A research team member has set up an appointment for you. The appointment will be in the morning or early afternoon. You will come to the appointment after not having anything to eat or drink other than water for 10 hours. You will not take your usual diabetes medications until after your blood has been drawn. The study visits will take approximately 1-2hours.

PHYSICAL EXAMINATION

The physical examination includes measurements of height, weight, waist, heart rate, blood pressure, and examination of the skin on the neck. The time to complete this part of the visit is approximately 30 minutes. If you request numbing cream before your blood is drawn, it will add about 30 minutes to the visit.

COLLECTION OF BLOOD AND URINE SAMPLES

Blood will be taken to measure blood sugar, hemoglobin Alc (a measure of long-term blood sugar control), C-peptide (a measure of internal insulin production), different types of cholesterol (fat), and diabetes autoantibodies (markers in the blood for type 1 diabetes). Two genetic markers for diabetes (HLA and ZNT8) will also be tested. The total amount of blood drawn for these tests are based on your weight but will not exceed 1.5 tablespoons.

A urine sample will requested and tested to see if diabetes is affecting your kidneys. After these tests are done, you will be given a snack. You may also bring your own snack to the Registry visit.. After your snack, you will take your usual diabetes medicine and have your medicines recorded by trained staff.

RELEASE OF TEST RESULTS

The results of tests that may be important to your health will be mailed to you once the samples are tested at the laboratory. Some participants like their physician to have copies of these test results as well. Please check one of the two boxes below to give the study permission to release your test results to your physician if you would like us to do this.

☐ I agree to have the test results sent to my physician. _____ Initials

☐ I do not agree to have the test results sent to my physician. _____ Initials

SAVING / STORAGE OF BLOOD

If you agree, your blood will be saved for the duration of the study and used in the future as new tests are developed to learn more about the types of diabetes and when someone has or is at risk to get the complications of diabetes. If the results of the tests affect your health, you will be informed of the test results.

☐ I agree to have my blood saved and used in the future for new tests as they are developed to learn more about the types of diabetes and the risk of developing the complications of diabetes.
_____ Initials

☐ I do not agree to have my blood saved and used in the future for new tests as they are developed to learn more about the types of diabetes and the risk of developing the complications of diabetes.
_____ Initials

SAVING / STORAGE OF DNA

DNA is found in all cells. DNA makes up genes. Genes determine height, hair color, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The

differences may be why some people are more likely to get certain diseases like diabetes.

If you agree, DNA will be saved and used in the future as new tests are developed to tell your type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and being overweight. DNA is found in all of your cells. DNA makes up your genes. Your genes decide how tall you are, what color hair you have, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences may explain why some people are more likely to get certain diseases like diabetes. The total amount of blood required is approximately 1¾ teaspoons (8.5 cc).

☐ I agree to have my DNA stored for the duration of the study and used in the future as new tests are developed to define the type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and obesity.
_____ Initials

☐ I do not agree to have my DNA stored for the duration of the study and used in the future as new tests are developed to define the type of diabetes and the risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and obesity.
_____ Initials

If you agree, a sample of your DNA may be analyzed to identify a complete picture of your genetic makeup. This information would then be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease, and may lead to better methods to select the best treatment options. When your DNA and clinical information are sent to the storage center, no personal information will be included, such as your name, date of birth, or address. Thus, researchers will not be able to link this information back to you.

☐ I agree to have the results of my DNA analysis sent to a national storage center.
_____ Initials

☐ I do not agree to have the results of my DNA analysis sent to a national storage center.
_____ Initials

CONTACT BY THE SEARCH STUDY IN THE FUTURE

The researchers conducting the SEARCH study may wish to call you as new studies are developed to let you know about these new studies and ask you if you would like to participate in these studies. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study.

☐ I agree to be called in the future. _____ Initials

☐ I do not agree to be called in the future. _____ Initials

RISKS, DISCOMFORTS, AND PRECAUTIONS

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, blood will be drawn by experienced medical staff and, if you wish, a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

The blood tests require that you not eat any food overnight (you may drink water). In order to prevent low or high blood sugars, your blood sugar will be checked by finger-stick and diabetes medicine will be given as needed to control your blood sugar.

Some of the tests will look for the presence of or risk of developing the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you anxious. If this happens, you will be referred to local mental health professionals for evaluation and treatment.

This research study includes genetic testing of blood samples that we ask you to provide. You are free to refuse to take part in this genetic testing. It is your choice. A federal law called the Genetic Information Nondiscrimination Act (GINA) limits the use of genetic information by employers with 15 or more employees and by health insurers and group or individual health plans. GINA generally makes it illegal to discriminate against you based on your genetic information. If you agree to have your child take part in genetic testing, the genetic information we collect or obtain through this research will not affect your child's eligibility for future medical care, membership in Kaiser Foundation Health Plan, or cost of your premiums or benefits.

The researchers have taken steps to minimize the risks of this study, and it is not expected that you will experience any adverse effects. However, you may still encounter problems or side effects. If this happens, please tell the researchers about any injuries, side effects, or other problems that you have during this study. You should also tell your regular doctors.

BENEFITS

There are no direct benefits to you from participating in this study. However, this study may more clearly define your type of diabetes and the presence or absence of some of the complications of diabetes. If you give permission, this information will be shared with your health care professionals and may allow them to change the management of your diabetes and any complications that may be present.

ALTERNATIVES

There are no treatments involved in this study, and participation is entirely voluntary. You may choose not to participate in this study. Your decision to participate or not to participate will not affect your future medical care. You may withdraw from this study at any time.

COST

There is no cost to you to participate in this study.

COMPENSATION

To reimburse you for your time to complete the Registry visit, you will receive $80.00 in gift certificates. This will be allocated in the following way: $30.00 for completing the survey(s), $30.00 for completing the physical examination, and $20.00 for having your blood drawn.

CONFIDENTIALITY

Only SEARCH project staff will be able to view the information that you give to us. Information that would identify you will not be released without your consent. All answers that you give will be kept private. This is so because this study has been given a Certificate of Confidentiality. This means that anything you tell us will not have to be given out to anyone, even if a court orders us to do so, unless you say it's okay. Under the law, we must report if you tell us you are planning to cause serious harm to yourself or others.

A special number will be assigned to you upon entering the study. This number will be used instead of your name to identify the information and laboratory tests collected during the study. The list containing the special number assigned to you will be kept in a password-protected database in the Department of Research & Evaluation at Kaiser Permanente Southern California. Thus, no one other than the research staff will be able to link any of the information collected in the study to you.

It is possible that members of the research team might use e-mail to contact you for study purposes, for example to remind you of a scheduled visit. We will not do this if you do not give us permission, and we will never put your private health information in an e-mail. However if you give us permission to contact you using e-mail, Kaiser Permanente cannot guarantee that the message will get to you or that the message will not go to

someone else by mistake.

The information from the research study may be presented or published; however, you will not be identified in such publications. When the study is over, your information will be kept in a computer database for a period of time required by the funding agency and then will be destroyed.

RIGHT TO WITHDRAWAL

You may leave this study at any time. Leaving the study will have no effect on your ability to get medical care or health insurance nor will it have any effect on the kind of care your health care professionals are giving to you. In order to withdraw from this study, please contact the Principal Investigator whose contact information is on the signature page. If you withdraw from this study, no further tests will be done on the stored samples that you provided. However, survey data and other tests conducted on samples collected at the visit will still be included in the dataset to be used for future studies. You will no longer be contacted to participate in this study.

The Centers for Medicare and Medicaid Services requires compliance with Section 111 of the Medicare, Medicaid and SCHIP Extension Act of 2007 (the MMSEA) which amended the Medicare Secondary Payer statute. Section II J requires sponsors of clinical trials to report payments made to Medicare beneficiaries for treatment, complications, and injuries that arise from clinical trials. When required, information about Medicare beneficiaries' participation in a research study, medical services received, Medicare claims, and other information, will be released to the Centers for Medicare and Medicaid Services and its agents and/or contractors. Information disclosed may be re-disclosed by the recipient and may no longer be protected by law.

WHAT DOES MY SIGNATURE ON THIS FORM MEAN?

My signature on this form would mean that I acknowledge:

1. Personal information about me that is collected in this study will be protected to the full extent of the law. No information from this study that could be linked to me will be released without my consent.

2. The results of this study may be reported in articles, books or at meetings. My identity will not be revealed at any time. Research records will be kept confidential to the extent provided by law. All study records will be kept in a locked room and accessed only by staff working on this research study.

3. Being in this study is my choice. I may decide to leave this study at any time.

   If I choose not to be in the study or leave the study, it will not affect my insurance benefits or my future medical care at Kaiser Permanente.

4. I may be asked to leave the study at any time for medical reasons, if the researcher feels that it is in my best interest, or if the study is stopped. I may be

withdrawn from the study if I lose my Kaiser Permanente Southern California insurance coverage.

5. My questions regarding this study have been answered. If I have any questions about this study or if I experience a study-related injury, I may contact

   Jean M. Lawrence, ScD, MPH, SEARCH Study Principal Investigator
   (626) 564-3106 or Jean.M.Lawrence@kp.org

   If I have any questions about my rights as a research subject, I may contact

   Armida Ayala, PhD, Director, Human Research Subjects Protection Office at 626-405-3665 or armida.ayala@kp.org

6. If I am injured by being in this study, the physicians and/or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals will provide medical care and treatment according to the terms of my plan benefits. These benefits are described in my Evidence of Coverage or Summary Plan Description. I may have to pay co-payments, coinsurance and/or deductibles. No additional financial payment is available

I have read the entire consent, including the Supplemental HIPAA Authorization and Experimental Subject's Bill of Rights and voluntarily consent to participate in this research study conducted by the physicians or employees of Southern California Permanente Medical Group and/or Kaiser Foundation Hospitals.

Your signature shows that the research study has been explained to you and all of your questions have been answered. ***If you still have questions or do not understand what this study is about, do not sign this form.*** Give this form back to the study staff and get more information.

A copy of this signed and dated Informed Consent Form will be given to me for my records

_____
First and Last Name of Participant (print)

_____ _____
Date Signature of Participant

_____ _____
Date Name of Person Obtaining Consent

AUTHORIZATION TO USE YOUR CHILD'S PRIVATE HEALTH INFORMATION

What is private health information?

Private health information is any information that can be traced back to you or your child. We need your authorization (permission) to use your child's private health information in this research study. The private health information that we will use and share for this study includes:

- Your past, present and future health information is used by the SEARCH study but is not disclosed with identifiers;
- Your date of birth is used by the SEARCH study and disclosed to collaborating researchers at Wake Forest University and our contractor, Anderson, Niebuhr & Associates, Inc. ;
- Your address is used by the SEARCH study local research staff and disclosed to Anderson, Niebuhr & Associates, Inc. to send out letters and cards for the study only;
- Your phone number is used by the SEARCH study local research staff and disclosed to Anderson, Niebuhr & Associates, Inc. only;
- Your medical record number is used by the SEARCH staff, but it is not disclosed;
- The results of your medical tests and lab work done for this research study are disclosed to Wake Forest University but without identifiers. Laboratory tests performed by collaborating researchers at the University of Washington and the genetics laboratory in the United Kingdom are completed without identifiers.

Who else will see my child's information?

This information may be shared with the following:

- The study sponsor, the Centers for Disease Control and Prevention and National Institute of Diabetes and Digestive and Kidney Diseases
- The Kaiser Permanente Southern California Institutional Review Board (IRB)

- Kaiser Permanente Principal Investigator, co-Investigators, research project manager and other research staff (research assistants and associates);

Once we have shared your child's information we cannot be sure that it will

stay private. If ***you*** share your child's information with people outside the research team, it will no longer be private. Your child's name will not be used in any report that is written. Your child's name will not be used in any report or publication that is written.

How long will Kaiser Permanente researchers and the affiliated researchers noted above use and share my child's information?

Your child's information will be used until the research is completed. This authorization will expire on December 31, 2015.

What if I change my mind about sharing my child's research information?

If you decide not to share your child's information anymore:

- The research team can continue to use any of the private information that they already have.
- You will no longer be contacted as part of this research study.
- Decisions about sharing your child's research information will not affect your child's medical care or health care coverage.
- You must write to the study Principal Investigator and tell her that you no longer want to share your child's information. Write to the study principal investigator at:

Jean M. Lawrence, ScD, MPH
Department of Research and Evaluation
Southern California Permanente Medical Group
100 South Los Robles, 2nd Floor
Pasadena, California 91101

Do I have the right to see and copy my research information?

The results of your laboratory tests will be sent to you (except for genetic test results other than monogenic forms of diabetes) and, if you have provided written authorization, copies of the test results sent to you will also be sent to your health care provider, including specific genetic test results for monogenic diabetes. In addition, you and your physician must be notified if your laboratory test results are above alert values described in the study protocol.

If you agree to share your information, you should sign this form below. You will be given a copy of this form.

I agree to share my information as described in this form

_____ _____

Print your name Date

_____

Sign your name

If you have questions or concerns about your privacy and the use of your personal medical information, contact the investigator at the telephone number listed in the consent form.

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

Any person who is requested to consent to participate as a subject in a research study involving a medical experiment, or who is requested to consent on behalf of another, has the right to:

1. Be informed of the nature and purpose of the experiment.

2. Be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be used.

3. Be given a description of any attendant discomforts and risks reasonably to be expected from the experiment.

4. Be given an explanation of any benefits to the subject reasonably to be expected from the experiment, if applicable.

5. Be given a disclosure of any appropriate alternative procedures, drugs, or devices that might be advantageous to the subject, and their relative risks and benefits.

6. Be informed of the avenues of medical treatment, if any, available to the subject after the experiment if complications should arise.

7. Be given an opportunity to ask any questions concerning the experiment or the procedures involved.

8. Be instructed that consent to participate in the medical experiment may be withdrawn at any time, and the subject may discontinue participation in the medical experiment without prejudice.

9. Be given a copy of a signed and dated written consent form when one is required.

10. Be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion, or undue influence on the subject's decision.

Original – Chart or Study Copy - Patient

Carolinas Consents

Consent to Participate in a Research Study
Adult Subjects, SEARCH 3 Cohort Study Visit

UNC IRB Study #10-2341
Consent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Cohort Study Visit

SEARCH Carolina Site Principal Investigators:

University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Funding Source and/or Sponsor: Centers for Disease Control and Prevention and National Institutes of Health/NIDDK
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason.

Research studies are designed to obtain new knowledge that may help other people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Deciding not to be in the study or leaving the study before it is done will not affect your relationship with the researcher or your health care provider. If you are a patient with an illness, you do not have to be in the research study in order to receive health care.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?

The purpose of this research study is to learn about diabetes in children and young adults. Diabetes is the third most common life-long disease in people under 20 years of age. The total number of cases of diabetes in this age group is increasing. Also, types of diabetes that have not been seen in young people are now being seen. Specifically, this project is interested in studying the following questions:

a. How common are long-term complications related to diabetes, including: retinopathy (damage to back of the eye), nephropathy (kidney damage), neuropathy (nerve damage), and damage to the heart and blood vessels?
b. How common are short-term complications, including hypoglycemia (low blood sugar) and diabetic ketoacidosis (DKA)?
c. What type of medical care are young people with diabetes receiving and how does diabetes affect the lives of these individuals?

You are being asked to be in the study because you have diabetes, previously did an in-person visit with the SEARCH study and have had diabetes for at least five years.

Are there any reasons you should not be in this study?
You should not complete a study visit if you are currently pregnant. You may take part in the study visit when it has been at least four months after the end of your pregnancy.

How many people will take part in this study?
A total of approximately 3900 people at five sites across the US will take part in the Cohort Study visit, including approximately 821 people from the Carolina SEARCH site.

How long will your part in this study last?
The Cohort Study visit will take about 3 ½ hours. We may contact you every year to be sure we have your correct contact information. If you agree to have a sample of your blood, urine or DNA stored following the Cohort Study visit, it will be saved for 10 years after the end of funding for follow-up of SEARCH participants. After this time, stored samples will be destroyed.

What will happen if you take part in the study?
A research team member will set up an appointment for you in the early morning. You will come to the appointment after not having anything to eat or drink other than water for 8-12 hours. You will not take your usual diabetes medicines until after you have been given breakfast during the appointment.

Laboratory Tests
Blood draw: When you arrive, blood will be taken from your arm to measure blood sugar, hemoglobin A1c (a measure of long-term blood sugar control), different types of cholesterol (fat), c-peptide (a measure of your own insulin production), islet cell antibodies (markers in the blood for type 1 diabetes), cystatin-C and serum creatinine (measures of kidney function), and several new blood markers associated with risk for developing heart disease or stroke (apolipoprotein B, C-reactive protein, interleukin-6, leptin, and adiponectin).

The total amount of blood drawn will be based on weight tables and will not exceed 3 tablespoons. The blood draw takes about 10 minutes. If you need numbing medicine for the blood draw, SEARCH staff can provide that for you. If you agree, results commonly used in clinical practice (hemoglobin A1c, cholesterol, c-peptide, and urine albumin/creatinine) will be shared with your doctor.

Mark the line that best matches your choice:

_____ OK to share results of the tests with my doctor

_____ Not OK to share results of the test with my doctor

Urine Collection: Before your scheduled appointment, you will be mailed a container with detailed instructions to collect your first morning urine the day of your study visit. You will be asked to bring this urine container with you to your visit.

A urine sample will also be collected during the study visit. .

Your urine will be tested for albumin and creatinine (small particles of protein) to see how well your kidneys are working.

A sample of your blood, urine, and DNA may be saved after the visit, if you agree.

After the blood and urine samples are obtained, you will be given a snack.

Physical Exam

The physical exam will include height, weight, waist measurement, blood pressure, and examination of the skin of the neck. This will be done by trained study staff. The time to complete this part of the visit is approximately 30 minutes.

Questionnaires

The questionnaires can be completed either at home before the visit or at the visit. If you prefer, a separate visit may be scheduled to complete the forms. You will be asked questions about your diabetes, medical care, current medications, family history of diabetes, education, family income level, food access and security, health insurance, and the effect diabetes has had on your life.

You will also be asked to answer some questions dealing with the following health issues – physical activity, smoking, eating and sleeping patterns, depression, and whether you have ever been pregnant. You will also be asked what might be done to prevent low blood sugars, what worries you might have in relation to low blood sugars, and practices that are consistent with eating problems.

The estimated time to complete these questions is 80-120 minutes.

Nerve and Heart Function Tests

Nerve Tests: Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking you to complete a short questionnaire, doing an examination of your feet, and doing an electrocardiogram (ECG) test of your heart.

We will ask you to answer 15 questions about foot sensation including pain, numbness, and temperature sensitivity. We will examine your feet to measure the ability to feel vibrations, reflexes, and the ability to feel light touches to the feet. The examiner will test the vibration sense by placing a vibrating instrument on the big toe. The examiner will use a rubber "hammer" to test the reflexes in the ankle. To test your sense of touch, the examiner will touch your toe several times with a thin piece of plastic. Doing the foot nerve tests will take about 10 minutes. The results of the tests will be sent to the University of Michigan for analysis.

In order to check the accuracy of our measurements, the foot test will be repeated for approximately 5% (1 in 20) of participants. Participants will be randomly selected to receive the repeat measurements. If you are selected for repeat measurements of the feet and you agree to have the measurements performed, the visit will last about 10 minutes longer. You may refuse to have the repeat measures, but still complete the foot examination.

____ You **have** been selected for the repeat measurements of the feet.
____ You **have not** been selected for repeat measurements of the feet.

Heart Rate Variability: Heart Rate Variability (HRV) is a measurement to assess the health of nerves in the heart. The test uses an ECG, or electrocardiogram. This is a test that doctors routinely use to study the heart; your doctor may have used it with you before. The examiner will place an EKG lead on each of your arms and on the left leg or two EKG leads on the chest and one on the stomach. It is important for the EKG leads to pick up a good signal of the heartbeats. In some cases it may be necessary for us to shave hair from a small area of skin to improve the heart signal. You will be asked to lie down and rest for 5 minutes before the test begins. We will then record the pattern of your heart beats for 10 minutes.

Blood Vessel Test: We will perform a test to measure how your blood vessels function. The test is called an arterial stiffness test. You will be asked to wear loose shorts or to put on a patient gown. A trained member of the research team will measure the pulse in the groin area, but will not expose your private parts. At your request a chaperone will be present during these procedures.

The following test will then be performed:

A staff member will measure the distance from your neck to the top of your sternum (breast bone), from the neck to your wrist, from the sternum to the your belly button, from your belly button to your groin, and from the groin to your foot. The electrodes (sticky pads) used for the HRV test will be left in place for the blood vessel test.

Your wrist will be touched with a small instrument shaped like a pen and the stiffness of your blood vessels will be measured. The pen instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test is painless and will be repeated 3 times.

Then the same pen-shaped instrument will be touched on the side of your neck, the top of your thigh, and your foot to measure the speed at which blood travels from the heart to that area of the body. This test will be repeated 3 times. The blood vessel tests will take about one hour.

This test is designed to be short, simple, and painless. This is a test that doctors use every day, and it is not dangerous. But if you feel uncomfortable at any time during any of these tests, just tell the examiner and he/she will immediately stop the tests.

In order to check the accuracy of our measurements, the blood vessel tests will be repeated for approximately 5% (1 in 20) of participants. Participants will be randomly selected to receive repeat measurements. If you are selected for repeat measurements of the blood vessel tests and you agree to have the measurements performed, your visit will last about 15 minutes longer. You may refuse to have the repeat measures, but still complete the blood vessel testing. You will receive additional compensation for your time if you have the repeat measures done.

____ You **have** been selected for repeat measurements of the blood vessels.
____ You **have not** been selected for repeat measurements of the blood vessels.

Eye Photographs

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will be taking 2 pictures of each of your eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for possible problems.

You will be asked to sit in a darkened room before a special camera with your chin in a chin rest. After your pupils have dilated (opened) naturally, we will take 2 photographs of the back of each of your eyes (retinas). No drops will be put in the eyes; and the camera will not touch the eyes. After each picture is taken, you may see a white or colored spot, which will disappear within a few minutes and cause no damage to the eye. We will pause for a few minutes between photographs to allow your eyes time to re-adjust to the darkened room so the pupils will dilate once again.

You will also be asked for the name and phone number of your eye doctor, and whether or not you have ever had eye injections or laser treatments on the back of your eyes. Doing the eye photographs will take about 20 minutes. We will send you the results of your eye photographs. If you agree, results will be shared with your doctor.

Mark the line that best matches your choice:

_____ OK to share results of the tests with my doctor
_____ Not OK to share results of the test with my doctor

Medical Record Review

A medical record review will be conducted for a small number (~25 people) who give us permission to check that the information you gave us regarding key medical events and markers of healthcare quality were remembered correctly.

Mark the line that best matches your choice:

__OK to review my medical records to check that the information I remembered was correct

__Not OK to review my medical records to check that the information I remembered was correct

Contact in the Future

The researchers will call you as new studies are developed in the future to let you know about new studies and ask you to take part in these studies. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study.

Mark the line that best matches your choice:

_____ OK to contact me in the future to tell me about other studies
_____ Not OK to contact me in the future to tell me about other studies

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You will not benefit personally from being in this research study.

What are the possible risks or discomforts involved with being in this study?

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, blood will be drawn by experienced staff and a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain. The total amount of blood that will be obtained will be no more than 3 tablespoons (45cc) depending on your age and body size. When drawing your blood, our research staff will follow all necessary safety precautions. In the highly unlikely event that our research staff is accidentally exposed to your bodily fluids (blood or urine), we will abide by the South Carolina law that provides for testing of blood to minimize threats to the health of the staff. You will be notified should this testing be necessary and the results will be reported as required by law.

The blood tests require that you not eat any food overnight. In order to limit low or high blood sugars, your blood sugar will be checked and your diabetes medication or a fast-acting carbohydrate will be given as needed.

There are no known risks associated with the nerve tests. There are no known risks associated with taking photographs of the eye. Although you will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last. When the pen-shaped blood vessel device is placed on your skin you may feel some pressure for a few seconds.

Some of the tests will look for the presence or risk of developing of the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you anxious. If this happens, you will be referred to your diabetes care provider or a local mental health professional.

Other possible risks include loss of privacy or confidentiality. Loss of privacy might happen if someone could overhear or see you taking part in the study. To limit this, we will do the study visit in a private location. Information collected will be stored in a locked filing cabinet or in a password-protected electronic file.

In addition, there may be uncommon or previously unknown risks that might occur. You should report any problems to the researchers.

If you choose not to be in the study, how does this affect your medical care?

You can still receive evaluation and treatment for your condition if you do not participate in this study. Discuss any alternative treatments with your regular doctor and/or the study doctor before you decide to participate in the study. Your decision is entirely up to you. If you decide not to participate in the study, you will not be penalized or lose any benefits and your decision will not affect your relationship with your doctor or hospital.

What if we learn about new findings or information during the study?

You will be given any new information gained during the course of the study that might affect your willingness to continue your participation.

How will your privacy be protected?

SEARCH staff will keep the information collected, tests done, and samples stored strictly private. This is so because the study has been given a Certificate of Confidentiality. This means anything you tell us will not have to be given out to anyone, even if a court orders us to do so, unless you say it's okay. But under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious harm to yourself or others.

When you enter the study, a special number will be given to you. The number will be used to identify the information and laboratory tests that will be done during this study. The special number and the information collected during this study will be sent to Wake Forest University in order to study the information. Blood and urine specimens will be sent to the University of Washington for testing or storage. The nerve test results and your special number will be sent to the University of Michigan and Wake Forest University. The eye test results and your special number will be sent to the Ocular Epidemiology Reading Center (OERC) at the University of Wisconsin-Madison and Wake Forest University. The list containing the special number assigned to you will be kept in a password-protected database at the Carolina SEARCH site. Thus, no one other than the study investigators (Dr. Mayer-Davis at the University of North Carolina (UNC), Dr. Nelson at Greenville Health System (GHS), Dr. Bowlby at the Medical University of South Carolina (MUSC), Dr. Merchant at the University of South Carolina (USC)) and the SEARCH Carolina research team will be able to link any of the

information collected in the study to you. Paper forms collected during the study will be stored in a locked filing cabinet.

No subjects will be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill and your local data collection site (GHS, MUSC, or USC) will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of UNC-Chapel Hill or your local data collection site (GHS, MUSC, or USC), research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

What will happen if you are injured by this research?

All research involves a chance that something bad might happen to you. This may include the risk of personal injury. In spite of all safety measures, you might develop a reaction or injury from being in this study. If such problems occur, the researchers will help you get medical care, but any costs for the medical care will be billed to you and/or your insurance company. The University of North Carolina at Chapel Hill and your local data collection site (GHS, MUSC, or USC) have not set aside funds to pay you for any such reactions or injuries, or for the related medical care. However, by signing this form, you do not give up any of your legal rights.

What if you want to stop before your part in the study is complete?

You can withdraw from this study at any time, without penalty.

Will you receive anything for being in this study?

You will be receiving $120 in VISA gift cards for completing a full study visit. If you complete a partial study visit due to refusal of the blood draw, you will only receive $80 in gift cards. You will get an additional $10 gift card if you are selected and complete the repeat measure of the blood vessel test. In the rare circumstance that a blood redraw is necessary; you would receive an additional $20 gift card.

If you traveled a significant distance to complete this study visit, you will be provided additional incentive to assist with travel costs. This additional incentive will be: two $20 gift cards if you traveled 70-100 miles round trip, three $20 gift cards if you traveled 101-150 miles round trip, or four $20 gift cards if you traveled more than 151 miles round trip. Travel distance will be determined based on your current home address and the location of the SEARCH visit.

Will it cost you anything to be in this study?

There will be no costs for being in the study

What if you are a student at UNC, MUSC or USC?

You may choose not to be in the study or to stop being in the study before it is over at any time. This will not affect your class standing or grades. You will not be offered or receive any

special consideration if you take part in this research.

What if you are an employee at MUSC, GHS, or USC?
Taking part in this research is not a part of your job duties, and refusing will not affect your job. You will not be offered or receive any special job-related consideration if you take part in this research.

Who is sponsoring this study?
This research is funded by the Centers for Disease Control and Prevention and the National Institutes of Health. This means that the research team is being paid by the sponsor for doing the study. The researchers do not, however, have a direct financial interest with the sponsor or in the final results of the study.

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research subject?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at Greenville Health System (864-522-2097; email jhayes@ghs.org) or at UNC-Chapel Hill (919-966-3113; email: IRB_subjects@unc.edu).

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

- -

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Cohort Study Visit

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site); Bryce Nelson, MD (GHS data collection site), Deborah Bowlby, MD (MUSC data collection site); Anwar Merchant, ScD (USC data collection site)

Subject's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_____ _____

Signature of Research Subject Date

_____

Printed Name of Research Subject

_____ _____

Signature of Research Team Member Obtaining Consent Date

_____

Printed Name of Research Team Member Obtaining Consent

Assent to Participate in a Research Study
Adolescent Subjects age 15-17, Cohort Study Visit

UNC IRB Study #10-2341
Assent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Cohort Study Visit

SEARCH Carolina Site Principal Investigators:
University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Funding Source and/or Sponsor: Centers for Disease Control and Prevention and National Institutes of Health/NIDDK
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your parent, or guardian, needs to give permission for you to be in this study. You do not have to be in this study if you don't want to, even if your parent has already given permission. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason.

Research studies are designed to obtain new knowledge that may help other people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Deciding not to be in the study or leaving the study before it is done will not affect your relationship with the researcher or your health care provider. If you are a patient with an illness, you do not have to be in the research study in order to receive health care.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn about diabetes in children and young adults. Diabetes is the third most common life-long disease in people under 20 years of age. The total number of cases of diabetes in this age group is going up. Also, types of diabetes that have not

been seen in young people are now being seen. Specifically, this project is interested in studying the following questions:

a. How common are long-term problems related to diabetes, including: retinopathy (damage to back of the eye), nephropathy (kidney damage), neuropathy (nerve damage), and damage to the heart and blood vessels?
b. How common are short-term problems, including hypoglycemia (low blood sugar) and diabetic ketoacidosis (DKA)?
c. What type of medical care are young people with diabetes receiving and how does diabetes affect the lives of these individuals?

You are being asked to be in the study because you have diabetes, already did an in-person visit with SEARCH and have had diabetes for at least five years.

Are there any reasons you should not be in this study?

You should not do a study visit if you are pregnant. You may take part in the study visit when it has been at least four months after the end of your pregnancy.

How many people will take part in this study?

A total of approximately 3900 people at five sites across the US will take part in the Cohort Study visit, including approximately 821 people from the Carolina SEARCH site.

How long will your part in this study last?

The Cohort Study visit will take about 3 ½ hours. We may contact your parent every year to be sure we have your correct contact information. If you agree to have a sample of your blood, urine or DNA stored after the Cohort Study visit, it will be saved for 10 years after the end of funding for follow-up of SEARCH participants. After this time, stored samples will be destroyed.

What will happen if you take part in the study?

A study team member will set up a time for your study visit in the morning. You will be asked to not have anything to eat or drink other than water for 8-12 hours before your visit. You will not take your usual diabetes medicines until after you have been given breakfast after your blood draw.

Laboratory Tests

Blood draw: When you arrive, blood will be taken from your arm to test blood sugar, hemoglobin A1c (a measure of long-term blood sugar control), different types of fat, c-peptide (a measure of your own insulin production), islet cell antibodies (markers in the blood for type 1 diabetes), cystatin-C and serum creatinine (measures of kidney function), and several new blood markers associated with risk for developing heart disease or stroke (apolipoprotein B, C-reactive protein, interleukin-6, leptin, and adiponectin).

The total amount of blood drawn will be based on weight tables and will not exceed 3 tablespoons. The blood draw takes about 10 minutes. If you need numbing medicine for the blood draw, SEARCH staff can provide that for you. If you agree, results commonly used in

clinical practice (hemoglobin A1c, cholesterol, c-peptide, and urine albumin/creatinine will be shared with your doctor.

Mark the line that best matches your choice:

_____ OK to share results of the tests with my doctor
_____ Not OK to share results of the test with my doctor

Urine Collection: Before your scheduled appointment, you will be mailed a container with detailed instructions to collect your first morning urine the day of your study visit. You will be asked to bring this urine container with you to your visit.

A urine sample will also be collected during the study visit. We will mark the time that you give this urine sample on a sheet of paper.

Your urine will be tested for albumin and creatinine (small particles of protein) to see how well your kidneys are working.

A sample of your blood, urine, and DNA may be saved after the visit, if you agree.

After the blood and urine samples are obtained, you will be given a snack.

Physical Exam

The physical exam will include height, weight, waist measurement, blood pressure, and examination of the skin of the neck. This will be done by trained study staff. The time to complete this part of the visit is approximately 30 minutes.

Questionnaires

The questionnaires can be completed either at home before the visit or at the visit. If you prefer, a separate visit may be scheduled to complete the forms. You and your parent will be asked questions about your diabetes, medical care, current medications, family history of diabetes, education, family income level, the food you eat, health insurance, and the effect diabetes has had on your life.

If you are 8-17 years of age, you will also be asked about stage of sexual development. If you are 10-17 years of age, you will be asked about diabetes-related topics that might be a source of fighting between you and your parent. The estimated time to complete these questionnaires is 40-60 minutes.

Additional questions for children 10 years or older

If you are 10 years of age or older, you will also be asked to answer a separate written series of questions dealing with the following health issues – physical activity, smoking, eating and sleeping patterns, depression, and whether you have ever been pregnant. You will also be asked what might be done to prevent low blood sugars, what worries you might have in relation to low blood sugars, and practices that are consistent with eating problems. This will take about 40 minutes to do. This information will not be shared

with your parent/guardian unless health issues are identified that need to be treated. The reason for this is to increase the likelihood that you will answer the questions more accurately.

Nerve and Heart Function Tests

Nerve Tests: Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking you to complete a short questionnaire, doing an examination of your feet, and doing an electrocardiogram (ECG) test of your heart.

We will ask you to answer 15 questions about foot sensation including pain, numbness, and temperature sensitivity. We will examine your feet to measure the ability to feel vibrations, reflexes, and the ability to feel light touches to the feet. The examiner will test the vibration sense by placing a vibrating instrument on the big toe. The examiner will use a rubber "hammer" to test the reflexes in the ankle. To test your sense of touch, the examiner will touch your toe several times with a thin piece of plastic. Doing the foot nerve tests will take about 10 minutes. The results of the tests will be sent to the University of Michigan for analysis.

In order to check the accuracy of our measurements, the foot test will be repeated for approximately 5% (1 in 20) of participants. Participants will be randomly selected to receive the repeat measurements. If you are selected for repeat measurements of the feet and you agree to have the measurements performed, the visit will last about 10 minutes longer. You may refuse to have the repeat measures, but still complete the foot examination.

____ You **have** been selected for the repeat measurements of the feet.
____ You **have not** been selected for repeat measurements of the feet.

Heart Rate Variability: Heart Rate Variability (HRV) is a measurement to assess the health of nerves in the heart. The test uses an ECG, or electrocardiogram. This is a test that doctors routinely use to study the heart; your doctor may have used it with you before. The examiner will place an EKG lead on each of your arms and on the left leg or two EKG leads on the chest and one on the stomach. It is important for the EKG leads to pick up a good signal of the heartbeats. In some cases it may be necessary for us to shave hair from a small area of skin to improve the heart signal. You will be asked to lie down and rest for 5 minutes before the test begins. We will then record the pattern of your heart beats for 10 minutes.

Blood Vessel Test: We will perform a test to measure how your blood vessels function. The test is called an arterial stiffness test. You will be asked to wear loose shorts or to put on a patient gown. A trained member of the research team will measure the pulse in the groin area, but will not expose your private parts. At your request a chaperone will be present during these procedures.

The following test will then be performed:

A staff member will measure the distance from your neck to the top of your sternum (breast bone), from the neck to your wrist, from the sternum to the your belly button, from your belly button to your groin, and from the groin to your foot. The electrodes (sticky pads) used for the HRV test will be left in place for the blood vessel test.

Your wrist will be touched with a small instrument shaped like a pen and the stiffness of your blood vessels will be measured. The pen instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test is painless and will be repeated 3 times.

Then the same pen-shaped instrument will be touched on the side of your neck, the top of your thigh, and your foot to measure the speed at which blood travels from the heart to that area of the body. This test will be repeated 3 times. The blood vessel tests will take about one hour.

This test is designed to be short, simple, and painless. This is a test that doctors use every day, and it is not dangerous. But if you feel uncomfortable at any time during any of these tests, just tell the examiner and he/she will immediately stop the tests.

In order to check the accuracy of our measurements, the blood vessel tests will be repeated for approximately 5% (1 in 20) of participants. Participants will be randomly selected to receive repeat measurements. If you are selected for repeat measurements of the blood vessel tests and you agree to have the measurements performed, your visit will last about 15 minutes longer. You may refuse to have the repeat measures, but still complete the blood vessel testing. You will receive additional compensation for your time if you have the repeat measures done.

____ You **have** been selected for repeat measurements of the blood vessels.
____ You **have not** been selected for repeat measurements of the blood vessels.

Eye Photographs

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will be taking 2 pictures of each of your eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for possible problems.

You will be asked to sit in a darkened room before a special camera with your chin in a chin rest. After your pupils have dilated (opened) naturally, we will take 2 photographs of the back of each of your eyes (retinas). No drops will be put in the eyes; and the camera will not touch the eyes. After each picture is taken, you may see a white or colored spot, which will disappear within a few minutes and cause no damage to the eye. We will pause for a few minutes between photographs to allow your eyes time to re-adjust to the darkened room so the pupils will dilate once again.

You will also be asked for the name and phone number of your eye doctor, and whether or not you have ever had eye injections or laser treatments on the back of your eyes. Doing the eye photographs will take about 20 minutes. We will send you the results of your eye photographs. If you agree, results will be shared with your doctor.

Mark the line that best matches your choice:

_____ OK to share results of the tests with my doctor

_____ Not OK to share results of the test with my doctor

Medical Record Review

A medical record review will be conducted for a small number (~25 people) who give us permission to check that the information you gave us regarding key medical events and markers of healthcare quality were remembered correctly.

Mark the line that best matches your choice:

__OK to review my medical records to check that the information I remembered was correct

__Not OK to review my medical records to check that the information I remembered was correct

Contact in the Future

The researchers will call your parent as new studies are developed in the future to let you know about new studies and ask you to take part in these studies. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study.

Mark the line that best matches your choice:

_____ OK to contact me in the future to tell me about other studies

_____ Not OK to contact me in the future to tell me about other studies

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You will not benefit personally from being in this research study.

What are the possible risks or discomforts involved with being in this study?

The risks from drawing blood include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the chance of these risks, blood will be drawn by experienced staff and a local numbing medicine may be used before the blood is drawn to decrease any pain. The total amount of blood that will be drawn will be no more than 3 tablespoons (45cc) depending on your age and body size. When drawing your blood, our research staff will follow all necessary safety precautions. In the highly unlikely event that our study staff is accidentally exposed to your bodily fluids (blood or urine), we will abide by the South Carolina law that provides for testing of blood to minimize threats to the health of the staff. You will be notified should this testing be necessary and the results will be reported as required by law.

You need to not eat any food overnight before you have the blood tests. In order to limit low or high blood sugars, your blood sugar will be checked and your diabetes medicine or a fast-acting carbohydrate will be given as needed.

There are no known risks associated with the nerve tests. There are no known risks related to taking photographs of the eye. Although you will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last. When the pen-shaped blood vessel device is placed on your skin you may feel some pressure for a few seconds.

Some of the tests will look for the presence or risk of getting problems related to diabetes. If these tests identify problems from diabetes or risk of getting these problems, the results may make you worried. If this happens, you will be referred to your diabetes care provider or a local mental health professional.

Other possible risks include loss of privacy or confidentiality. Loss of privacy might happen if someone could overhear or see you taking part in the study. To limit this, we will do the study visit in a private location. Information collected will be stored in a locked filing cabinet or in a password-protected electronic file.

In addition, there may be uncommon or previously unknown risks that might occur. You should report any problems to the researchers.

If you choose not to be in the study, how does this affect your medical care?
Whether you decide to take part or decline to take part in this study, your decision will not affect your medical care.

What if we learn about new findings or information during the study?
You will be given any new information gained during the study that might affect your willingness to continue to take part.

How will your privacy be protected?
SEARCH staff will keep the information collected, tests done, and samples stored strictly private. This is so because the study has been given a Certificate of Confidentiality. This means anything you tell us will not have to be given out to anyone, even if a court orders us to do so, unless you say it's okay. But under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious harm to yourself or others.

When you enter the study, a special number will be given to you. The number will be used to identify the information and laboratory tests that will be done during this study. The special number and the information collected during this study will be sent to Wake Forest University in order to study the information. Blood and urine specimens will be sent to the University of Washington for testing or storage. The nerve test results and your special number will be sent to the University of Michigan and Wake Forest University. The eye test results and your special number will be sent to the Ocular Epidemiology Reading Center (OERC) at the University of Wisconsin-Madison and Wake Forest University. The list containing the special number assigned to you will be kept in a password-protected database at the Carolina SEARCH site. So, no one other than the study investigators (Dr. Mayer-Davis at the University of North Carolina at

Chapel Hill (UNC), Dr. Nelson at Greenville Health System (GHS), Dr. Bowlby at the Medical University of South Carolina (MUSC), Dr. Merchant at the University of South Carolina (USC)) and the SEARCH Carolina research team will be able to link any of the information collected in the study to you. Paper forms collected during the study will be stored in a locked filing cabinet.

No subjects will be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill and your local data collection site (GHS, MUSC, or USC) will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of UNC-Chapel Hill or your local data collection site (GHS, MUSC or USC) , research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

What will happen if you are injured by this research?

All research involves a chance that something bad might happen to you. This may include the risk of personal injury. In spite of all safety measures, you might develop a reaction or injury from being in this study. If such problems occur, the researchers will help you get medical care.

What if you want to stop before your part in the study is complete?

You can withdraw from this study at any time, or your parents can withdraw you, without penalty.

Will you receive anything for being in this study?

You will get $80 in VISA gift cards for completing a full study visit. If you complete a partial study visit due to refusal of the blood draw, you will only receive $40 in gift cards. Your parents will also get $40 in gift cards at the end of the visit. You will get an additional $10 gift card if you are selected and do the repeat measure of the blood vessel test. In the rare circumstance that a blood redraw is necessary; you would receive an additional $20gift card.

Your parents will also get additional incentive to assist with travel costs, if you and your parent traveled a significant distance to do the study visit. This additional incentive will be: two $20 gift cards if you traveled 70-100 miles round trip, three $20 gift cards if you traveled 101-150 miles round trip, or four $20 gift cards if you traveled more than 151 miles round trip. Travel distance will be determined based on your current home address and the location of the SEARCH visit.

Who is sponsoring this study?

This research is funded by the Centers for Disease Control and Prevention and the National Institutes of Health. This means that the research team is being paid by the sponsor for doing the study. The researchers do not, however, have a direct financial interest with the sponsor or in the final results of the study.

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research subject?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at Greenville Health System (864-522-2097; email jhayes@ghs.org) or at UNC-Chapel Hill (919-966-3113; email: IRB_subjects@unc.edu).

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

- -

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Cohort Study Visit

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site); Bryce Nelson, MD (GHS data collection site), Deborah Bowlby, MD (MUSC data collection site); Anwar Merchant, ScD (USC data collection site)

Subject's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_____ _____
Your signature if you agree to be in the study Date

_____
Printed name if you agree to be in the study

_____ _____
Signature of Research Team Member Obtaining Assent Date

_____
Printed Name of Research Team Member Obtaining Assent

Consent to Participate in a Research Study
Adult Subjects, SEARCH 3 Registry Study Visit

UNC IRB Study #10-2341
Consent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

People in charge of the study:
University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason.

Research studies are designed to obtain new knowledge that may help other people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Deciding not to be in the study or leaving the study before it is done will not affect your relationship with the researcher or your health care provider. If you are a patient with an illness, you do not have to be in the research study in order to receive health care.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn about diabetes in children and young adults. Diabetes is the third most common life-long disease in people under 20 years of age. The total number of cases of diabetes in this age group is increasing. Also, types of diabetes that have not been seen in young people are now being seen. These changes have resulted in gaps in knowledge about the total number of cases and types of diabetes in the United States, the type of care young people with diabetes receive, and the effect diabetes has on their lives. This research study will gather information to answer these questions.

You are being asked to be in the study because you have diabetes and were under age 20 and living in South Carolina around the time you developed diabetes.

Are there any reasons you should not be in this study?
You should not complete a study visit if you are currently pregnant. You may take part in the study visit when it has been at least four months after the end of your pregnancy.

How many people will take part in this study?
A total of approximately 900 people at five sites across the US will take part in the Registry Study visit, including approximately 211 people from the Carolina SEARCH site.

How long will your part in this study last?
The Registry Study visit will take about 40 minutes. We may contact you every year to be sure we have your correct contact information. If you agree to have a sample of your blood, urine or DNA stored following the Registry Study visit, it will be saved for 10 years after the end of funding for follow-up of SEARCH participants. After this time, stored samples will be destroyed.

What will happen if you take part in the study?
A research team member will set up an appointment for you in the early morning. You will come to the appointment after not having anything to eat or drink other than water for 8-12 hours. You will not take your usual diabetes medicines until after you have been given breakfast during the appointment.

Laboratory Tests
When you arrive, blood will be taken from your arm to measure blood sugar, hemoglobin A1c (a measure of long-term blood sugar control), different types of cholesterol (fat), c-peptide (a measure of your own insulin production), and islet cell antibodies (markers in the blood for type 1 diabetes). A genetic marker for diabetes risk (HLA genes) will also be tested. The total amount of blood drawn will be based on weight tables and will not exceed 3 tablespoons. If you agree, results commonly used in clinical practice (hemoglobin A1c, cholesterol, c-peptide, islet cell antibodies, and urine albumin/creatinine) will be shared with your doctor.

Mark the line that best matches your choice:
_____ OK to share results of the tests with my doctor
_____ Not OK to share results of the test with my doctor

Urine Collection: Before your scheduled appointment, you will be mailed a container with detailed instructions to collect your first morning urine the day of your study visit. You will be asked to bring this urine container with you to your visit.

A urine sample will also be collected during the study visit.

Your urine will be tested for albumin and creatinine (small particles of protein) to see how well your kidneys are working.

A sample of your blood, urine, and DNA may be saved after the visit, if you agree.

After the blood and urine samples are obtained, you can take your pills or insulin and you will be given a snack.

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Physical Exam and Questionnaires

After eating, we will ask you some questions about the medicines you use and the food you eat. A physical examination will be done by trained study staff. The physical examination will include height, weight, waist measurement, blood pressure, and examination of the skin on the neck. Then you will do a brief form to update your contact information. We will also ask you some questions about the types of providers you see for your diabetes care.

Contact in the Future

The researchers will call you as new studies are developed in the future to let you know about new studies and ask you to take part in these studies. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study.

Mark the line that best matches your choice:

_____ OK to contact me in the future to tell me about other studies

_____ Not OK to contact me in the future to tell me about other studies

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You will not benefit personally from being in this research study.

What are the possible risks or discomforts involved with being in this study?

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the chance of these risks, blood will be drawn by experienced staff and a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain. The total amount of blood that will be obtained will be no more than 3 tablespoons (45cc) depending on your age and body size. When drawing your blood, our research staff will follow all necessary safety precautions. In the highly unlikely event that our research staff is accidentally exposed to your bodily fluids (blood or urine), we will abide by the South Carolina law that provides for testing of blood to minimize threats to the health of the staff. You will be notified should this testing be necessary and the results will be reported as required by law.

The blood tests require that you not eat any food overnight. In order to limit low or high blood sugars, your blood sugar will be checked and your diabetes medication or a fast-acting carbohydrate will be given as needed.

Some of the tests will look for the presence or risk of developing of the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you anxious. If this happens, you will be referred to your diabetes care provider or a local mental health professional.

Other possible risks include loss of privacy or confidentiality. Loss of privacy might happen if someone could overhear or see you taking part in the study. To limit this, we will do the study visit in a private location. Information collected will be stored in a locked filing cabinet or in a password-protected electronic file.

In addition, there may be uncommon or previously unknown risks that might occur. You should report any problems to the researchers.

If you choose not to be in the study, how does this affect your medical care?
You can still receive evaluation and treatment for your condition if you do not participate in this study. Discuss any alternative treatments with your regular doctor and/or the study doctor before you decide to participate in the study. Your decision is entirely up to you. If you decide not to participate in the study, you will not be penalized or lose any benefits and your decision will not affect your relationship with your doctor or hospital.

What if we learn about new findings or information during the study?
You will be given any new information gained during the course of the study that might affect your willingness to continue your participation.

How will your privacy be protected?
SEARCH staff will keep the information collected, tests done, and samples stored strictly private. This is so because the study has been given a Certificate of Confidentiality. This means anything you tell us will not have to be given out to anyone, even if a court orders us to do so, unless you say it's okay. But under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious harm to yourself or others.

When you enter the study, a special number will be given to you. The number will be used to identify the information and laboratory tests that will be done during this study. The special number and the information collected during this study will be sent to Wake Forest University in order to study the information. Blood and urine specimens will be sent to the University of Washington for testing or storage. The list containing the special number assigned to you will be kept in a password-protected database at the Carolina SEARCH site. Thus, no one other than the study investigators (Dr. Mayer-Davis at the University of North Carolina (UNC), Dr. Nelson at Greenville Health System (GHS), Dr. Bowlby at the Medical University of South Carolina (MUSC), Dr. Merchant at the University of South Carolina (USC)) and the SEARCH Carolina research team will be able to link any of the information collected in the study to you. Paper forms collected during the study will be stored in a locked filing cabinet.

No subjects will be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill and your local data collection site (GHS, MUSC, or USC) will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the UNC-Chapel Hill or your local data collection site (GHS, MUSC, or USC), research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

What will happen if you are injured by this research?
All research involves a chance that something bad might happen to you. This may include the risk of personal injury. In spite of all safety measures, you might develop a reaction or injury from being in this study. If such problems occur, the researchers will help you get medical care, but any costs for the medical care will be billed to you and/or your insurance company. The University of North Carolina at Chapel Hill and your local data collection site (GHS, MUSC or USC) have not set aside funds to pay you for any such reactions or injuries, or for the related medical care. However, by signing this form, you do not give up any of your legal rights.

What if you want to stop before your part in the study is complete?
You can withdraw from this study at any time, without penalty.

Will you receive anything for being in this study?
You will be receiving $80 in store gift cards for taking part in this study. In the rare circumstance that a blood redraw is necessary; you would receive an additional $20 gift card.

If you traveled a significant distance to complete this study visit, you will be provided additional incentive to assist with travel costs. This additional incentive will be: two $20 gift cards if you traveled 70-100 miles round trip, three $20 gift cards if you traveled 101-150 miles round trip, or four $20 gift cards if you traveled more than 151 miles round trip. Travel distance will be determined based on your current home address and the location of the SEARCH visit.

Will it cost you anything to be in this study?
There will be no costs for being in the study

What if you are a student at UNC, MUSC or USC?
You may choose not to be in the study or to stop being in the study before it is over at any time. This will not affect your class standing or grades. You will not be offered or receive any special consideration if you take part in this research.

What if you are an employee at MUSC, GHS, or USC?
Taking part in this research is not a part of your job duties, and refusing will not affect your job. You will not be offered or receive any special job-related consideration if you take part in this research.

Who is sponsoring this study?
This research is funded by the Centers for Disease Control and Prevention and the National Institutes of Health. This means that the research team is being paid by the sponsor for doing the study. The researchers do not, however, have a direct financial interest with the sponsor or in the final results of the study.

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research subject?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at Greenville Health System (864-522-2097; email: jhayes@ghs.org) or at UNC-Chapel Hill (919-966-3113; email: IRB_subjects@unc.edu.

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

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Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site);
Bryce Nelson, MD (GHS data collection site);
Deborah Bowlby, MD (MUSC data collection site);
Anwar Merchant, ScD (USC data collection site)

Subject's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_____ _____
Signature of Research Subject Date

_____
Printed Name of Research Subject

_____ _____
Signature of Research Team Member Obtaining Consent Date

_____
Printed Name of Research Team Member Obtaining Consent

Assent to Participate in a Research Study
Adolescent Subjects age 15-17, Registry Study Visit

UNC IRB Study #10-2341
Assent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

SEARCH Carolina Site Principal Investigators:
University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Funding Source and/or Sponsor: Centers for Disease Control and Prevention and National Institutes of Health/NIDDK
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your parent, or guardian, needs to give permission for you to be in this study. You do not have to be in this study if you don't want to, even if your parent has already given permission. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason.

Research studies are designed to obtain new knowledge that may help other people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Deciding not to be in the study or leaving the study before it is done will not affect your relationship with the researcher or your health care provider. If you are a patient with an illness, you do not have to be in the research study in order to receive health care.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn about diabetes in children and young adults. Diabetes is the third most common life-long disease in people under 20 years of age. The total number of cases of diabetes in this age group is increasing. Also, types of diabetes that have not

been seen in young people are now being seen. These changes have resulted in gaps in knowledge about the total number of cases and types of diabetes in the United States, the type of care young people with diabetes receive, and the effect diabetes has on their lives. This research study will gather information to answer these questions.

You are being asked to be in the study because you have diabetes and were under age 20 and living in South Carolina around the time you developed diabetes.

Are there any reasons you should not be in this study?

You should not do a study visit if you are pregnant. You may take part in the study visit when it has been at least four months after the end of your pregnancy.

How many people will take part in this study?

A total of about 900 people at five sites across the US will take part in the Registry Study visit, including about 211 people from the Carolina SEARCH site.

How long will your part in this study last?

The Registry Study visit will take about 40 minutes. We may contact your parent every year to be sure we have your correct contact information. If you agree to have a sample of your blood, urine or DNA stored after the Registry Study visit, it will be saved for 10 years after the end of funding for follow-up of SEARCH participants. After this time, stored samples will be destroyed.

What will happen if you take part in the study?

A study team member will set up a time for your study visit in the morning. You will be asked to not have anything to eat or drink other than water for 8-12 hours before your visit. You will not take your usual diabetes medicines until after you have been given breakfast after your blood draw.

Laboratory Tests

When you arrive, blood will be taken from your arm to test blood sugar, hemoglobin A1c (a measure of long-term blood sugar control), different types of fat, c-peptide (a measure of your own insulin production), and islet cell antibodies (markers in the blood for type 1 diabetes). A genetic marker for diabetes risk (HLA genes) will also be tested. The total amount of blood drawn will be based on weight tables and will not exceed 3 tablespoons. If you agree, results commonly used in clinical practice (hemoglobin A1c, cholesterol, c-peptide, islet cell antibodies, and urine albumin/creatinine) will be shared with your doctor.

Mark the line that best matches your choice:

_____ OK to share results of the tests with my doctor

_____ Not OK to share results of the test with my doctor

Urine Collection: Before your scheduled appointment, you will be mailed a container with detailed instructions to collect your first morning urine the day of your study visit. You will be asked to bring this urine container with you to your visit.

A urine sample will also be collected during the study visit.

Your urine will be tested for albumin and creatinine (small particles of protein) to see how well your kidneys are working.

A sample of your blood, urine, and DNA may be saved after the visit, if you agree.

After the blood and urine samples are obtained, you can take your pills or insulin and you will be given a snack.

Physical Exam and Questionnaires

After eating, we will ask you about the medicines you use and the food you eat. A physical examination will be done by trained study staff. The physical exam will include height, weight, waist measurement, blood pressure, and examination of the skin on the neck. Then you or your parent will do a brief form to update your contact information. We will also ask you or your parent about the types of providers you see for your diabetes care.

Contact in the Future

The researchers will call your parent as new studies are developed in the future to let you know about new studies and ask you to take part in these studies. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study.

Mark the line that best matches your choice:

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_____ Not OK to contact me in the future to tell me about other studies

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You will not benefit personally from being in this research study.

What are the possible risks or discomforts involved with being in this study?

The risks from drawing blood include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the chance of these risks, blood will be drawn by experienced staff and a local numbing medicine may be used before the blood is drawn to decrease any pain. The total amount of blood that will be drawn will be no more than 3 tablespoons (45cc) depending on your age and body size. When drawing your blood, our research staff will follow all necessary safety precautions. In the highly unlikely event that our study staff is accidentally exposed to your bodily fluids (blood or urine), we will abide by the South Carolina law that provides for testing of blood to minimize threats to the health of the staff. You will be notified should this testing be necessary and the results will be reported as required by law.

You need to not eat any food overnight before you have the blood tests. In order to limit low or high blood sugars, your blood sugar will be checked and your diabetes medicine or a fast-acting carbohydrate will be given as needed.

Some of the tests will look for the presence or risk of getting problems from diabetes. If these tests identify problems from diabetes or risk of getting these problems, the results may make you worried. If this happens, you will be referred to your diabetes care provider or a local mental health professional.

Other possible risks include loss of privacy or confidentiality. Loss of privacy might happen if someone could overhear or see you taking part in the study. To limit this, we will do the study visit in a private location. Information collected will be stored in a locked filing cabinet or in a password-protected electronic file.

In addition, there may be uncommon or previously unknown risks that might occur. You should report any problems to the researchers.

If you choose not to be in the study, how does this affect your medical care?
Whether you decide to take part or decline to take part in this study, your decision will not affect your medical care.

What if we learn about new findings or information during the study?
You will be given any new information gained during the study that might affect your willingness to continue to take part.

How will your privacy be protected?
SEARCH staff will keep the information collected, tests done, and samples stored strictly private. This is so because the study has been given a Certificate of Confidentiality. This means anything you tell us will not have to be given out to anyone, even if a court orders us to do so, unless you say it's okay. But under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious harm to yourself or others.

When you enter the study, a special number will be given to you. The number will be used to identify the information and laboratory tests that will be done during this study. The special number and the information collected during this study will be sent to Wake Forest University in order to study the information. Blood and urine specimens will be sent to the University of Washington for testing or storage. The list containing the special number assigned to you will be kept in a password-protected database at the Carolina SEARCH site. So, no one other than the study investigators (Dr. Mayer-Davis at the University of North Carolina (UNC), Dr. Nelson at Greenville Health System (GHS), Dr. Bowlby at the Medical University of South Carolina (MUSC), Dr. Merchant at the University of South Carolina (USC)) and the SEARCH Carolina research team will be able to link any of the information collected in the study to you. Paper forms collected during the study will be stored in a locked filing cabinet.

No subjects will be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill and your local data collection site (GHS, MUSC, or USC) will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of UNC-Chapel Hill or your local data collection site (GHS, MUSC, or USC), research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

What will happen if you are injured by this research?
All research involves a chance that something bad might happen to you. This may include the risk of personal injury. In spite of all safety measures, you might develop a reaction or injury from being in this study. If such problems occur, the researchers will help you get medical care.

What if you want to stop before your part in the study is complete?
You can withdraw from this study at any time, or your parents can withdraw you, without penalty.

Will you receive anything for being in this study?
You will get $40 in store gift cards for taking part in this study. Your parents will also get $40 in gift cards at the end of the visit. In the rare circumstance that a blood redraw is necessary; you would receive an additional $20 gift card.

Your parents will also get additional incentive to assist with travel costs, if you and your parent traveled a significant distance to do the study visit. This additional incentive will be: two $20 gift cards if you traveled 70-100 miles round trip, three $20 gift cards if you traveled 101-150 miles round trip, or four $20 gift cards if you traveled more than 151 miles round trip. Travel distance will be determined based on your current home address and the location of the SEARCH visit.

Who is sponsoring this study?
This research is funded by the Centers for Disease Control and Prevention and the National Institutes of Health. This means that the research team is being paid by the sponsor for doing the study. The researchers do not, however, have a direct financial interest with the sponsor or in the final results of the study.

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research subject?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board

at Greenville Health System (864-522-2097;email jhayes@ghs.org) or at UNC-Chapel Hill (919-966-3113; email: IRB_subjects@unc.edu).

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

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Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site);
Bryce Nelson, MD (GHS data collection site);
Deborah Bowlby, MD (MUSC data collection site);
Anwar Merchant, ScD (USC data collection site)

Subject's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_____ _____
Your signature if you agree to be in the study Date

_____
Printed name if you agree to be in the study

_____ _____
Signature of Research Team Member Obtaining Assent Date

_____
Printed Name of Research Team Member Obtaining Assent

Parental Permission for a Minor Child to Participate in a Research Study
SEARCH 3 Cohort Study Visit

UNC IRB Study #10-2341
Consent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Cohort Study Visit

SEARCH Carolina Site Principal Investigators:
University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Funding Source and/or Sponsor: Centers for Disease Control and Prevention and National Institutes of Health/NIDDK
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

What are some general things you and your child should know about research studies?

You are being asked to allow your child to take part in a research study. To join the study is voluntary. You may refuse to give permission, or you may withdraw your permission for your child to be in the study, for any reason. Even if you give your permission, your child can decide not to be in the study or to leave the study early.

Research studies are designed to obtain new knowledge that may help other people in the future. Your child may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Deciding not to be in the study or leaving the study before it is done will not affect your or your child's relationship with the researcher or with the health care provider. If your child is a patient with an illness, your child does not have to be in the research study in order to receive health care.

Details about this study are discussed below. It is important that you and your child understand this information so that you and your child can make an informed choice about being in this research study. You will be given a copy of this permission form. You and your child should ask the researchers named above, or staff members who may assist them, any questions you or your child have about this study at any time.

What is the purpose of this study?

The purpose of this research study is to learn about diabetes in children and young adults. Diabetes is the third most common life-long disease in people under 20 years of age. The total

number of cases of diabetes in this age group is increasing. Also, types of diabetes that have not been seen in young people are now being seen. Specifically, this project is interested in studying the following questions:

a. How common are long-term complications related to diabetes, including: retinopathy (damage to back of the eye), nephropathy (kidney damage), neuropathy (nerve damage), and damage to the heart and blood vessels?
b. How common are short-term complications, including hypoglycemia (low blood sugar) and diabetic ketoacidosis (DKA)?
c. What type of medical care are young people with diabetes receiving and how does diabetes affect the lives of these individuals?

Your child is being asked to be in the study because he/she has diabetes, previously did an in-person visit with the SEARCH study and has had diabetes for at least five years.

Are there any reasons your child should not be in this study?

Your child should not complete a study visit if currently pregnant. She may take part in the study visit when it has been at least four months after the end of the pregnancy.

How many people will take part in this study?

A total of approximately 3900 people at five sites across the US will take part in the Cohort Study visit, including approximately 821 people from the Carolina SEARCH site.

How long will your child's part in this study last?

The Cohort Study visit will take about 3 ½ hours. We may contact you every year to be sure we have your correct contact information. If you and your child agree to have a sample of blood, urine or DNA stored following the Cohort Study visit, it will be saved for 10 years after the end of funding for follow-up of SEARCH participants. After this time, stored samples will be destroyed.

What will happen if your child takes part in the study?

A research team member will set up an appointment for your child in the early morning. Your child will come to the appointment after not having anything to eat or drink other than water for 8-12 hours. Your child will not take your usual diabetes medicines until after he/she has been given breakfast during the appointment.

Laboratory Tests

Blood draw: When you arrive, blood will be taken from your child's arm to measure blood sugar, hemoglobin A1c (a measure of long-term blood sugar control), different types of cholesterol (fat), c-peptide (a measure of your child's own insulin production), islet cell antibodies (markers in the blood for type 1 diabetes), cystatin-C and serum creatinine (measures of kidney function), and several new blood markers associated with risk for developing heart disease or stroke (apolipoprotein B, C-reactive protein, interleukin-6, leptin, and adiponectin).

The total amount of blood drawn will be based on weight tables and will not exceed 3 tablespoons. The blood draw takes about 10 minutes. If your child needs numbing medicine for

the blood draw, SEARCH staff can provide that. If you agree, results commonly used in clinical practice (hemoglobin A1c, cholesterol, c-peptide, and urine albumin/creatinine) will be shared with your child's doctor.

Mark the line that best matches your choice:

_____ OK to share results of the tests with my child's doctor
_____ Not OK to share results of the test with my child's doctor

Urine Collection: Before your child's scheduled appointment, you will be mailed a container with detailed instructions to collect the first morning urine the day of the study visit. You will be asked to bring this urine container with you to your child's visit.

A urine sample will also be collected during the study visit.

Your child's urine will be tested for albumin and creatinine (small particles of protein) to see how well your kidneys are working.

A sample of your child's blood, urine, and DNA may be saved after the visit, if you and your child agree.

After the blood and urine samples are obtained, your child can take his/her diabetes pills or insulin and will be given a snack.

Physical Exam

The physical exam will include height, weight, waist measurement, blood pressure, and examination of the skin of the neck. This will be done by trained study staff. The time to complete this part of the visit is approximately 30 minutes.

Questionnaires:

The questionnaires can be completed either at home before the visit or at the visit. If you prefer, a separate visit may be scheduled to complete the forms. You and your child will be asked questions about your child's diabetes, medical care, current medications, family history of diabetes, education, family income level, the food your child eats, health insurance, and the effect diabetes has had on your life.

If your child is 8-17 years of age, he/she will also be asked about stage of sexual development. If your child is 10-17 years of age, he/she will be asked about diabetes-related topics that might be a source of conflict between you and your child. The estimated time to complete these questionnaires is 40-60 minutes.

Additional questions for children 10 years or older

If your child is 10 years of age or older, your child will be asked to answer a separate written series of questions dealing with the following health issues – physical activity, smoking, eating and sleeping patterns, depression, and whether your child has ever been pregnant. Your child will also be asked what might be done to prevent low blood sugars,

what worries he/she might have in relation to low blood sugars, and practices that are consistent with eating problems. This will take about 40 minutes to do. As a parent/guardian, this information will not be shared with you unless health issues are identified that need to be treated. The reason for this is to increase the likelihood that your child will answer the questions more accurately.

Nerve and Heart Function Tests

Nerve Tests: Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking your child to complete a short questionnaire, doing an examination of your child's feet, and doing an electrocardiogram (ECG) test of your child's heart.

We will ask your child to answer 15 questions about foot sensation including pain, numbness, and temperature sensitivity. We will examine your child's feet to measure the ability to feel vibrations, reflexes, and the ability to feel light touches to the feet. The examiner will test the vibration sense by placing a vibrating instrument on the big toe. The examiner will use a rubber "hammer" to test the reflexes in the ankle. To test your child's sense of touch, the examiner will touch your child's toe several times with a thin piece of plastic. Doing the foot nerve tests will take about 10 minutes. The results of the tests will be sent to the University of Michigan for analysis.

In order to check the accuracy of our measurements, the foot test will be repeated for approximately 5% (1 in 20) of participants. Participants will be randomly selected to receive the repeat measurements. If your child is selected for repeat measurements of the feet and you agree to have the measurements performed, the visit will last about 10 minutes longer. You child may refuse to have the repeat measures, but still complete the foot examination.

____ Your child **has** been selected for the repeat measurements of the feet.
____ Your child **has not** been selected for repeat measurements of the feet.

Heart Rate Variability: Heart Rate Variability (HRV) is a measurement to assess the health of nerves in the heart. The test uses an ECG, or electrocardiogram. This is a test that doctors routinely use to study the heart; your doctor may have used it with you or your child before. The examiner will place an EKG lead on each of your child's arms and on the left leg or two EKG leads on the chest and one on the stomach. It is important for the EKG leads to pick up a good signal of the heartbeats. In some cases it may be necessary for us to shave hair from a small area of skin to improve the heart signal. Your child will be asked to lie down and rest for 5 minutes before the test begins. We will then record the pattern of your child's heartbeats for 10 minutes.

Blood Vessel Test: We will perform a test to measure how your child's blood vessels function. The test is called an arterial stiffness test. Your child will be asked to wear loose shorts or to put on a patient gown. A trained member of the research team will measure the pulse in the groin area, but will not expose your child's private parts. At your or your child's request a chaperone will be present during these procedures.

The following test will then be performed:

A staff member will measure the distance from your child's neck to the top of your child's sternum (breast bone), from the neck to your child's wrist, from the sternum to the belly button, from the belly button to your child's groin, and from your child's groin to your child's foot. The electrodes (sticky pads) used for the HRV test will be left in place for the blood vessel test.

Your child's wrist will be touched with a small instrument shaped like a pen and the stiffness of your child's blood vessels will be measured. The pen instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test is painless and will be repeated 3 times.

Then the same pen-shaped instrument will be touched on the side of your child's neck, the top of your child's thigh, and your child's foot to measure the speed at which blood travels from the heart to that area of the body. This test will be repeated 3 times. The blood vessel tests will take about one hour.

This test is designed to be short, simple, and painless. This is a test that doctors use every day, and it is not dangerous. But if your child feels uncomfortable at any time during any of these tests, just tell the examiner and he/she will immediately stop the tests.

In order to check the accuracy of our measurements, the blood vessel tests will be repeated for approximately 5% (1 in 20) of participants. Participants will be randomly selected to receive repeat measurements. If your child is selected for repeat measurements of the blood vessel tests and you/your child agree to have the measurements performed, your child's visit will last about 15 minutes longer. You/your child may refuse to have the repeat measures, but still complete the blood vessel testing. Your child will receive additional compensation for your time if you have the repeat measures done.

____ Your child **has** been selected for repeat measurements of the blood vessels.
____ Your child **has not** been selected for repeat measurements of the blood vessels.

Eye Photographs

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will be taking 2 pictures of each of your child's eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for possible problems.

Your child will be asked to sit in a darkened room before a special camera with your child's chin in a chin rest. After your child's pupils have dilated (opened) naturally, we will take 2 photographs of the back of each of your child's eyes (retinas). No drops will be put in the eyes; and the camera will not touch the eyes. After each picture is taken, your child may see a white or colored spot, which will disappear within a few minutes and cause no damage to the eye. We will pause for a few minutes between photographs to allow your child's eyes time to re-adjust to the darkened room so the pupils will dilate once again.

You will also be asked for the name and phone number of your child's eye doctor, and whether or not your child has ever had eye injections or laser treatments on the back of the eyes. Doing the eye photographs will take about 20 minutes. We will send you the results of your child's eye photographs. If you agree, results will be shared with your child's doctor.

Mark the line that best matches your choice:

_____ OK to share results of the tests with my child's doctor
_____ Not OK to share results of the test with my child's doctor

Medical Record Review

A medical record review will be conducted for a small number (~25 people) who give us permission to check that the information you gave us regarding key medical events and markers of healthcare quality were remembered correctly.

Mark the line that best matches your choice:

__OK to review my child's medical records to check that the information I remembered was correct

__Not OK to review my child's medical records to check that the information I remembered was correct

Contact in the Future

The researchers will call you as new studies are developed in the future to let you know about new studies and ask you/your child to take part in these studies. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study.

Mark the line that best matches your choice:

_____ OK to contact me/my child in the future to tell me about other studies
_____ Not OK to contact me/my child in the future to tell me about other studies

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. Your child will not benefit personally from being in this research study.

What are the possible risks or discomforts involved with being in this study?

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, blood will be drawn by experienced staff and a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain. The total amount of blood that will be obtained will be no more than 3 tablespoons (45cc) depending on your child's age and body size. When drawing your child's blood, our research staff will follow all necessary safety precautions. In the highly unlikely event that our research staff is accidentally exposed to your child's bodily fluids (blood or urine), we will abide by the South Carolina law that provides for testing of blood to minimize

threats to the health of the staff. You will be notified should this testing be necessary and the results will be reported as required by law.

The blood tests require that your child not eat any food overnight. In order to limit low or high blood sugars, your child's blood sugar will be checked and his/her diabetes medication or a fast-acting carbohydrate will be given as needed.

There are no known risks associated with the nerve tests. There are no known risks associated with taking photographs of the eye. Although your child will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last. When the pen-shaped blood vessel device is placed on your child's skin he/she may feel some pressure for a few seconds.

Some of the tests will look for the presence or risk of developing of the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you or your child anxious. If this happens, you will be referred to your child's diabetes care provider or a local mental health professional.

Other possible risks include loss of privacy or confidentiality. Loss of privacy might happen if someone could overhear or see you taking part in the study. To limit this, we will do the study visit in a private location. Information collected will be stored in a locked filing cabinet or in a password-protected electronic file.

In addition, there may be uncommon or previously unknown risks that might occur. You should report any problems to the researchers.

If you choose not to give permission for your child to be in the study, how does this affect your child's medical care?

You can still receive evaluation and treatment for your condition if you do not participate in this study. Discuss any alternative treatments with your regular doctor and/or the study doctor before you decide to participate in the study. Your decision is entirely up to you. If you decide not to participate in the study, you will not be penalized or lose any benefits and your decision will not affect your relationship with your doctor or hospital.

What if we learn about new findings or information during the study?

You and your child will be given any new information gained during the course of the study that might affect your willingness to continue your child's participation in the study.

How will your child's privacy be protected?

SEARCH staff will keep the information collected, tests done, and samples stored strictly private. This is so because the study has been given a Certificate of Confidentiality. This means anything you or your child tells us will not have to be given out to anyone, even if a court orders us to do so, unless you say it's okay. But under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious harm to yourself or others.

When you enter the study, a special number will be given to your child. The number will be used to identify the information and laboratory tests that will be done during this study. The special number and the information collected during this study will be sent to Wake Forest University in order to study the information. Blood and urine specimens will be sent to the University of Washington for testing or storage. The nerve test results and your child's special number will be sent to the University of Michigan and Wake Forest University. The eye test results and your child's special number will be sent to the Ocular Epidemiology Reading Center (OERC) at the University of Wisconsin-Madison and Wake Forest University. The list containing the special number assigned to your child will be kept in a password-protected database at the Carolina SEARCH site. Thus, no one other than the study investigators (Dr. Mayer-Davis at the University of North Carolina (UNC), Dr. Nelson at Greenville Health System (GHS), Dr. Bowlby at the Medical University of South Carolina (MUSC), Dr. Merchant at the University of South Carolina (USC)) and the SEARCH Carolina research team will be able to link any of the information collected in the study to your child. Paper forms collected during the study will be stored in a locked filing cabinet.

No subjects will be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill and your local data collection site (GHS, MUSC, or USC) will take steps allowable by law to protect the privacy of personal information. In some cases, your child's information in this research study could be reviewed by representatives of UNC-Chapel Hill or your local data collection site (GHS, MUSC, or USC), research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

What will happen if your child is injured by this research?

All research involves a chance that something bad might happen. This may include the risk of personal injury. In spite of all safety measures, your child might develop a reaction or injury from being in this study. If such problems occur, the researchers will help your child get medical care, but any costs for the medical care will be billed to you and/or your insurance company. The University of North Carolina at Chapel Hill and your local data collection site (GHS, MUSC, or USC) have not set aside funds to pay you for any such reactions or injuries, or for the related medical care. However, by signing this form, you and your child do not give up any of your legal rights.

What if you or your child wants to stop before your child's part in the study is complete?

You can withdraw your child from this study at any time, without penalty.

Will you or your child receive anything for being in this study?

You will get $40 in VISA gift cards at the end of the Cohort Study Visit. Your child will get $80 in gift cards if he/she completes a full study visit. If your child completes a partial study visit due to refusal of the blood draw, he/she will only receive $40 in gift cards. Your child will get an additional $10 gift card if he/she is selected and completes the repeat measure of the blood

vessel test. In the rare circumstance that a blood redraw is necessary; your child would receive an additional $20 gift card.

If you traveled a significant distance to complete this study visit, you will be provided additional incentive to assist with travel costs. This additional incentive will be: two $20 gift cards if you traveled 70-100 miles round trip, three $20 gift cards if you traveled 101-150 miles round trip, or four $20 gift cards if you traveled more than 151 miles round trip. Travel distance will be determined based on your current home address and the location of the SEARCH visit.

Will it cost you anything for your child to be in this study?
There will be no costs for being in the study

What if you are a student at MUSC or USC?
You may choose not to give permission for your child to be in the study or to stop being in the study before it is over at any time. This will not affect your class standing or grades. You will not be offered or receive any special consideration if your child takes part in this research.

What if you are an employee at MUSC, GHS, or USC?
Your child's taking part in this research is not a part of your job duties, and refusing to give permission will not affect your job. You will not be offered or receive any special job-related consideration if your child takes part in this research.

Who is sponsoring this study?
This research is funded by the Centers for Disease Control and Prevention and the National Institutes of Health. This means that the research team is being paid by the sponsor for doing the study. The researchers do not, however, have a direct financial interest with the sponsor or in the final results of the study.

What if you or your child has questions about this study?
You and your child have the right to ask, and have answered, any questions you may have about this research. If there are questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

What if you or your child has questions about his/her rights as a research subject?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you or your child has questions or concerns about your child's rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at Greenville Health System (864-522-2097; email jhayes@ghs.org) or at UNC-Chapel Hill (919-966-3113;email: IRB_subjects@unc.edu).

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

- -

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Cohort Study Visit

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site);
Bryce Nelson, MD (GHS data collection site);
Deborah Bowlby, MD (MUSC data collection site);
Anwar Merchant, ScD (USC data collection site)

Parent's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily give permission to allow my child to participate in this research study.

____
Printed Name of Research Subject (Child)

____ _______________
Signature of Parent Date

____
Printed Name of Parent

____ _______________
Signature of Research Team Member Obtaining Permission Date

____
Printed Name of Research Team Member Obtaining Permission

Assent to Participate in a Research Study
Minor Subjects (7-14 yrs), SEARCH 3 Cohort Study Visit

UNC IRB Study #10-2341
Consent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Cohort Study Visit

People in charge of the study:
University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

The people named above are doing a research study.

These are some things we want you to know about research studies:
Your parent needs to say it is okay for you to be in this study. You do not have to be in this study if you don't want to, even if your parent says it is okay for you to be in the study.

You may stop being in the study at any time. If you decide to stop, no one will be angry or upset with you.

Sometimes good things happen to people who take part in studies, and sometimes things we may not like happen. We will tell you more about these things below.

Why are they doing this research study?
The reason for doing this study is to learn about diabetes in children and young adults. Diabetes is the third most common life-long disease in people under 20 years of age. The total number of cases of diabetes in this age group is going up. Also, types of diabetes that have not been seen in young people are now being seen. Specifically, this project is interested in studying the following questions:

a. How common are long-term problems from having diabetes, like problems with the eyes, nerves, or other parts of the body?
b. How common are short-term problems from having diabetes, like low blood sugar?
c. What type of medical care are young people with diabetes getting and how does diabetes affect them?

Why are you being asked to be in this research study?
You are being asked to be in this study because you have diabetes, you already did a visit with SEARCH, and you have had diabetes for at least five years.

How many people will take part in this study?
A total of about 3900 people at five sites in the U.S. will take part in this study, including about 821 people from South Carolina.

What will happen during this study?
During this study we will ask to:

- Measure you and check your blood pressure. This will be a lot like when they measure you at your doctor's office.
- Take some blood from your arm with a needle and do some special tests that tell us about your diabetes.
- Take some blood from your arm with a needle and look at some of the genes that we know have something to do with diabetes. A sample from this blood will be kept in a freezer until we do tests on it.
- Test some of your urine to see if diabetes is changing the way your kidneys work.
- Have you and your parent answer some questions about having diabetes and how you take care of your diabetes
- Have you (if you are 10 or older) answer some questions about what you eat, your physical activity, when you sleep, what you do when your blood sugar is low, and things related to diabetes that might cause fighting between you and your parents
- Take pictures of the back of your eyes
- Look at your feet and ask you some questions about your feet. Some people may be asked to do this two times. If you are asked to do this twice, you can say no.
- Use a small machine to test your heart, blood vessels, and nerves. Some people may be asked to do parts of this two times. If you are asked to do this twice, you can say no.
- Get your parent/guardian's permission to review some of your medical records.

This study visit will last about 3 ½ hours.

Who will be told the things we learn about you in this study?
SEARCH staff will keep the things we learn private, but we must report to the state if we feel you are being hurt or if you tell us you are planning to hurt yourself or others. If you tell us you are planning to hurt yourself or others, we will also tell your parents.

When you start in SEARCH, a special number is given to you. The number is used to mark all the forms and blood tests we do with you. The special number and the forms will be sent to Wake Forest University. Blood and urine will be sent to the University of Washington to test or store. The nerve test results and your special number will be sent to the University of Michigan and Wake Forest University. The eye test results and your special number will be sent to the reading center at the University of Wisconsin-Madison and Wake Forest University. The list

showing the special number given to you will be kept in a file and saved with a password. Only the people listed on the first page or others working with the Carolina study site will be able to see this list.

What are the good things that might happen?

People may have good things happen to them because they are in research studies. These are called "benefits." You will not benefit from being in this research study.

What are the bad things that might happen?

Sometimes things happen to people in research studies that may make them feel bad. These are called "risks." These are the risks of this study:

- It may hurt when you have your blood drawn and you may get a bruise. We can put some medicine on your skin to make it hurt less.
- You need to come to the visit without eating anything the night before your visit. This may affect your blood sugar. We will test your blood sugar and you may take your diabetes medicine or eat a snack to help your blood sugar.
- When you have the picture of your eye done, it will not hurt, but you will see a bright flash and this may bother you for a minute or two.
- When we use the machine to test your blood vessels, you will feel a little pushing on your skin. This will not hurt.

Not all of these things may happen to you. None of them may happen or things may happen that the researchers don't know about. You should report any problems to the researcher

What if you or your parents don't want you to be in this study?

It is okay if you or your parents don't want to be in this study. This will not affect the care you get.

Will you get any money or gifts for being in this research study?

You will get $80 in VISA gift cards for doing a full study visit. If you do a partial study visit due to refusing the blood draw, you will only receive $40 in gift cards. You will also get another $10 gift card if you are asked to do the blood vessel test two times. If we are not able to get your blood and you return for a 2nd blood draw, you will get another $20 gift card.

Your parents will get $40 in gift cards for being in the study.

Who should you ask if you have any questions?

If you have questions you should ask the people listed on the first page of this form. If you have other questions, complaints or concerns about your rights while you are in this research study you may contact the Institutional Review Board at Greenville Health System (864-522-2097; email: jhayes@ghs.org) or at UNC-Chapel Hill (919-966-3113;email: IRB_subjects@unc.edu).

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Cohort Study Visit

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site);
Bryce Nelson, MD (GHS data collection site);
Deborah Bowlby, MD (MUSC data collection site);
Anwar Merchant, ScD (USC data collection site)

If you sign your name below, it means that you agree to take part in this research study.

_____ _____
Sign your name here if you want to be in the study Date

_____
Print your name here if you want to be in the study

_____ _____
Signature of Research Team Member Obtaining Assent Date

_____
Printed Name of Research Team Member Obtaining Assent

Parental Permission for a Minor Child to Participate in a Research Study
SEARCH 3 Registry Study Visit

UNC IRB Study #10-2341
Consent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

SEARCH Carolina Site Principal Investigators:
University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Funding Source and/or Sponsor: Centers for Disease Control and Prevention and National Institutes of Health/NIDDK
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

What are some general things you and your child should know about research studies?

You are being asked to allow your child to take part in a research study. To join the study is voluntary. You may refuse to give permission, or you may withdraw your permission for your child to be in the study, for any reason. Even if you give your permission, your child can decide not to be in the study or to leave the study early.

Research studies are designed to obtain new knowledge that may help other people in the future. Your child may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Deciding not to be in the study or leaving the study before it is done will not affect your or your child's relationship with the researcher or with the health care provider. If your child is a patient with an illness, your child does not have to be in the research study in order to receive health care.

Details about this study are discussed below. It is important that you and your child understand this information so that you and your child can make an informed choice about being in this research study. You will be given a copy of this permission form. You and your child should ask the researchers named above, or staff members who may assist them, any questions you or your child have about this study at any time.

What is the purpose of this study?

The purpose of this research study is to learn about diabetes in children and young adults. Diabetes is the third most common life-long disease in people under 20 years of age. The total

number of cases of diabetes in this age group is increasing. Also, types of diabetes that have not been seen in young people are now being seen. These changes have resulted in gaps in knowledge about the total number of cases and types of diabetes in the United States, the type of care young people with diabetes receive, and the effect diabetes has on their lives. This research study will gather information to answer these questions.

Your child is being asked to be in the study because he/she has diabetes and was under age 20 and living in South Carolina around the time the diabetes started.

Are there any reasons your child should not be in this study?

Your child should not complete a study visit if currently pregnant. She may take part in the study visit when it has been at least four months after the end of the pregnancy.

How many people will take part in this study?

A total of approximately 900 people at five sites across the US will take part in the Registry Study visit, including approximately 211 people from the Carolina SEARCH site.

How long will your child's part in this study last?

The Registry Study visit will take about 40 minutes. We may contact you every year to be sure we have your correct contact information. If you and your child agree to have a sample of blood, urine or DNA stored following the Registry Study visit, it will be saved for 10 years after the end of funding for follow-up of SEARCH participants. After this time, stored samples will be destroyed.

What will happen if your child takes part in the study?

A research team member will set up an appointment for your child in the early morning. Your child will come to the appointment after not having anything to eat or drink other than water for 8-12 hours. Your child will not take your usual diabetes medicines until after he/she has been given breakfast during the appointment.

Laboratory Tests

When you arrive, blood will be taken from your child's arm to measure blood sugar, hemoglobin A1c (a measure of long-term blood sugar control), different types of cholesterol (fat), c-peptide (a measure of your child's own insulin production), and islet cell antibodies (markers in the blood for type 1 diabetes). A genetic marker for diabetes risk (HLA genes) will also be tested. The total amount of blood drawn will be based on weight tables and will not exceed 3 tablespoons. . If you agree, results commonly used in clinical practice (hemoglobin A1c, cholesterol, c-peptide, islet cell antibodies, and urine albumin/creatinine) will be shared with your child's doctor.

Mark the line that best matches your choice:

_____ OK to share results of the tests with my child's doctor

_____ Not OK to share results of the test with my child's doctor

Urine Collection: Before your scheduled appointment, you will be mailed a container with detailed instructions to collect your first morning urine the day of your study visit. You will be asked to bring this urine container with you to your visit.

A urine sample will also be collected during the study visit.

The urine will be tested for albumin and creatinine (small particles of protein) to see how well your child's kidneys are working.

A sample of your child's blood, urine, and DNA may be saved after the visit, if you agree.

After the blood and urine samples are obtained, your child can take his/her pills or insulin and will be given a snack.

Physical Exam and Questionnaires

After eating, we will ask you some questions about the medicines your child uses and the food your child eats. A physical examination will be done on your child by trained study staff. The physical examination will include height, weight, waist measurement, blood pressure, and examination of the skin on the neck. Then you will do a brief form to update your contact information. We will also ask you about the type of providers your child sees for his/her diabetes care.

Contact in the Future

The researchers will call you as new studies are developed in the future to let you know about new studies and ask your child to take part in these studies. As with this study, taking part in any future study is voluntary. Taking part in the present study does not mean that you are agreeing to take part in any future study.

Mark the line that best matches your choice:

_____ OK to contact me/my child in the future to tell me about other studies

_____ Not OK to contact me/my child in the future to tell me about other studies

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. Your child will not benefit personally from being in this research study.

What are the possible risks or discomforts involved with being in this study?

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, blood will be drawn by experienced staff and a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain. The total amount of blood that will be obtained will be no more than 3 tablespoons (45cc) depending on your child's age and body size. When drawing your child's blood, our research staff will follow all necessary safety precautions. In the highly unlikely event that our research staff is accidentally exposed to your child's bodily fluids (blood or urine), we will abide by the South Carolina law that provides for testing of blood to minimize

threats to the health of the staff. You will be notified should this testing be necessary and the results will be reported as required by law.

The blood tests require that your child not eat any food overnight. In order to limit low or high blood sugars, your child's blood sugar will be checked and his/her diabetes medication or a fast-acting carbohydrate will be given as needed.

Some of the tests will look for the presence or risk of developing of the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you or your child anxious. If this happens, you will be referred to your child's diabetes care provider or a local mental health professional.

Other possible risks include loss of privacy or confidentiality. Loss of privacy might happen if someone could overhear or see you taking part in the study. To limit this, we will do the study visit in a private location. Information collected will be stored in a locked filing cabinet or in a password-protected electronic file.

In addition, there may be uncommon or previously unknown risks that might occur. You should report any problems to the researchers.

If you choose not to give permission for your child to be in the study, how does this affect your child's medical care?

You can still receive evaluation and treatment for your condition if you do not participate in this study. Discuss any alternative treatments with your regular doctor and/or the study doctor before you decide to participate in the study. Your decision is entirely up to you. If you decide not to participate in the study, you will not be penalized or lose any benefits and your decision will not affect your relationship with your doctor or hospital.

What if we learn about new findings or information during the study?

You and your child will be given any new information gained during the course of the study that might affect your willingness to continue your child's participation in the study.

How will your child's privacy be protected?

SEARCH staff will keep the information collected, tests done, and samples stored strictly private. This is so because the study has been given a Certificate of Confidentiality. This means anything you or your child tells us will not have to be given out to anyone, even if a court orders us to do so, unless you say it's okay. But under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious harm to yourself or others.

When you enter the study, a special number will be given to your child. The number will be used to identify the information and laboratory tests that will be done during this study. The special number and the information collected during this study will be sent to Wake Forest University in order to study the information. Blood and urine specimens will be sent to the University of Washington for testing or storage. The list containing the special number assigned to your child will be kept in a password-protected database at the Carolina SEARCH site. Thus,

no one other than the study investigators (Dr. Mayer-Davis at the University of North Carolina (UNC), Dr. Nelson at Greenville Health System (GHS), Dr. Bowlby at the Medical University of South Carolina (MUSC), Dr. Merchant at the University of South Carolina (USC)) and the SEARCH Carolina research team will be able to link any of the information collected in the study to your child. Paper forms collected during the study will be stored in a locked filing cabinet.

No subjects will be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill and your local data collection site (GHS, MUSC, or USC) will take steps allowable by law to protect the privacy of personal information. In some cases, your child's information in this research study could be reviewed by representatives of UNC-Chapel Hill or your local data collection site (GHS, MUSC, or USC), research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

What will happen if your child is injured by this research?

All research involves a chance that something bad might happen. This may include the risk of personal injury. In spite of all safety measures, your child might develop a reaction or injury from being in this study. If such problems occur, the researchers will help your child get medical care, but any costs for the medical care will be billed to you and/or your insurance company. The University of North Carolina at Chapel Hill and your local data collection site (GHS, MUSC, or USC) have not set aside funds to pay you for any such reactions or injuries, or for the related medical care. However, by signing this form, you and your child do not give up any of your legal rights.

What if you or your child wants to stop before your child's part in the study is complete?

You can withdraw your child from this study at any time, without penalty.

Will you or your child receive anything for being in this study?

You and your child will both get $40 in store gift cards at the end of the Registry Study Visit. In the rare circumstance that a blood redraw is necessary, your child would receive an additional $20 gift card.

If you traveled a significant distance to complete this study visit, you will be provided additional incentive to assist with travel costs. This additional incentive will be: two $20 gift cards if you traveled 70-100 miles round trip, three $20 gift cards if you traveled 101-150 miles round trip, or four $20 gift cards if you traveled more than 151 miles round trip. Travel distance will be determined based on your current home address and the location of the SEARCH visit.

Will it cost you anything for your child to be in this study?

There will be no costs for being in the study

What if you are a student at MUSC or USC?
You may choose not to give permission for your child to be in the study or to stop being in the study before it is over at any time. This will not affect your class standing or grades. You will not be offered or receive any special consideration if your child takes part in this research.

What if you are an employee at MUSC, GHS, or USC?
Your child's taking part in this research is not a part of your job duties, and refusing to give permission will not affect your job. You will not be offered or receive any special job-related consideration if your child takes part in this research.

Who is sponsoring this study?
This research is funded by the Centers for Disease Control and Prevention and the National Institutes of Health. This means that the research team is being paid by the sponsor for doing the study. The researchers do not, however, have a direct financial interest with the sponsor or in the final results of the study.

What if you or your child has questions about this study?
You and your child have the right to ask, and have answered, any questions you may have about this research. If there are questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

What if you or your child has questions about his/her rights as a research subject?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you or your child has questions or concerns about your child's rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at Greenville Health System (864-522-2097; email jhayes@ghs.org or UNC-Chapel Hill (919-966-3113 or by email to IRB_subjects@unc.edu).

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

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Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site);
Bryce Nelson, MD (GHS data collection site);
Deborah Bowlby, MD (MUSC data collection site);
Anwar Merchant, ScD (USC data collection site)

Parent's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily give permission to allow my child to participate in this research study.

_____
Printed Name of Research Subject (Child)

_____ _____
Signature of Parent Date

_____
Printed Name of Parent

_____ _____
Signature of Research Team Member Obtaining Permission Date

_____
Printed Name of Research Team Member Obtaining Permission

Assent to Participate in a Research Study
Minor Subjects (7-14 yrs), SEARCH 3 Registry Study Visit

UNC IRB Study #10-2341
Consent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

People in charge of the study:
University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

The people named above are doing a research study.

These are some things we want you to know about research studies:
Your parent needs to say it is okay for you to be in this study. You do not have to be in this study if you don't want to, even if your parent says it is okay for you to be in the study.

You may stop being in the study at any time. If you decide to stop, no one will be angry or upset with you.

Sometimes good things happen to people who take part in studies, and sometimes things we may not like happen. We will tell you more about these things below.

Why are they doing this research study?
The reason for doing this study is to find out how many young people have diabetes in your area. We want to learn more about the types of diabetes young people have. We want to learn more about your health, and how diabetes affects you and your family.

Why are you being asked to be in this research study?
You are being asked to be in this study because you have diabetes and you found out you had diabetes when you were a child.

How many people will take part in this study?
A total of about 900 people at five sites in the U.S. will take part in this study, including about 211 people from South Carolina.

What will happen during this study?

During this study we will ask to:

- Measure you and check your blood pressure. This will be a lot like when they measure you at your doctor's office.
- Take some blood from your arm with a needle and do some special tests that tell us about your diabetes.
- Take some blood from your arm with a needle and look at some of the genes that we know have something to do with diabetes. A sample from this blood will be kept in a freezer until we do tests on it.
- Test some of your urine to see if diabetes is changing the way your kidneys work.
- Have your parent/guardian fill in some forms about how to best contact you and also about who you see for your diabetes care.
- Answer some questions about the food you eat.

This study visit will last about 40 minutes.

Who will be told the things we learn about you in this study?

SEARCH staff will keep the things we learn private, but we must report to the state if we feel you are being hurt or if you tell us you are planning to hurt yourself or others. If you tell us you are planning to hurt yourself or others, we will also tell your parents.

When you start in SEARCH, a special number is given to you. The number is used to mark all the forms and blood tests we do with you. The special number and the forms will be sent to Wake Forest University. Blood and urine will be sent to the University of Washington to test or store. The list showing the special number given to you will be kept in a file and saved with a password. Only the people listed on the first page or others working with the Carolina study site will be able to see this list.

What are the good things that might happen?

People may have good things happen to them because they are in research studies. These are called "benefits." You will not benefit from being in this research study.

What are the bad things that might happen?

Sometimes things happen to people in research studies that may make them feel bad. These are called "risks." These are the risks of this study:

- It may hurt when you have your blood drawn and you may get a bruise. We can put some medicine on your skin to make it hurt less.
- You need to come to the visit without eating anything the night before your visit. This may affect your blood sugar. We will test your blood sugar and you may take your diabetes medicine or eat a snack to help your blood sugar.

Not all of these things may happen to you. None of them may happen or things may happen that the researchers don't know about. You should report any problems to the researcher

What if you or your parents don't want you to be in this study?
It is okay if you or your parents don't want to be in this study. This will not affect the care you get.

Will you get any money or gifts for being in this research study?
You will receive $40 in store gift cards for being in this study. If we are not able to get your blood and you return for a 2nd blood draw, you will get another $20 gift card.

Your parents will get $40 in gift cards for being in the study.

Who should you ask if you have any questions?
If you have questions you should ask the people listed on the first page of this form. If you have other questions, complaints or concerns about your rights while you are in this research study you may contact the Institutional Review Board at Greenville Health System (864-522-2097; email: jhayes@ghs.org) or at UNC-Chapel Hill (919-966-3113; email:IRB_subjects@unc.edu).

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site);
Bryce Nelson, MD (GHS data collection site);
Deborah Bowlby, MD (MUSC data collection site);
Anwar Merchant, ScD (USC data collection site)

If you sign your name below, it means that you agree to take part in this research study.

_____ _____
Sign your name here if you want to be in the study Date

_____
Print your name here if you want to be in the study

_____ _____
Signature of Research Team Member Obtaining Assent Date

_____
Printed Name of Research Team Member Obtaining Assent

SEARCH for Diabetes in Youth, Carolina Site
Consent for Storing Biological Specimens With Identifying Information

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UNC IRB Study #10-2341
Consent Form Version Date: January 2014

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3), Registry Study Visit

SEARCH Carolina Site Principal Investigators:
University of North Carolina-Chapel Hill, Coordinating Site: Elizabeth Mayer-Davis, PhD (919-966-1991)
Greenville Health System, Data Collection Site: Bryce Nelson, MD (864-454-5100)
Medical University of South Carolina, Data Collection Site: Deborah Bowlby, MD (843-792-6807)
University of South Carolina, Data Collection Site: Anwar Merchant, ScD (803-777-6095)
Funding Source and/or Sponsor: Centers for Disease Control and Prevention and National Institutes of Health/NIDDK
Study Contact telephone number: local numbers given above or studywide toll-free at 866-595-2397
Study Contact email: search.study@unc.edu

What are some general things you should know about research?
Research is designed to gain scientific information that may help other people in the future. You may not receive any direct benefit from taking part. There also may be risks.

You may refuse to take part in research. If you are a patient with an illness, you do not have to be in research in order to receive treatment.

Details are discussed below. It is important that you understand this information so that you can make an informed choice. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this specimen repository or "biobank?"
Research with blood or body fluids (specimens) can help researchers understand how the human body works. Research can also answer other questions by using specimens. Researchers may develop new tests to find diseases, or new ways to treat diseases. In the future, research may help to develop new products, such as drugs. Specimens are commonly used for genetic research. Sometimes researchers collect and store many specimens together and use them for different kinds of research, or share them with other scientists; this is called a specimen repository or "biobank."

The purpose of this particular repository or biobank is to aid in our understanding of causes of diabetes and related conditions. It may also help in the development of new diagnoses, treatment and cures, as well as a better overall scientific understanding of diabetes and related conditions. Specimens to be stored following the SEARCH visit include blood, DNA, and urine.

How will the specimens be collected?

Blood and DNA will be collected during the blood draw for your SEARCH study visit. Urine will also be collected during the study visit.

What will happen to the specimens?

The blood, DNA, and urine will be sent to the study's central laboratory at the University of Washington, Northwest Lipid Research Laboratories for storage. These samples will be labeled with your unique study number. The laboratory will not be able to link the number to you. The list linking the number to you is kept at the SEARCH Carolina site in a password-protected file.

SEARCH will plan to keep your specimens until 10 years after the end of funding for follow-up of SEARCH participants. After this time, stored samples will be destroyed.

SEARCH may share your stored specimens with other investigators to be used for testing related to diabetes or associated complications. This would only be done after the investigators have submitted a proposal to use these specimens to the SEARCH Ancillary Studies Committee. The committee will review the proposal to ensure the proposed testing adequately relates to the goals of SEARCH.

____ I agree to have blood stored to be used in the future for new tests as they are developed to learn more about diabetes and related conditions.

____ I do not agree to have blood stored to be used in the future.

_____ I agree to have DNA stored to be used in the future for new tests as they are developed to learn more about diabetes and related conditions.

_____ I do not agree to have DNA stored to be used in the future.

___ I agree to have urine stored to be used in the future for new tests as they are developed to learn more about diabetes and related conditions.

____ I do not agree to have urine stored to be used in the future.

What are Genome Wide Association Studies (GWAS)?

Usually researchers study just a few areas of your genetic material (DNA) that is linked to a single disease or condition. However, in a whole genome analysis (GWAS), all (or most) of your genes are analyzed and used by researchers to study links to multiple diseases or conditions.

At this time, SEARCH has no plans to complete GWAS on your stored sample, but it could be done in the future. If GWAS is done, the results are saved in the form of a data report and will be stored in a data bank at the National Institutes of Health (NIH), where the report could be shared with other investigators for research. The report would not include name, address or other information that could be traced back to you.

____ I agree to allow GWAS to be done on my stored DNA and to share the data with the NIH data bank.

_____ I do not agree to allow GWAS to be done on my stored DNA.

What are the possible benefits to you?

Benefits to you are unlikely. Studies that use specimens from this repository may provide additional information that will be helpful in understanding diabetes and related conditions.

What are the possible risks or discomforts involved with the use of your specimens?

The risks from drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the chance of these risks, blood will be drawn by experienced staff and a local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

The blood tests require that you not eat any food overnight. In order to limit low or high blood sugars, your blood sugar will be checked and your diabetes medication or a fast-acting carbohydrate will be given as needed.

Other possible risks include loss of privacy and breach of confidentiality. If this research involves genetics, there is also a potential risk for some of your relatives and other members of your ethnic group, since they share some of your genetic makeup.

In addition, there may be uncommon or previously unknown risks that might occur.

Will there be any cost to you for storage of the specimens?

There will be no cost to you for the storage and use of the specimens for research purposes.

Will you receive anything for the use of your specimens?

You will receive gift cards after you finish your SEARCH study visit (as noted on the visit consent form), but you will not get additional gift cards for giving your specimens for storage.

Who owns the specimens?

Any blood, body fluids, or tissue specimens obtained for this purpose become the exclusive property of the University of North Carolina at Chapel Hill and your local data collection site (GHS, MUSC, or USC). These organizations may retain, preserve or dispose of these specimens and may use these specimens for research related to diabetes and its complications. The research may result in commercial applications. There are no plans to compensate you for any future commercial use of these specimens.

How will your privacy be protected?

SEARCH staff will keep the information collected, tests done, and samples stored strictly private. This is so because the study has been given a Certificate of Confidentiality. This means anything you tell us will not have to be given out to anyone, even if a court orders us to do so, unless you say it's okay. But under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious harm to yourself or others.

When you enter the study, a special number will be given to you. The number will be used to identify the information and laboratory tests that will be done during this study. Blood and urine specimens will be sent to the University of Washington for testing or storage. Results from testing will be sent to Wake Forest University in order to study the information. The list containing the special number assigned to you will be kept in a password-protected database at the Carolina SEARCH site. Thus, no one other than the study investigators (Dr. Mayer-Davis at the University of North Carolina (UNC), Dr. Nelson at Greenville Health System (GHS), Dr. Bowlby at the Medical University of South Carolina (MUSC), Dr. Merchant at the University of South Carolina (USC)) and the SEARCH Carolina research team will be able to link any of the information collected in the study to you. Paper forms collected during the study will be stored in a locked filing cabinet.

You will not be identified in any report or publication about research using your specimens. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill and your local data collection site (GHS, MUSC, or USC) will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research could be reviewed by representatives of UNC-Chapel Hill or your local data collection site (GHS, MUSC, or USC) , research sponsors, or government agencies for purposes such as quality control or safety.

A Federal law called the Genetic Information Nondiscrimination Act (GINA) generally makes it illegal for health insurance companies, group health plans, and most employers to discriminate against you based on your genetic information. GINA does not protect you against genetic discrimination by companies that sell life insurance, disability insurance, or long-term care insurance. GINA also does not protect you against discrimination based on an already-diagnosed genetic condition or disease.

Will researchers seek approval from you to do future studies involving the specimens?

By signing this consent form, you are giving your permission for researchers to use your specimens as described above. Current and future research is overseen by a committee called the Institutional Review Board (IRB). The role of the IRB is to protect the rights and welfare of research participants. In some cases, the IRB may require that you be re-contacted and asked for your consent to use your specimens in a specific research study. You have the right, at that future time, not to participate in any research study for which your consent is sought. Refusal to participate will not affect your medical care or result in loss of benefits to which you are entitled.

Will you receive results from research involving your specimens?
Most research with your specimens is not expected to yield new information that would be meaningful to share with you personally. There are no plans to re-contact you or other subjects with information about research results.

Can you withdraw the specimens from the research repository?
If you decide that you no longer wish for the specimens to be stored, you should contact the researchers on the front page of this form. It is best to make your request in writing.

Any analysis in progress at the time of your request or already performed prior to your request being received by the researcher will continue to be used as part of the research study. Once the researchers have been notified, your remaining specimens would be destroyed. If you do not make such a request, the specimens may be stored forever. The researchers may choose to destroy the specimens at any time.

What will happen if you are injured by this research?
All research involves a chance that something bad might happen to you. This may include the risk of personal injury. In spite of all safety measures, you might develop a reaction or injury from having your specimen collected. If such problems occur, the researchers will help you get medical care, but any costs for the medical care will be billed to you and/or your insurance company. The University of North Carolina at Chapel Hill and your local data collection site (GHS, MUSC, USC) have not set aside funds to pay you for any such reactions or injuries, or for the related medical care. However, by signing this form, you do not give up any of your legal rights.

Who is sponsoring this research?
This research is funded by the Centers for Disease Control and Prevention and the National Institutes of Health. This means that the research team is being paid by the sponsor for doing the study. The researchers do not, however, have a direct financial interest with the sponsor or in the final results of the study.

What if you have questions about this research?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research subject?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at Greenville Health System (864-522-2097; email: jhayes@ghs.org) or at UNC Chapel Hill (919-966-3113; e-mail: IRB_subjects@unc.edu.

A survey about your experience with this informed consent process is located at the following website:

http://www.ghs.org/Research-and-Clinical-Trials

Participation in the survey is completely anonymous and voluntary and will not affect your relationship with your doctor or the Greenville Health System. If you would like to have a paper copy of this survey, please tell your doctor.

Title of Study: SEARCH for Diabetes in Youth 3 (SEARCH 3)

Principal Investigators: Elizabeth Mayer-Davis, PhD (UNC-Chapel Hill Coordinating Site);
Bryce Nelson, MD (GHS data collection site);
Deborah Bowlby, MD (MUSC data collection site);
Anwar Merchant, ScD (USC data collection site)

Subject's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate. I agree to my specimen(s) being stored with the identifying code(s).

_____ _____
Signature of Research Subject Date

_____
Printed Name of Research Subject

_____ _____
Signature of Parent (if subject is under 18) Date

_____
Printed Name of Parent (if subject is under 18)

_____ _____
Signature of Research Team Member Obtaining Consent Date

_____
Printed Name of Research Team Member Obtaining Consent

Colorado Consents

Principal Investigator: Dana Dabelea, MD, PhD
COMIRB No: Protocol 01-934
Version Date: 03/04/14
Version No: 3.0

Study Title: SEARCH for Diabetes in Youth Registry Study

You (in this form 'you' refers to you and/or your child) are being asked to participate in a research study. This form provides you with information about the study. A member of the research team will describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part.

Why is this study being done?
You are being asked to take part in a research study called the SEARCH for Diabetes in Youth Registry Study because you have diabetes and were diagnosed under the age of 20. The study's aims are to count how many children have diabetes and determine whether diabetes is increasing in children and adolescents, to more accurately determine what type of diabetes you have, and to identify how diabetes affects the lives of youth with diabetes.

Diabetes is the third most common chronic disease in individuals under 20 years of age. The total number of cases of diabetes in this age group is increasing. Also, types of diabetes not seen previously in young people are now being seen. We do not know how many cases and types of diabetes in children and adolescents there are in the United States and whether diabetes is increasing. We also do not know the type of care young people with diabetes receive, or the effect of diabetes on their lives. Specifically, this project is interested in studying the following questions.

a. How many cases of diabetes are there in the United States in people under 20 years old?
b. How many new cases of diabetes develop every year?
c. What can we learn about each type of diabetes?
d. What medical care is given to youth with diabetes?
e. How does diabetes affect the lives of youth with diabetes?

Other people in this study
Up to 8000 youth less than 20 years old will be enrolled locally, and up to 25,000 youth less than 20 years old will be invited to participate nationally in this study.

What happens if I join this study?
If you agree to participate in this study you will be asked to come to an in-person visit. If you haven't already completed the Initial Participant Survey (IPS), you will be asked to complete the IPS at the visit. The IPS is a brief survey that asks questions about demographic information (name, address, date of birth, data of diagnosis, education), as well as information about family history, symptoms you may have experienced at the time of diagnosis, your health care and health insurance. The IPS also collects contact information so we know the best way to reach you. A brief survey will also be sent to you each year in order to maintain contact information, no matter what parts of the study you choose to participate in.

All aspects of this study are for research purposes only and are in addition to regular health care. You may choose not to take part in any part of the study. If you join the study, you will be in it until the end of SEARCH in September 2015.

In-person Visit
1.) <u>Collection of Blood and Urine:</u>

You will be scheduled for a morning appointment. You will come to the visit after not having anything to eat or drink other than water for 8-12 hours. Please do not take your morning insulin prior to arrival, unless you must control your blood sugars. Upon arrival, blood will be drawn from your arm to measure blood sugar, hemoglobin A1c, c-peptide (a measure of your own insulin production), different types of cholesterol (blood fats), and islet cell antibodies (markers in the blood for type 1 diabetes). A genetic marker for diabetes risk (HLA genes) will also be tested. The total amount of blood drawn for these tests will be based on weight tables and will not exceed 1.5 tablespoons.

The week before your scheduled appointment, you will be mailed a container with detailed instructions to collect your first morning void of urine at home on the morning of the visit. You will be asked to bring this container with you on the day of your visit. A urine sample will also be collected at your visit after the blood draw. Your urine will be tested for albumin and creatinine (small particles of protein) to see how well your kidneys are working.

After the blood and urine are collected, you can take your pills or insulin and you will be given a snack.

2.) **Physical Examination and Questionnaire:**

After eating, you will have your medicines recorded and a physical examination will be performed by trained study personnel. The physical examination will include height, weight, waist measurement, blood pressure, and examination of the skin on the neck. Thereafter brief questionnaires will be administered to update your contact information and to ask questions about food availability. You may choose to not answer the questions and you may still participate in the study.

The time to complete the in-person is approximately 40 minutes. If you need numbing cream applied before the blood draw, it will add about 30 minutes to the visit.

Research Data and Specimens

Blood and urine samples will be labeled with a study number code and sent to the Central Laboratory at University of Washington Seattle to be tested. The research team will inform you of your test results that may affect your health or healthcare. With your permission, the test results will also be shared with your healthcare provider.

The SEARCH study would like to keep some of the blood and urine that is taken during the study but is not used for other tests. If you agree, an additional sample of blood (1.5 tablespoons) will be taken, and the excess urine sample will be saved. Whenever possible, blood for storage will be drawn at the same time as the samples for the in-person visit tests. If it is not possible, an additional needle stick will be required with your permission. The blood and urine samples will be kept and may be used in future research to learn more about diabetes. The research that is done with your blood and urine samples is not designed to specifically help you. It might help people who have diabetes and other diseases in the future. Reports about research done with your samples will not be given to you or your doctor. These reports will not be put in your health records. The research using your stored blood and urine samples will not affect your care.

The choice to let SEARCH study investigators keep the blood and urine samples for future research is up to you. No matter what you decide to do, it will not affect the care that you will receive as part of the study. If you decide now that your blood and urine samples can be kept for research, you can change your mind at any time and contact your study doctor to let him or her know that you do not want the SEARCH study to use your blood and urine samples any longer, and they will no longer be used for research. Otherwise, they may be kept until they are used up, or until the SEARCH study investigators decide to destroy them.

In the future, people who do research with your blood and tissue samples may need to know more about your health. While the SEARCH study may provide reports about your health, they will not give them your name, address, phone number or any other information that will let the researcher know who you are.

DNA (Genes) Blood Sample

You are also being asked for permission to use your blood to have genetic material (DNA) stored for possible use in genetic research about diseases that are passed on in families. If you agree to this request, no more than one additional tablespoon (15ml) of blood will be drawn. DNA is found in all of your cells. DNA makes up your genes. Your genes control how tall you are, what color hair you have, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences in DNA may explain why some people are more likely to get certain diseases like diabetes.

We know that diabetes runs in families, but we don't know all the genes that are involved in the development of diabetes and its complications. In addition, there are specific types of diabetes that can only be diagnosed by genetic tests. By studying the DNA in your blood sample, researchers may be able to find the genes that carry the risk factors for problems such as diabetes, heart disease, complications such as eye and kidney trouble, and related conditions (high cholesterol, etc.)

If you agree, a sample of your DNA may be analyzed to identify a complete picture of your genetic makeup. The results of the DNA testing and associated data would then be sent to a national storage center that holds a database to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease. This may lead to better methods to select the best treatment options. When your DNA and clinical information are sent to the storage center, no personal information will be included, such as your name, date of birth, or address. Thus, researchers will not be able to link this information back to you.

Even if your blood samples are used for this kind of research, the results will not be told to you and will not be put in your health records.

Blood and Urine Storage

Your blood and urine samples will only be used for research and will not be sold. The research done with your samples may help to develop new products in the future, but there is no plan for you to be paid. The possible benefits of research from your blood and urine include learning more about what causes diabetes and other diseases, how to prevent them and how to treat them. The greatest risk to you is the release of information from your health records. The SEARCH study research team will protect your records so that your name, address and phone number will be kept private. The chance that this information will be given to someone else is very small. There will be no cost to you for any blood or urine collected and stored by the SEARCH study.

Your stored blood, urine and DNA samples will be kept in storage indefinitely or until the sample is no longer usable. A code number identifies samples and the link between the code and your personal information is stored in a secure location at the University of Colorado. Thus, your sample will not be directly identified with your name. Your samples would be released to a SEARCH investigator (or other investigator authorized by the SEARCH) only after determination of the scientific usefulness of a proposed study and would be reviewed for compliance with human research safety and protection guidelines before approval.

Participation in this study is voluntary and you may choose to withdraw from the study at any time. You may request that your stored samples be permanently removed from the Central Laboratory if you choose to withdraw consent. To request that your sample be permanently removed from the central laboratory, contact:

Dr. Dana Dabelea
UCD Colorado School of Public Health
Dept. of Epidemiology
Bldg 500, Box B-119
Aurora, CO 80045
Ph. (303) 724-4414 FAX (303) 724-4491

We will send a request to the central laboratory and they will then destroy the samples and send us a letter certifying that the sample has been destroyed. We will send you a copy of this letter.

Please read each sentence below and think about your choice. After reading each sentence, check "Yes" or "No" and write your initials. If you have questions, please talk to the SEARCH study staff, Dr. Dabelea or your healthcare provider. Remember, no matter what you decide to do about the storage and future use of your data, blood, DNA, and urine samples, you may still take part in the study.

1. I wish to have the results of my blood and urine tests given to my doctor or diabetes care provider.

☐ Yes ☐ No _____Initials

2. I give my permission for my blood and urine samples to be stored in a central laboratory at the University of Washington, Seattle for future use by study investigators in studies of diabetes and diabetes risk factors and complications.

☐ Yes ☐ No _____Initials

3. I give my permission for my DNA (genes) blood sample to be tested for inherited factors in the development of diabetes, diabetes risk factors and complications.

☐ Yes ☐ No _____Initials

4. I give my permission for my DNA (genes) blood sample to be stored by the SEARCH study laboratory at the University of Washington, Seattle for future use in diabetes and diabetes-related studies.

☐ Yes ☐ No _____Initials

5. I give my permission for the results of my DNA analysis and associated data to be sent to a national storage center for future study on how genes may affect the risk of diseases such as asthma, cancer, diabetes and heart disease.

☐ Yes ☐ No _____Initials

6. I give my permission for my study doctor (or someone he or she chooses) to contact me in the future to ask me to take part in more research.

☐ Yes ☐ No _____Initials

What are the possible discomforts or risks?

Discomforts you may experience while in this study include those related to the collection of blood for laboratory studies, the disclosure of laboratory results to participants, and breaches of confidentiality of research data.

In this study we may need to get a maximum of 3 tablespoons (1.5 tablespoons for testing and 1.5 tablespoons for storage) of blood from you. We will get blood by putting a needle into a vein and letting the blood flow into a glass tube. You may feel some pain when the needle goes into your vein. To reduce the

pain, a local skin numbing cream or spray (EMLA or Ethyl Chloride) may be applied to the skin before blood is drawn. On rare occasions EMLA cream may cause slight short-lived skin irritation. A day or two later, you may have a small bruise where the needle went under the skin.

You might worry about whether results of a blood test will lead to discrimination, for example denial of health insurance or employment. Laws exist to protect against discrimination, and these vary from state to state. While it is theoretically possible that information about you could lead to this sort of discrimination, this is very unlikely. Information about you will not be given to insurance companies, employers, or other parties without your permission. Results of this testing will be reported to your healthcare provider with your permission, and therefore will go into your medical record.

The central laboratory receives only number coded information that does not have your name on it and will make every effort to protect your privacy, although no guarantee of confidentiality can be absolute. Some of the tests will look for the presence of risk factors for complications of diabetes. If these tests identify complications of diabetes, the results may raise anxiety about the complications. If this happens, you will be referred to a local mental health professional for evaluation and treatment.

Sample Storage Risks: You, your family, or your doctor will not receive the results of tests from the storage samples and the results will not become a part of your medical record because this research is not expected to affect your medical care. The study investigators will make every effort to maintain confidentiality by labeling your samples with a number rather than with your name or other personal information. However, in the unlikely circumstance that your test results are unintentionally made known to a third party, or revealed to you because they are deemed to be important to your medical care, you will need to consider the risks associated with having this information. First, as with any medical study, there is a risk that the result may be in error. Also, having information that you are at risk for a condition related to that disease might be emotionally stressful.

There is a risk that people outside of the research team will see your research information. We will do all that we can to protect your information, but it cannot be guaranteed. The study may include risks that are unknown at this time.

What are the possible benefits of the study?
This study is designed for the researchers to learn more about children and youth diagnosed with diabetes. This study is not designed to treat any illness or to improve your health. You will receive no health benefit from participating in this research study and there are risks as mentioned in the Risk section.

Are there alternative treatments?
There are no treatments proposed in this study, and the decision to participate in this study will not affect your treatment. Blood and urine test results will be available approximately 3 months after the samples are collected. Someone from the study will explain the results to you if you wish. Your diabetes provider will also receive the results, if you have given your permission.

Who is paying for this study?
This research is being paid for by the Centers for Disease Control and Prevention (CDC) (PA number DP-10-001).

Will I be paid for being in the study?

You will be given a gift card worth $10 for completing the Initial Participant Survey. You will be given a gift card worth $40 for having a blood draw and an additional $40 in gift cards for completing the questionnaires and physical measurements. It is important for you to know that payment for participation in the study is taxable income. If needed, we can offer assistance with transportation to the visit.

Will I have to pay for anything?

It will not cost you anything to be in the study.

Is my participation voluntary?

Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you choose to take part, you have the right to stop at any time. If you refuse or decide to withdraw later, you will not lose any benefits or rights to which you are entitled.

If you leave this study, you will still receive your normal medical care. The only medical care that you will lose is the medical care you are getting as part of this study. You might be able to get that same kind of medical care outside of the study. Ask your study doctor.

If you drop out of the research study you can request that all blood or DNA samples that have been collected be destroyed. Withdrawal from this research study will have no effect on access to medical care nor will it have any effect on the standard of care your health care professionals are providing. If there are any new findings during the study that may affect whether you want to continue to take part, you will be told about them. Significant new findings that relate to your participation in this study will be discussed with you and/or your health care provider with your permission.

Can I be removed from this study?

You may be taken out of this study if the study doctor thinks it is not safe for you to be in the study. You can be taken out of the study even if you do not want to leave the study. The study doctor may decide to stop your participation without your permission if the study doctor thinks that being in the study may cause you harm, or for any other reason. Also, the sponsor may stop the study at any time.

What happens if I am injured or hurt during the study?

If you are hurt by this research, you should call Dr. Dana Dabelea immediately at (303) 724-4414. We will arrange to get you medical care if you have an injury that is caused by this research. However, you or your insurance company will have to pay for the care that is needed. You should inform your health care providers if you decide to participate in this research study. If you have questions about injury related to the research, you may call Dr. Dabelea and/or your private physician.

Who do I call if I have questions?

If you have questions right now, you can ask the person who is talking to you about this consent form. The researcher carrying out this study is Dr. Dana Dabelea. If you have questions, concerns or complaints later, you may call Dr. Dana Dabelea at (303) 724-4414. You will be given a copy of this form to keep. If you have questions about your rights as a subject in this study, you can call the Colorado Multiple Institutional Review Board (COMIRB) office at (303) 724-1055.

Who will see my research information?

The University of Colorado Denver (UCD) and its affiliated hospital(s) have rules to protect information about you. Federal and state laws including the Health Insurance Portability and Accountability Act (HIPAA) also protect your privacy. This part of the consent form tells you what information about you may be collected in this study and who might see or use it.

The institution involved in this study is the University of Colorado Denver. We cannot do this study without your permission to see, use and give out your information. You do not have to give us this permission. If you do not, then you may not join this study.

We will see, use and disclose your information only as described in this form and in our Notice of Privacy Practices; however, people outside the University of Colorado Denver and its affiliate hospitals may not be covered by this obligation.

Initials_____

We will do everything we can to maintain the confidentiality of your personal information but confidentiality cannot be guaranteed.

The use and disclosure of your information has no time limit. You can cancel your permission to use and disclose your information at any time by writing to the study's Primary Investigator, at the name and address listed below. If you do cancel your permission to use and disclose your information, your part in this study will end and no further information about you will be collected. Your cancellation would not affect information already collected in this study.

Dr. Dana Dabelea
UCD Colorado School of Public Health
Dept. of Epidemiology
Bldg 500, Box B-119
Aurora, CO 80045
Ph. (303) 724-4414 FAX (303) 724-4491

Both the research records that identify you and the consent form signed by you may be looked at by the following people:

- Federal offices such as the Food and Drug Administration (FDA) and the Office of Human Research Protections (OHRP) that protect research subjects like you.
- People at the Colorado Multiple Institutional Review Board (COMIRB)
- The Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH), who are the sponsors paying for this study
- Officials at the institution where the research is being conducted and officials at other institutions involved in this study who are in charge of making sure that we follow all of the rules for research.

We might talk about this research study at meetings. We might also print the results of this research study in relevant journals. But we will always keep the names of the research subjects, like you, private.

You have the right to request access to your personal health information from the Investigator. To ensure proper evaluation of test results, your access to these study results may not be allowed until after the study has been completed.

The investigator (or staff acting on behalf of the investigator) will use your information for the research purpose outlined in ths consent form. They will also make *all or some* **of the following health information about you collected in this study available to:**

- Wake Forest University Biostatistics Center
- Northwest Lipid Metabolism and Diabetes Research Laboratory
- NIH Genome-Wide Association Studies (GWAS) Repository

Information about you that will be seen, collected, used and disclosed in this study:

- Age, sex, race/ethnicity
- Date of birth
- Date of diabetes diagnosis
- Portions of your previous and current Medical Records that are relevant to this study, including but not limited to Diagnoses, History and Physical, or laboratory studies, procedure results
- Research visit and research test records including questionnaires and physical examinations
- Blood, DNA and urine samples
- Results of genetic analyses and the associated data

What happens to Data, Blood and Specimens that are collected in this study?

Scientists at the University of Colorado Denver and the hospitals involved in this study work to find the causes and cures of disease. The data, blood and specimens collected from you during this study are important to this study and to future research. If you join this study:

- The data, blood, or other specimens given by you to the investigators for this research no longer belong to you.
- Both the investigators and any sponsor of this research may study your data, blood, or other specimens collected from you.
- If data, blood, or other specimens are in a form that identifies you, UCD or the hospitals involved in this study may use them for future research only with your consent or Institutional Review Board (IRB) approval.
- Any product or idea created by the researchers working on this study will not belong to you.
- There is no plan for you to receive any financial benefit from the creation, use or sale of such a product or idea.

All information gathered during this study will be held in strict confidence. Once you decide to join the research study, a unique number, called a research study number, will be assigned to you. The unique identifying number will be used instead of your name. The list linking the number assigned to you to your name will be kept in a locked file at the clinic site in Denver, Colorado. Thus, no one other than Dr. Dana Dabelea and her research team will be able to connect any of the research study information to you.

All answers that you give will be kept private. This is so because this study has been given a certificate of confidentiality. This means that anything you tell us will not have to be given to anyone even if a court orders us to do so unless you give permission. However, under the law we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious damage to yourself or others.

HIPAA Authorization for Optional Additional Study Procedures –

In this form, you were given the option to agree to additional, optional research procedures. You must also give us your permission, under HIPAA rules, to use and disclose the information collected from these optional procedures, as described above.
Some of these optional procedures may involve genetic testing or the use of your genetic information. Your genetic information will be released to the NIH Genome-Wide Association Studies Repository.
If you decline to give us permission to use and disclose your information, you cannot take part in these optional procedures, but you can still participate in the main study. Please initial next to your choice:

_____ I give permission for my information, from the optional procedures I have agreed to above, to be used and disclosed as described in this section.

_____ I **do not** give permission for my information for any optional procedures to be used and disclosed; I understand that I will not participate in any optional procedures.

Agreement to be in this study

I have read this paper about the study or it was read to me. I understand the possible risks and benefits of this study. I understand and authorize the access, use and disclosure of my information as stated in this form. I choose to be in this study. I will get a signed and dated copy of this consent form. (Please initial all previous pages of the consent form).

Signature: _____ Print Name: _____ Date: _____
Parent or guardian if subject < 18 years

Signature: _____ Print Name _____Date: _____
Subject >18 years

Consent form explained by: _____Date:_____
Signature Print Name

Investigator's Signature: _____ Date: _____
Investigator must sign with 30 days

For children ages 14-18 who can read this form:

_____ Date_____
Child's Name

COMIRB
APPROVED
For Use
16-Jun-2014
15-Jun-2015

Principal Investigator: Dana Dabelea, MD, PhD
COMIRB No: Protocol 01-934
Version Date: 03/04/2014
Version No: 3.0

Study Title: SEARCH for Diabetes in Youth Registry Study

Assent Format for participants 8 - 13 years of age

What is this study about?
I am being asked to decide if I want to be in this research study. The goal of this study is to know more about diabetes in children and how it affects my life.

Why are you asking me?
I am being asked to be in the study because I have diabetes.

What do I have to do?
I know that to be in the study I will come to the clinic for one visit, for approximately 1 hour, which includes questionnaires, blood draw, urine collection and body measurements.

Will this hurt?
The blood draw might hurt but we can use a numbing cream so that you do not feel the pain.

Can I ask questions?
I asked any questions I have now about the study. All my questions were answered. I know that I can ask any questions about this study at any time. If I want to, I can call Dr. Dana Dabelea at (303) 724-4414.

Do I have to do this?
I know that I do not have to be in this study. No one will be mad at me if I say no.

I want to be in the study at this time. ☐ YES ☐ NO

I will get a copy of this form to keep.

Child's Printed Name: _____

Child's Signature: _____ Date: _____

Witness or Mediator: _____ Date: _____

I have explained the research at a level that is understandable by the child and believe that the child understands what is expected during this study.

Signature of person obtaining assent: _____ Date: _____

Principal Investigator: Dana Dabelea, MD, PhD
COMIRB No: Protocol 01-934
Version Date: 03/04/2014
Version No: 3.0

Study Title: SEARCH for Diabetes in Youth Cohort Study

You (in this form 'you' refers to you and/or your child) are being asked to participate in a research study. This form provides you with information about the study. A member of the research team will describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part.

Why is this study being done?
You are being asked to take part in a research study called the SEARCH for Diabetes in Youth Cohort Study because you have diabetes and were diagnosed under the age of 20 and you have previously completed an in person visit with the SEARCH study.

Diabetes is the third most common chronic disease in individuals under 20 years of age. The total number of cases of diabetes in this age group is increasing. Also, types of diabetes not seen previously in young people are now present. Specifically, this project is interested in studying the following questions.

a. How common are long-term complications related to diabetes, including: retinopathy (damage to back of the eye), nephropathy (kidney damage), neuropathy (nerve damage), and damage to the heart and blood vessels?
b. How common are short-term complications, including hypoglycemia (low blood sugar) and diabetic ketoacidosis (DKA)?
c. What type of medical care are young people with diabetes receiving and how does diabetes affect the lives of these individuals?

Other people in this study
Up to 1250 youth will be enrolled locally, and up to 3900 youth will be invited to participate nationally in this study.

What happens if I join this study?
If you agree to participate in this study you will be asked to come in for an in-person visit at the SEARCH clinic that lasts about 3 1/2 hours. A brief survey will be sent to you each year in order to update your contact information, no matter what other parts of the study you choose to participate in. You may be asked whether you agree to have your medical records released to get more information about your diabetes. All aspects of this study are for research purposes only and are in addition to regular health care. Participation in this study is voluntary and you may refuse to take part in any procedure in the study.

In-person Visit
1.) Collection of Blood and Urine:
Blood Draw: You will be scheduled for a morning appointment. You will come to the visit after not having anything to eat or drink other than water for 8-12 hours. Please do not take your morning insulin prior to arrival, unless you must control your blood sugars. Upon arrival, blood will be drawn from your arm or hand to measure blood sugar, hemoglobin A1c (a measure of long-term blood sugar control), c-peptide (a measure of insulin production), different types of cholesterol (blood fats), islet cell antibodies (markers in the blood for type 1 diabetes), serum creatinine (a measure of kidney function), and several new blood markers associated with risk for developing heart disease or stroke (apolipoprotein B, C-reactive protein, interleukin-6, leptin, and adiponectin).

The total amount of blood drawn for these tests will be based on weight tables and will not exceed 4 tablespoons (20ml). The blood draw takes about 10 minutes. If you need numbing cream for the blood draw, it will add about 30 minutes to this part.

Urine Collection: The week before your scheduled appointment, you will be mailed a container with detailed instructions to collect your first morning void of urine at home on the morning of your visit. You will be asked to bring this urine container with you on the day of your visit.

A urine sample will also be collected at the visit after the blood draw.
Your urine will be tested for albumin and creatinine (small particles of protein) to see how well your kidneys are working.

2.) Physical Examination:
The physical examination will include height, weight, waist measurement, blood pressure, and examination of your feet and of the skin on your neck. The time to complete this section of the visit is approximately 30 minutes.

3.) Questionnaires:
The questionnaires can be completed either at home before the visit or at the visit. If you prefer, a separate visit may be scheduled to complete the forms. Several questionnaires will be administered that gather information about the following areas:

- personal and family medical history
- stage of puberty (if you are over 8 years of age)
- the effect that diabetes has had on your life
- your strategies to prevent low blood sugar
- your or your family's work status, income and education
- types of diabetes education you have received
- your diabetes self-care habits
- symptoms of diabetes complications
- types of food you eat and availability of food
- who provides your diabetes and general medical care, and,
- costs for care

The estimated time to complete the questionnaires is 70 minutes. You can choose not to answer some questions and you can still be in the study.

If you are over 10 years of age, you will be asked to complete questions dealing with the following health issues – physical activity, smoking, eating and sleeping patterns, depression, and how many children you may have had. This information will not be shared with parents unless health issues are identified that need to be treated. The reason why the information will not be shared with parents is to increase the chance that you will answer the questions more honestly. A description of the types of questions asked will be shared with your parents if you are under 18 but your parent must agree NOT to see your answers and let you do the questionnaire by yourself by initialing here:

_____Yes, my child can participate in the questionnaire and I agree to NOT see the answers.
Initial

The estimated time to complete these questions is about 15 minutes.

4.) Photographs of Your Eyes:
Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will take 2 photographs of each of your eyes using a camera with a bright flash.

These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for any unusual changes.

You will be asked to sit in a darkened room before a special eye camera with your chin in a chin rest. After your pupils have dilated (opened) naturally, we will take 2 photographs of the back of each of your eyes (retinas). No drops will be put in your eyes and the camera will not touch your eyes. After each picture is taken, you may see a blue or red spot which will disappear within 5 to 7 minutes and cause no damage to the eye. We will pause for approximately 3-5 minutes between photographs to allow your eyes time to re-adjust to the darkened room so the pupils will open once again.

You will also be asked for the name and phone number of your eye doctor, and whether or not you have ever had laser treatments on the back of your eyes. Doing the eye photographs will take about 20 minutes. We will send you the results of your eye photographs.

5.) Nerve and Heart Function Tests:

Nerve Test: Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking you to complete a short questionnaire, doing a physical examination of your feet, and doing an electrocardiogram (EKG) test of your heart.

We will ask you to answer a brief questionnaire about foot sensation including pain, numbness, and temperature sensitivity. We will examine your feet to measure your ability to feel vibrations, your reflexes, and your ability to feel light touches to your feet. The examiner will test your vibration sense by placing a tuning fork (vibrating instrument) on your big toe. The examiner will use a rubber "hammer" to test the reflexes at your ankle. To test your sense of touch, the examiner will touch your big toe several times with a thin piece of flexible plastic, similar to fishing line. Doing the foot nerve tests will take about 10 minutes. The results of the tests will be sent to the University of Michigan for analysis.

In order to check the accuracy of our measurements, the foot test will be repeated for approximately 5% (1 in 20) of participants. Participants will be randomly selected to receive the repeat measurements. If you are selected for repeat measurements of the feet and you agree to have the measurements performed, your visit will last about 10 minutes longer. You may refuse to have the repeat measures, but still complete the foot examination.

____ You **have** been selected for the repeat measurements of the feet and you **agree** OR **do not agree**

(circle one) to have the repeat measures completed.

____ You **have not** been selected for repeat measurements of the feet.

Heart Rate Variability: Heart Rate Variability (HRV) is a measurement to assess the health of nerves in your heart. The test uses an ECG, or electrocardiogram. This is a machine that doctors routinely use to study the heart; your doctor may have used it with you before. It involves placing three electrodes (sticky pads) on your chest and abdomen. The electrodes will record your heartbeat. The examiner will also take your blood pressure with a blood pressure cuff at least once during the test. During the ECG test, you will simply breathe normally for five minutes while the machine records your heartbeat and blood pressure.

Blood Vessel Test: We will perform a test to measure how your blood vessels function. The test is called an arterial stiffness test. You will be asked to wear loose shorts or to put on a patient gown. A trained member of the research team will measure your pulse in your groin area, but will not expose your private parts. At your request, a chaperone will be present during these procedures.
The following test will then be performed:

After a 5-minute rest period, your blood pressure and heart rate will be measured using a blood pressure cuff placed on your upper arm. This test will be repeated 3 times.

A staff member will then measure the distance from your neck to the bottom of your sternum (breast bone), from your sternum to your wrist, from your sternum to the top of your thigh, and from your thigh to your foot. Electrodes (sticky pads) will then be placed on your chest.

Your wrist will be touched with a small instrument shaped like a pen and the stiffness of your blood vessels will be measured. The pen instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test is painless and will be repeated 3 times.

Then the same pen-shaped instrument will be touched on the side of your neck, the top of your thigh, and your foot to measure the speed at which blood travels from your heart to that area of the body. This test will be repeated 3 times. The blood vessel tests will take about one hour.

This test is designed to be short, simple, and painless. This is a test that doctors use every day, and they are not dangerous. But if you feel uncomfortable at any time during any of these tests, just tell the examiner and he/she will immediately stop the tests.

In order to check the accuracy of our measurements, the blood vessel tests will be repeated for approximately 10% (1 in 10) of participants. Participants will be randomly selected to receive repeat measurements in some of the tests. If you are selected for repeat measurements of the blood vessel tests and you agree to have some of the measurements performed, your visit will last about 20 minutes longer. Some participants may choose to repeat all the measures, in which case your visit will last about 40 minutes longer than usual. You may refuse to have the repeat measures, but still complete the blood vessel testing. You will receive additional compensation for your time if you have the repeat measures done.

____ You **have** been selected for repeat measurements of the blood vessels for all measures (about 40 min) and you **agree** OR **do not agree** (circle one) to have the repeat measurements completed.

____ You **have** been selected for repeat measurements of the blood vessels for some of the measures (about 20 min) and you **agree** OR **do not agree** (circle one) to have the repeat measurements completed.

____ You **have not** been selected for repeat measurements of the blood vessels.

Research Data and Specimens

Blood and urine samples will labeled with a study number code and will be sent to the Central Laboratory at University of Washington, Seattle to be tested. Your name and other identifying information will not be on the samples. The research team will inform you of your test results that may affect your health or healthcare. With your permission, the test results will also be shared with your healthcare provider.

The SEARCH study would like to keep some of the blood and urine that is taken during the study but is not used for other tests. If you agree, an additional sample of blood (1 tablespoon) will be taken, and the excess urine sample will be saved. Whenever possible, blood for storage will be drawn at the same time as the samples for the in-person visit tests. If it is not possible, an additional needle stick will be required with your permission. The blood and urine samples will be kept and may be used in future research to learn more about diabetes. The research that is done with your blood and urine samples is not designed to specifically help you. It might help people who have diabetes and other diseases in the future. Reports about research done with your samples will not be given to you or your doctor. These reports will not be put in your health records. The research using your stored blood and urine samples will not affect your care.

The choice to let SEARCH study investigators keep the blood and urine samples for future research is up to you. No matter what you decide to do, it will not affect the care that you will receive as part of the study. If you decide now that your blood and urine samples can be kept for research, you can change your mind at any time and contact your study doctor to let him or her know that you do not want the study to use your blood and urine samples any longer, and they will be destroyed. Otherwise, they may be kept until they are used up, or until the SEARCH study investigators decide to destroy them.

In the future, people who do research with your blood and urine samples may need to know more about your health. While the SEARCH study may provide reports about your health, they will not give them your name, address, phone number or any other information that will let the researcher know who you are.

DNA (Genes) Blood Sample

You are also being asked for permission to use your blood to have genetic material (DNA) stored for possible use in genetic research about diseases that are passed on in families. If you agree to this request, no more than one additional tablespoon (15ml) of blood will be drawn.

DNA is found in all of your cells. DNA makes up your genes. Your genes control how tall you are, what color hair you have, and all other body traits. The DNA in each person's body is different from every other person's DNA (except identical twins or triplets who have the same DNA). The differences in DNA may explain why some people are more likely to get certain diseases like diabetes.

We know that diabetes runs in families, but we don't know all the genes that are involved in the development of diabetes and its complications. In addition, there are specific types of diabetes that can only be diagnosed by genetic tests. By studying the DNA in your blood sample, researchers may be able to find the genes that carry the risk factors for problems such as diabetes, heart disease, and complications such as eye and kidney trouble, and related conditions (high cholesterol, etc.)

If you agree, a sample of your DNA may be analyzed to identify a complete picture of your genetic makeup. The results of the DNA testing and associated data would then be sent to a national storage center that holds a database to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease. This may lead to better methods to select the best treatment options. When your DNA and clinical information are sent to the storage center, no personal information will be included, such as your name, date of birth, or address. Thus, researchers will not be able to link this information back to you.

Even if your blood samples are used for this kind of research, the results will not be told to you and will not be put in your health records.

Blood and Urine Storage

Your blood and urine samples will only be used for research and will not be sold. The research done with your samples may help to develop new products in the future, but there is no plan for you to be paid. The possible benefits of research from your blood and urine include learning more about what causes diabetes and other diseases, how to prevent them and how to treat them. The greatest risk to you is the release of information from your health records. The SEARCH study research team will protect your records so that your name, address and phone number will be kept private. The chance that this information will be given to someone else is very small. There will be no cost to you for any blood or urine collected and stored by the SEARCH study.

Your stored blood, urine and DNA samples will be kept in storage indefinitely or until the sample is no longer usable. A code number identifies samples and the link between the code and your personal information is stored in a secure location at the University of Colorado. Thus, your sample will not be directly identified with your name. Your samples would be released to a SEARCH investigator (or other investigator authorized by the SEARCH) only after determination of the scientific usefulness of a proposed

Study and would be reviewed for compliance with human research safety and protection guidelines before approval.

Participation in this study is voluntary and you may choose to withdraw from the study at any time. You may request that your stored samples be permanently removed from the Central Laboratory if you choose to withdraw consent. To request that your sample be permanently removed from the central laboratory, contact:

Dr. Dana Dabelea
UCD Colorado School of Public Health
Dept. of Epidemiology
Bldg 500, Box B-119
Aurora, CO 80045
Ph. (303) 724-4414 FAX (303) 724-4491

We will send a request to the central laboratory and they will then destroy the samples and send us a letter certifying that the sample has been destroyed. We will send you a copy of this letter.

Medical Record Review

A medical record review will be conducted for a small number (~25 people) who give us permission to check their medical charts to assess that the information you gave us regarding key medical events and markers of healthcare quality were remembered correctly.

Please read each sentence below and think about your choice. After reading each sentence, check "Yes" or "No" and write your initials. If you have questions, please talk to the SEARCH study staff, Dr Dabelea or your healthcare provider. Remember, no matter what you decide to do about the storage and future use of your data, blood, DNA and urine samples, you may still take part in the study.

1. I wish to have the results of my tests given to my doctor or diabetes care provider.

☐ Yes ☐ No _____Initials

2. I give my permission for my blood and urine samples to be stored in a central laboratory at the University of Washington, Seattle for future use by study investigators in studies of diabetes and diabetes risk factors and complications:

☐ Yes ☐ No _____Initials

3. I give my permission for my DNA (genes) blood sample to be tested for inherited factors in the development of diabetes, diabetes risk factors and complications.

☐ Yes ☐ No _____Initials

4. I give my permission for my DNA (genes) blood sample to be stored by the SEARCH study laboratory a central laboratory at the University of Washington, Seattle for future use in diabetes and diabetes-related studies.

☐ Yes ☐ No _____Initials

5. I give my permission for the results of my DNA analysis and associated data to be sent to a national storage center for future study on how genes may affect the risk of diseases such as asthma, cancer, diabetes and heart disease.

☐ Yes ☐ No _____Initials

6. I give my permission for my study doctor (or someone he or she chooses) to contact me in the future to ask me to take part in more research.

☐ Yes ☐ No _____Initials

7. I give permission for my medical records to be reviewed to check that the information I remembered was correct.

☐ Yes ☐ No _____Initials

What are the possible discomforts or risks?

Discomforts you may experience while in this study include those related to the collection of blood for laboratory studies, the disclosure of laboratory results to participants, and breaches of confidentiality of research data.

In this study we will need to get a maximum of 4 tablespoons (3 tablespoons for testing and 1 tablespoon for storage) of blood from you. We will get blood by putting a needle into a vein and letting the blood flow into a glass tube. You may feel some pain when the needle goes into your vein. To reduce the pain, a local skin numbing cream or spray (EMLA or Ethyl Chloride) can be applied to the skin before blood is drawn. On rare occasions EMLA cream may cause slight short-lived skin irritation. A day or two later, you may have a small bruise where the needle went under the skin.

You might worry about whether results of a blood test will lead to discrimination, for example denial of health insurance or employment. Laws exist to protect against discrimination, and these vary from state to state. While it is theoretically possible that information about you could lead to this sort of discrimination, this is very unlikely. Information about you will not be given to insurance companies, employers, or other parties without your permission. Results of this testing will be reported to your healthcare provider with your permission, and therefore will go into your medical record.

The central laboratory receives only coded information that does not have your name on it and will make every effort to protect your privacy, although no guarantee of confidentiality can be absolute.

There are no known risks associated with taking a photograph of the eye. Although you will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last for longer than a few minutes.

There are no majors risks associated with the nerve tests on the feet. All of the devices used (a reflex hammer, a tuning fork, and a monofilament) are used daily in doctors' offices; your doctor has probably used them with you before. They are non-invasive instruments. They may, however, cause a slight agitation or discomfort in some patients.

There are no major risks associated with the heart function tests. ECGs are performed daily in hospitals; you may have had one before. No electrical current is sent through the body, so there is no risk of electrical shock. Application of the sticky pads may feel cold, and in very rare cases, a patient may develop a skin rash or irritation where the patches were applied. You may feel some pressure for a few seconds when the

pen-shaped device is placed on your skin. Some participants may feel discomfort when the arm cuff is inflated for the blood pressure measurements.

Some of the tests will look for the presence of risk factors for complications of diabetes. If these tests identify complications of diabetes, the results may raise anxiety about the complications. If this happens, you will be referred to a local mental health professional for evaluation and treatment.

Sample Storage Risks: You, your family, or your doctor will not receive the results of tests from the storage samples and the results will not become a part of your medical record because this research is not expected to affect your medical care. The study investigators will make every effort to maintain confidentiality by labeling your samples with a number rather than with your name or other personal information. However, in the unlikely circumstance that your test results are unintentionally made known to a third party or revealed to you because they are deemed to be important to your medical care, you will need to consider the risks associated with having this information. First, as with any medical study, there is a risk that the result may be in error. Also, having information that you are at risk for a condition related to that disease might be emotionally stressful.

There is a risk that people outside of the research team will see your research information. We will do all that we can to protect your information, but it cannot be guaranteed. The study may include risks that are unknown at this time.

What are the possible benefits of the study?

This study is designed for the researchers to learn more about children and youth diagnosed with diabetes. This study is not designed to treat any illness or to improve your health. You will receive no direct health benefit from participating in this research study and there are risks as mentioned in the discomfort and risk section.

Are there alternative treatments?

There are no treatments proposed in this study, and the decision to participate in this study will not affect your treatment. Blood and urine test results will be available approximately 3 months after it is collected. Eye photography results will be available approximately 6 months after your visit. Someone from the study will explain the results to you if you wish. Your diabetes provider will also receive the results, if you have given your permission.

Who is paying for this study?

This research is being paid for by the Centers for Disease Control and Prevention (CDC) (PA number DP-10-001).

Will I be paid for being in the study?

You will be given gift cards worth $60 for having the blood draw. If you complete the physical measurements and the questionnaires, you will be given an additional $60 in gift cards. If you are selected to repeat the blood vessel measurements you will receive an additional $20 gift card if you repeat all the measures and a $10 gift card if you repeat only some of the measures. It is important for you to know that payment for participation in the study is taxable income. If needed, we can offer assistance with transportation to the visit.

Will I have to pay for anything?

It will not cost you anything to be in the study.

Is my participation voluntary?

Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you

choose to take part, you have the right to stop at any time. If you refuse or decide to withdraw later, you will not lose any benefits or rights to which you are entitled.

If you leave this study, you will still receive your normal medical care. The only medical care that you will lose is the medical care you are getting as part of this study. You might be able to get that same kind of medical care outside of the study. Ask your study doctor.

If you drop out of the research study you can request that all blood, urine or DNA samples that have been collected be destroyed. Withdrawal from this research study will have no effect on access to medical care nor will it have any effect on the standard of care your health care professionals are providing. If there are any new findings during the study that may affect whether you want to continue to take part, you will be told about them. Significant new findings that relate to your participation in this study will be discussed with you and/or your health care provider with your permission.

Can I be removed from this study?
You may be taken out of this study if the study doctor thinks it is not safe for you to be in the study. You can be taken out of the study even if you do not want to leave the study. The study doctor may decide to stop your participation without your permission if the study doctor thinks that being in the study may cause you harm, or for any other reason. Also, the sponsor may stop the study at any time.

What happens if I am injured or hurt during the study?
If you are hurt by this research, you should call Dr. Dana Dabelea immediately at (303) 724-4414. We will arrange to get you medical care if you have an injury that is caused by this research. However, you or your insurance company will have to pay for the care that is needed. You should inform your health care providers if you decide to participate in this research study. If you have questions about injury related to the research, you may call Dr. Dabelea and/or your private physician.

Who do I call if I have questions?
If you have questions right now, you can ask the person who is talking to you about this consent form. The researcher carrying out this study is Dr. Dana Dabelea. If you have questions, concerns or complaints later, you may call Dr. Dana Dabelea at (303) 724-4414. You will be given a copy of this form to keep. If you have questions about your rights as a subject in this study, you can call the Colorado Multiple Institutional Review Board (COMIRB) office at (303) 724-1055.

Who will see my research information?
The University of Colorado Denver (UCD) and its affiliated hospital(s) have rules to protect information about you. Federal and state laws including the Health Insurance Portability and Accountability Act (HIPAA) also protect your privacy. This part of the consent form tells you what information about you may be collected in this study and who might see or use it.

The institution involved in this study is the University of Colorado Denver. We cannot do this study without your permission to see, use and give out your information. You do not have to give us this permission. If you do not, then you may not join this study.

We will see, use and disclose your information only as described in this form and in our Notice of Privacy Practices; however, people outside the University of Colorado Denver and its affiliate hospitals may not be covered by this obligation.

We will do everything we can to maintain the confidentiality of your personal information but confidentiality cannot be guaranteed.

The use and disclosure of your information has no time limit. You can cancel your permission to use and disclose your information at any time by writing to the study's Principal Investigator (PI), at the name and

address listed below. If you do cancel your permission to use and disclose your information, your part in this study will end and no further information about you will be collected. Your cancellation would not affect information already collected in this study.

Dr. Dana Dabelea
UCD Colorado School of Public Health
Dept. of Epidemiology
Bldg 500, Box B-119
Aurora, CO 80045
TEL (303) 724-4414 FAX (303) 724-4491

Both the research records that identify you and the consent form signed by you may be looked at by the following people:

- Federal offices such as the Food and Drug Administration (FDA) and the Office of Human Research Protections (OHRP) that protect research subjects like you.
- People at the Colorado Multiple Institutional Review Board (COMIRB)
- The Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH), who are the sponsors paying for this study
- Officials at the institution where the research is being conducted and officials at other institutions involved in this study who are in charge of making sure that we follow all of the rules for research

We might talk about this research study at meetings. We might also print the results of this research study in relevant journals. But we will always keep the names of the research subjects, like you, private.

You have the right to request access to your personal health information from the Investigator. To ensure proper evaluation of test results, your access to these study results may not be allowed until after the study has been completed.

The investigator (or staff acting on behalf of the investigator) will use your information for the research purpose outlined in this consent form. They will also make *all or some* **of the following health information about you collected in this study available to:**

- Wake Forest University Biostatistics Center
- Northwest Lipid Metabolism and Diabetes Research Laboratory
- University of Wisconsin Madison Eye Photography Reading Center
- University of Michigan Neuropathy Reading Center
- Cincinnati Children's Hospital Medical Center Heart Institute
- NIH Genome-Wide Association Studies (GWAS) Repository

Information about you that will be seen, collected, used and disclosed in this study:

- Age, sex, race/ethnicity
- Date of birth
- Date of diabetes diagnosis
- Portions of your previous and current medical records that are relevant to this study, including but not limited to diagnoses, history and physical, or laboratory studies, procedure results
- Research visit and research test records including questionnaires and physical examinations
- Blood, DNA and urine samples
- Results of genetic analyses and the associated data
- Eye photographs
- Heart and blood vessel tests

What happens to Data, Blood and Specimens that are collected in this study?

Scientists at the University of Colorado Denver and the hospitals involved in this study work to find the causes and cures of disease. The data, blood and specimens collected from you during this study are important to this study and to future research. If you join this study:

- The data, blood, or other specimens given by you to the investigators for this research no longer belong to you.
- Both the investigators and any sponsor of this research may study your data, blood, or other specimens collected from you.
- If data, blood, or other specimens are in a form that identifies you, UCD or the hospitals involved in this study may use them for future research only with your consent or Institutional Review Board (IRB) approval.
- Any product or idea created by the researchers working on this study will not belong to you.
- There is no plan for you to receive any financial benefit from the creation, use or sale of such a product or idea.

All information gathered during this study will be held in strict confidence. Once you decide to join the research study, a unique number, called a research study number, will be assigned to you. The unique identifying number will be used instead of your name. The list linking the number assigned to you to your name will be kept in a locked file at the clinic site in Denver, Colorado. Thus, no one other than Dr. Dana Dabelea and her research team will be able to connect any of the research study information to you.

All answers that you give will be kept private. This is so because this study has been given a certificate of confidentiality. This means that anything you tell us will not have to be given to anyone even if a court orders us to do so unless you give permission. However, under the law we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious damage to yourself or others.

HIPAA Authorization for Optional Additional Study Procedures –

In this form, you were given the option to agree to additional, optional research procedures. You must also give us your permission, under HIPAA rules, to use and disclose the information collected from these optional procedures, as described above.

Some of these optional procedures may involve genetic testing or the use of your genetic information. Your genetic information will be released to the NIH Genome-Wide Association Studies Repository.

If you decline to give us permission to use and disclose your information, you cannot take part in these optional procedures, but you can still participate in the main study. Please initial next to your choice:

_____ I give permission for my information, from the optional procedures I have agreed to above, to be used and disclosed as described in this section.

_____ I **do not** give permission for my information for any optional procedures to be used and disclosed; I understand that I will not participate in any optional procedures.

Agreement to be in this study

I have read this paper about the study or it was read to me. I understand the possible risks and benefits of this study. I understand and authorize the access, use and disclosure of my information as stated in this form. I know that being in this study is voluntary. I choose to be in this study. I will get a signed and dated copy of this consent form. (Please initial all previous pages of the consent form).

Signature: _____ Print Name: _____ Date: _____
Parent or guardian if subject < 18 years

Signature: _____ Print Name _____Date: _____
Subject >18 years

Consent form explained by: _____Date:_____
Signature Print Name

Investigator's Signature: _____ Date: _____
Investigator must sign within 30 days

For children ages 14-18 who can read this form:

_____ Date_____
Child's Name

Principal Investigator: Dana Dabelea, MD, PhD
COMIRB No: Protocol 01-934
Version Date: 03/04/2014
Version No: 3.0

Study Title: SEARCH for Diabetes in Youth Cohort Study

Assent Format for participants 8 - 13 years of age

What is this study about?
I am being asked to decide if I want to be in this research study. The goal of this study is to know more about diabetes in children and how it affects my life.

Why are you asking me?
I am being asked to be in the study because I have diabetes.

What do I have to do?
I know that to be in the study I will come to the clinic for one visit for approximately 3-4 hours, which includes questionnaires, blood draw, urine collection, body measurements, eye photos and a heart test.

Will this hurt?
The blood draw might hurt but we will use a numbing cream so that you do not feel the pain. The eye photos have a bright light and may cause me to blink or to see spots.

Can I ask questions?
I asked any questions I have now about the study. All my questions were answered.
I know that I can ask any questions about this study at any time. If I want to, I can call Dr. Dana Dabelea at (303) 724-4414.

Do I have to do this?
I know that I do not have to be in this study. No one will be mad at me if I say no.

I want to be in the study at this time. ☐ YES ☐ NO

I will get a copy of this form to keep.

Child's Printed Name: _____

Child's Signature: _____ Date: _____

Witness or Mediator: _____ Date: _____

I have explained the research at a level that is understandable by the child and believe that the child understands what is expected during this study.

Signature of person obtaining assent: _____ Date: _____

Ohio

Consents

STUDY TITLE: SEARCH FOR DIABETES IN YOUTH
(STUDY VISIT: 2002-06 & 2008 COHORT)

STUDY NUMBER: 2011-0407

FUNDING ORGANIZATION: Centers for Disease Control and Prevention; National Institutes of Health

Lawrence Dolan, MD
Name of Principal Investigator

513-636-2444
Telephone Number

INTRODUCTION

We are asking you to be in a research study so we can learn new information that may help others. If you decide not to be in this study, we will still take good care of you. If you decide to be in this study, you may change your mind at any time during the study and you can stop being in the study. Take all the time you need to make your choice. Ask us any questions you have. It is also okay to ask more questions after you decide to be in the study. You can ask questions at any time.

WHY ARE WE DOING THIS RESEARCH?

In this research study we want to learn more about diabetes in children, teens, and young adults.

We are asking you and others with diabetes to be in the research, because we want to learn more about how diabetes is affecting the lives of young people with diabetes, what type of medical care they receive, and what type of complications are beginning to develop.

WHO IS IN CHARGE OF THE RESEARCH?

Dr. Lawrence Dolan is the researcher at Cincinnati Children's Hospital Medical Center (CCHMC) who is in charge of this study.

CCHMC is being paid by the CDC (Centers for Disease Control and Prevention) and the NIH (National Institutes of Health) to do this study.

WHO SHOULD NOT BE IN THE STUDY

You cannot be in this study if you do not have diabetes.

- If you are pregnant, you will not be able to take part in the study visit until 4 months after delivery or end of the pregnancy.

WHAT WILL HAPPEN IN THE STUDY?

The research staff will explain the visit to you. You will be able to ask questions to make sure you understand what will happen to you.

If you qualify and you decide you want to be in the study, you will come to CCHMC one time. Your visit will last about 3½ - 4 hours. You may be contacted once a year by mail to update any changes in your address or phone number. If your address/phone number has changed, we may attempt to update your contact information through a public database, such as LexisNexis.

These are the things that will happen to you while in the study:

Physical Exam and Blood and Urine Samples

- Fast for 8-10 hours before the visit (no food or drinks, except water)
- Bring in a urine sample to be tested for albumin and creatinine to see how well your kidneys are working
- Measure height, weight, waist, and blood pressure. Each will be done 2-3 times.
- Look at skin on back of neck
- Another urine sample will be collected during your visit. It will also be tested for albumin and creatinine.
- Blood will be taken from your arm or hand to measure blood sugar, hemoglobin A1c (measures average blood sugar over past 3 months), c-peptide (measures your own insulin production), creatinine (measures kidney function), different types of cholesterol (fat), adiponectin and leptin (hormones made by fat cells), diabetes antibodies (markers in the blood for type 1 diabetes), hsCRP and IL-6 (measures of inflammation), fibrinogen (involved in blood clotting), and creatinine and cystatin C (measures of how well the kidneys are functioning). The amount of blood needed for these tests is about 4 teaspoons.

➢ If you agree, extra blood will be collected and saved for the duration of the study. This blood may be used in the future as new tests are developed to tell your type of diabetes and your risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and

being overweight. The amount of blood needed is about 3¾ teaspoons.

☐ I agree to have my blood and urine stored. _____initials

☐ I do not agree to have my blood and urine stored. _____initials

- If you agree, extra blood will be collected for DNA. This blood sample may be tested to identify your genetic makeup. This blood sample or the test results may be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease. When your blood or test results and clinical information are sent to the storage center, no personal information, such as your name, date of birth, or address will be included. Thus, researchers will not be able to link this information back to you. The amount of blood needed is about 1¾ teaspoons.

☐ I agree to have my blood stored and tested for DNA. _____initials

☐ I do not agree to have my blood stored and tested for DNA. _____initials

- After the blood test is done, you will be given a snack. You may take your diabetes medicine at that time. When the heart function tests have been completed, you will be given breakfast.

Questions

- You will be asked questions about your diabetes, medical care, current medications, family history of diabetes, education, family income level, health insurance, and the effect diabetes has had on your life. You will be asked to answer questions dealing with the following health issues; physical activity, smoking, alcohol use, eating and sleeping patterns, and depression. You will also be asked what you might do to prevent low blood sugars, what worries you might have in relation to low blood sugars, and practices that are consistent with eating problems.

Nerve Tests

Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking you to complete a short questionnaire and doing an examination of your feet. Doing the nerve tests will take about 10 minutes. The results of your foot exam and questionnaire will be sent to the University of Michigan for analysis.

- We will ask you to answer 15 questions about foot sensation including pain, numbness, and temperature sensitivity.
- We will examine your feet to measure your ability to feel vibrations, your reflexes, and the ability to feel light touches to your feet. To test the

sense of touch, the examiner will touch your big toe several times with a thin piece of plastic and place a vibrating instrument on the toe. The examiner will use a rubber "hammer" to test the reflexes in the ankle. We may ask you to repeat the foot exam with a different examiner.

Eye Photographs

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will be taking 2 pictures of each of your eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for possible problems.

- You will be asked to sit in a darkened room in front of a special camera with your chin in a chin rest. After the pupils have dilated, we will take 2 photographs of the back of each eye. No drops will be put in your eyes; and the camera will not touch your eyes. After each picture is taken, you may see a white or colored spot, which will disappear within a few minutes and cause no damage to the eye. We will pause for a few minutes between photographs to allow the eyes time to re-adjust to the darkened room so the pupils will dilate once again.
- You will also be asked for the name and phone number of your eye doctor, and whether or not you have ever had eye injections or laser treatments on the back of the eyes. We will send you the results of your eye photographs.

Heart Function Tests

We will be monitoring blood vessel changes to see if the changes that are commonly related to other risk factors for heart disease are present in children, adolescents and young adults. These tests will not hurt.

- The examiner will place an EKG lead on each of your arms and on the left leg or two EKG leads on your chest and one on the stomach. It is important for the EKG leads to pick up a good signal of your heart beats. In some cases it may be necessary for us to shave the hair from a small area of skin to improve the heart signal. You will be asked to lie down and rest for 5 minutes before the test begins. We will then record the pattern of heart beats for 10 minutes.
- We will check your pulse on the upper, inner thigh, but will not expose private parts. You may be asked to remove outer clothing and to put on a patient gown. At your request a chaperone will be present during these procedures.

The following tests will then be performed:

- A staff member will measure the distance from your sternum (breast bone) to the umbilicus (belly button), from the umbilicus to the top of the leg, from the top of the leg to the foot, from the sternum to the wrist, and from the neck to the sternum. These measurements will be repeated 3

times.

- A small instrument shaped like a pen will be touched on the side of your neck, the top of the leg, and the top of the foot to measure the speed of your pulse. This test will be repeated 3 times.
- Your wrist will be touched with the pen-shaped instrument to measure the stiffness of the blood vessels. This instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test will be repeated 3 times.

In order to check the accuracy of our measurements, some of the blood vessel tests will be repeated for about 32 CCHMC participants. Participants will be randomly selected to receive repeat measurements. Your chance of being selected for these repeat measurements is 5% (1 out of every 20 participants). If you are selected for repeat measurements and you agree to have the measurements performed, your visit will last about 30 minutes longer; and you will receive an extra payment of $10 for your time.

☐ You have been selected for these repeat measurements.

☐ You have not been selected for these repeat measurements.

WHAT ARE THE GOOD THINGS THAT CAN HAPPEN FROM THIS RESEARCH?

Being in this research may not help you right now. When we finish the study, we hope that we will know more about diabetes. This may help others with diabetes later on.

As part of this research you will receive blood and urine test results at no charge. At your request, we will send copies of your test results to your healthcare provider. This may allow the provider to change, if indicated, how they take care of your diabetes and to treat any complications that may be present.

➢ If you agree, your results will be shared with your provider(s).

☐ I agree to have my results shared with my healthcare provider. _____initials

☐ I do not agree to have my results shared with my healthcare provider. _____initials

WHAT ARE THE BAD THINGS THAT CAN HAPPEN FROM THIS RESEARCH?

The risks of drawing blood from a vein in the lower arm include mild pain,

bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, experienced medical staff will draw blood. A local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

You will be fasting for 8-10 hours before your appointment. To help prevent and treat low or high blood sugars, your blood sugar will be checked; and you may take diabetes medicine or a fast-acting carbohydrate as needed to control the blood sugar level.

Some of the tests will look for the presence or risk of developing the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you anxious. If this happens, you will be referred to a local mental health professional for evaluation and treatment.

There are no known risks associated with the nerve tests. There are no known risks associated with taking photographs of the eye. Although you will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last. When the pen-shaped blood vessel device is placed on your skin you may feel some pressure for a few seconds.

There may be other risks that we do not know about yet.

WHAT OTHER CHOICES ARE THERE?

Instead of being in this study, you can choose not to be in it.

HOW WILL INFORMATION ABOUT YOU BE KEPT PRIVATE?

Making sure that information about you remains private is important to us. To protect your privacy in this research study, we will assign a special number to you. This number will be used instead of your name to identify the information and laboratory tests collected during the study. The list containing the special number assigned to you is kept in a password-protected database at CCHMC. Thus, no one other than Dr. Dolan and his research team at CCHMC will be able to link any of the information collected in the study to you.

WILL IT COST YOU ANYTHING EXTRA FOR YOU TO BE IN THE RESEARCH STUDY?

Your time is valuable and, therefore, would be the most costly part of your involvement in the study. The only other cost to you would be for transportation to and from the study site**.**

WILL YOU BE PAID TO BE IN THIS RESEARCH STUDY?

You will be reimbursed for your time, effort and travel while you are in this research study.

You will be paid $100 for completing the study visit and an extra $20 for bringing in a 1st morning urine sample.

If you are able to complete only a portion of the study visit, you will be asked to schedule a second visit to complete the remainder of the study procedures. Based on the time spent at the visit, your payment will be pro-rated accordingly for each visit.

We may ask you to repeat one or both urine samples. You will be paid an extra $20 for providing these urine samples.

WHAT HAPPENS IF YOU ARE INJURED FROM BEING IN THIS STUDY?

If you believe you have been injured as a result of this research you should contact Dr. Dolan as soon as possible to discuss the concerns. Treatment for injuries is available at CCHMC. If you go to the Emergency Room or to another hospital or doctor, it is important that you tell them that you are in a research study. If possible, you should give them a copy of this consent form.

CCHMC follows a policy of making all decisions about compensation for the medical treatment of physical injuries that happened during or were caused by research on an individual basis.

WHO DO YOU CALL IF YOU HAVE QUESTIONS OR PROBLEMS?

For questions, concerns, or complaints about this research study you can contact the study person listed on page 1 of this document. If you would like to talk to someone that is not part of the research staff or if you have general questions about your research study rights or questions, concerns, or complaints about the research, you can call the CCHMC Institutional Review Board at 513-636-8039.

AUTHORIZATION FOR USE/DISCLOSURE OF HEALTH INFORMATION FOR RESEARCH

To be in this research study you must also give your permission (or authorization) to use and disclose (or share) your "protected health information" (called PHI for short).

What protected health information will be used and shared during this

study?
CCHMC will need to use and share your PHI as part of this study. This PHI will come from:

- Your CCHMC medical records
- Your research records

The types of information that will be used and shared from these records include:

- Laboratory test results, diagnosis, and medications
- Reports and notes from clinical and research observations
- Imaging (like CT scans, MRI scans, x-rays, etc.) studies and reports
- If applicable, information concerning HIV testing or the treatment of AIDS or AIDS-related conditions, drug or alcohol abuse, drug-related conditions, alcoholism, and/or psychiatric/psychological conditions (but not psychotherapy notes).

Who will share, receive and/or use your protected health information in this study?

- Staff at all the research study sites (including CCHMC)
- Personnel who provide services to you as part of this study
- Other individuals and organizations that need to use your PHI in connection with the research, including people at the sponsor and organizations that the sponsor may use to oversee or conduct the study.
- The members of the CCHMC Institutional Review Board and staff of the Office of Research Compliance and Regulatory Affairs.

How will you know that your PHI is not misused?
People that receive your PHI as part of the research are generally limited in how they can use your PHI. In addition, most people who receive your PHI are also required by federal privacy laws to protect your PHI. However, some people that may receive your PHI may not be required to protect it and may share the information with others without your permission, if permitted by the laws that apply to them.

Can you change your mind?
You may choose to withdraw your permission at any time. A withdrawal of your permission to use and share your PHI would also include a withdrawal from participation in the research study. If you wish to withdraw your permission to use and share your PHI you need to notify the study doctor, listed on the first page of this document, in writing. Your request will be effective immediately and no new PHI about you will be used or shared. The only exceptions are (1) any use or sharing of PHI that has already occurred or was in process prior to you withdrawing your permission and (2) any use or sharing that is needed to maintain the integrity of the research.

Will this permission expire?

Your permission will expire at the end of the study. If the study involves the creation or maintenance of a research database repository, this authorization will not expire.

Will your other medical care be impacted?
By signing this document you agree to participate in this research study and give permission to CCHMC to use and share your PHI for the purpose of this research study. If you refuse to sign this document you will not be able to participate in the study. However, your rights concerning treatment not related to this study, payment for services, enrollment in a health plan or eligibility of benefits will not be affected.

SIGNATURES

The research team has discussed this study with you and answered all of your questions. Like any research, the researchers cannot predict exactly what will happen. Once you have had enough time to consider whether you should participate in this research you will document your permission by signature below.

You will receive a copy of this signed document for your records.

_____
Printed Name of Research Participant

_____ _____
Signature of Research Participant Indicating Consent — Date

_____ _____
Signature of Legally Authorized Representative* — Date

_____
* If signed by a legally authorized representative, a description of such representative's authority must be provided

_____ _____
Signature of Individual Obtaining Consent — Date

STUDY TITLE: SEARCH FOR DIABETES IN YOUTH
(STUDY VISIT: 2002-06 & 2008 COHORT)

STUDY NUMBER: 2011-0407

FUNDING ORGANIZATION: Centers for Disease Control and Prevention; National Institutes of Health

Lawrence Dolan, MD
Name of Principal Investigator

513-636-2444
Telephone Number

INTRODUCTION

We are asking for your permission for your child to be in a research study so we can learn new information that may help others. If you decide not to give your permission for your child to be in this study, we will still take good care of him/her. If you decide to allow your child to be in this study, you may change your mind at any time during the study and your child can stop being in the study. Take all the time you need to make your choice. Ask us any questions you have. It is also okay to ask more questions after you decide to allow your child to be in the study. You can ask questions at any time.

WHY ARE WE DOING THIS RESEARCH?

In this research study we want to learn more about diabetes in children, teens, and young adults.

We are asking your child and other children with diabetes to be in the research, because we want to learn more about how diabetes is affecting the lives of young people with diabetes, what type of medical care they receive, and what type of complications are beginning to develop.

WHO IS IN CHARGE OF THE RESEARCH?

Dr. Lawrence Dolan is the researcher at Cincinnati Children's Hospital Medical Center (CCHMC) who is in charge of this study.

CCHMC is being paid by the CDC (Centers for Disease Control and Prevention) and the NIH (National Institutes of Health) to do this study.

WHO SHOULD NOT BE IN THE STUDY

Your child cannot be in this study if your child does not have diabetes.

- If your child is pregnant, she will not be able to take part in the study visit until 4 months after delivery or end of the pregnancy.

WHAT WILL HAPPEN IN THE STUDY?

The research staff will explain the visit to you. You will be able to ask questions to make sure you understand what will happen to your child.

If your child qualifies and you decide you want your child to be in the study, your child will come to CCHMC one time. If your child is less than 10 years of age, the study visit will last about 3 hours. If your child is 10 years of age or older, visits will take about 3½ - 4 hours. You may be contacted once a year by mail to update any changes in your address or phone number. If your address/phone number has changed, we may attempt to update your contact information through a public database, such as LexisNexis.

These are the things that will happen to your child while in the study:

<u>Physical Exam and Blood and Urine Samples</u>

- Fast for 8-10 hours before the visit (no food or drinks, except water)
- Bring in a urine sample to be tested for albumin and creatinine to see how well your child's kidneys are working
- Measure height, weight, waist, and blood pressure. Each will be done 2-3 times.
- Look at skin on back of neck
- Another urine sample will be collected during your visit. It will also be tested for albumin and creatinine.
- Blood will be taken from your child's arm or hand to measure blood sugar, hemoglobin A1c (measures average blood sugar over past 3 months), c-peptide (measures your child's own insulin production), creatinine (measures kidney function), different types of cholesterol (fat), adiponectin and leptin (hormones made by fat cells), diabetes antibodies (markers in the blood for type 1 diabetes), hsCRP and IL-6 (measures of inflammation), fibrinogen (involved in blood clotting), and creatinine and cystatin C (measures of how well the kidneys are functioning). The amount of blood needed for these tests is between 1 and 4 teaspoons. Smaller amounts will be used for very young children.

- If you agree, extra blood will be collected and saved for the duration of the study. This blood may be used in the future as new tests are developed to tell your child's type of diabetes and your child's risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and being overweight. The amount of blood needed is about 3¾ teaspoons.

☐ I agree to have my child's blood and urine stored. _____initials

☐ I do not agree to have my child's blood and urine stored. _____initials

- If you agree, extra blood will be collected for DNA. This blood sample may be tested to identify your child's genetic makeup. This blood sample or the test results may be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease. When your child's blood or test results and clinical information are sent to the storage center, no personal information, such as your child's name, date of birth, or address will be included. Thus, researchers will not be able to link this information back to your child. The amount of blood needed is about 1¾ teaspoons.

☐ I agree to have my child's blood stored and tested for DNA. _____initials

☐ I do not agree to have my child's blood stored and tested for DNA. _____initials

- After the blood test is done, your child will be given a snack. Your child may take his/her diabetes medicine at that time. When the heart function tests have been completed, your child will be given breakfast.

Questions

- Your child will be asked questions about the effect diabetes has had on his/her life.
- If your child is 8 years of age or older, your child will also be asked about his/her stage of sexual development.
- Young people 10 years of age or older will be asked to answer questions dealing with the following health issues; physical activity, smoking, alcohol use, eating and sleeping patterns, and depression. They will also be asked what they might do to prevent low blood sugars, what worries they might have in relation to low blood sugars, practices that are consistent with eating problems, and diabetes-related topics

that might be a source of conflict between you and your child. This information will not be shared with you unless health issues are identified that need to be treated. The reason why the information will not be shared is to increase the likelihood that your child will answer the questions honestly.

- You will be asked questions about your child's diabetes, medical care, current medications, family history of diabetes, education, family income level, health insurance, and the effect diabetes has had on your life.

Nerve Tests

Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking your child to complete a short questionnaire and doing an examination of your child's feet. Doing the nerve tests will take about 10 minutes. The results of your child's foot exam and questionnaire will be sent to the University of Michigan for analysis.

- We will ask your child to answer 15 questions about foot sensation including pain, numbness, and temperature sensitivity.
- We will examine your child's feet to measure your child's ability to feel vibrations, your child's reflexes, and the ability to feel light touches to your child's feet. To test the sense of touch, the examiner will touch your child's big toe several times with a thin piece of plastic and place a vibrating instrument on the toe. The examiner will use a rubber "hammer" to test the reflexes in the ankle. We may ask your child to repeat the foot exam with a different examiner.

Eye Photographs

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). We will be taking 2 pictures of each of your child's eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for possible problems.

- Your child will be asked to sit in a darkened room in front of a special camera with the chin in a chin rest. After the pupils have dilated, we will take 2 photographs of the back of each eye. No drops will be put in the eyes; and the camera will not touch your child's eyes. After each picture is taken, your child may see a white or colored spot, which will disappear within a few minutes and cause no damage to the eye. We will pause for a few minutes between photographs to allow the eyes time to re-adjust to the darkened room so the pupils will dilate once again.

- You will also be asked for the name and phone number of your child's eye doctor, and whether or not your child has ever had eye injections or laser treatments on the back of the eyes. We will send you the results of your child's eye photographs.

Heart Function Tests

We will be monitoring blood vessel changes to see if the changes that are commonly related to other risk factors for heart disease are present in children, adolescents and young adults. These tests will not hurt.

- The examiner will place an EKG lead on each of your child's arms and on the left leg or two EKG leads on your child's chest and one on the stomach. It is important for the EKG leads to pick up a good signal of your child's heart beats. In some cases it may be necessary for us to shave the hair from a small area of skin to improve the heart signal. Your child will be asked to lie down and rest for 5 minutes before the test begins. We will then record the pattern of heart beats for 10 minutes.
- We will check your child's pulse on the upper, inner thigh, but will not expose private parts. Your child may be asked to remove outer clothing and to put on a patient gown. At your request a chaperone will be present during these procedures.

The following tests will then be performed:

- A staff member will measure the distance from your child's sternum (breast bone) to the umbilicus (belly button), from the umbilicus to the top of the leg, from the top of the leg to the foot, from the sternum to the wrist, and from the neck to the sternum. These measurements will be repeated 3 times.
- A small instrument shaped like a pen will be touched on the side of your child's neck, the top of the leg, and the top of the foot to measure the speed of your child's pulse. This test will be repeated 3 times.
- Your child's wrist will be touched with the pen-shaped instrument to measure the stiffness of the blood vessels. This instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test will be repeated 3 times.

In order to check the accuracy of our measurements, some of the blood vessel tests will be repeated for about 32 CCHMC participants. Participants will be randomly selected to receive repeat measurements. Your chance of being selected for these repeat measurements is 5% (1 out of every 20 participants).

If your child is selected for repeat measurements and you agree to have the measurements performed, your visit will last about 30 minutes longer; and your child will receive an extra payment of $10 for their time.

☐ Your child has been selected for these repeat measurements.

☐ Your child has not been selected for these repeat measurements.

WHAT ARE THE GOOD THINGS THAT CAN HAPPEN FROM THIS RESEARCH?

Being in this research may not help your child right now. When we finish the study, we hope that we will know more about diabetes. This may help other children with diabetes later on.

As part of this research you will receive blood and urine test results at no charge. At your request, we will send copies of your child's test results to your child's healthcare provider. This may allow the provider to change, if indicated, how they take care of your child's diabetes and to treat any complications that may be present.

- If you agree, your child's results will be shared with your child's provider(s).

☐ I agree to have my child's results shared with my child's healthcare provider. _____initials

☐ I do not agree to have my child's results shared with my child's healthcare provider. _____initials

WHAT ARE THE BAD THINGS THAT CAN HAPPEN FROM THIS RESEARCH?

The risks of drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, experienced medical staff will draw blood. A local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

Your child will be fasting for 8-10 hours before your appointment. To help prevent and treat low or high blood sugars, your child's blood sugar will be checked; and your child may take diabetes medicine or a fast-acting carbohydrate as needed to control the blood sugar level.

Some of the tests will look for the presence or risk of developing the complications of diabetes. If these tests identify complications of diabetes or

risk of developing the complications, the results may make you or your child anxious. If this happens, you or your child will be referred to local mental health professionals for evaluation and treatment.

There are no known risks associated with the nerve tests. There are no known risks associated with taking photographs of the eye. Although your child will see a flash of light when the picture is taken, this flash is not harmful. People who are light sensitive may experience some minor discomfort from the camera flash, but the discomfort will not last. When the pen-shaped blood vessel device is placed on your child's skin your child may feel some pressure for a few seconds.

There may be other risks that we do not know about yet.

WHAT OTHER CHOICES ARE THERE?

Instead of being in this study, you can choose not to have your child be in it.

HOW WILL INFORMATION ABOUT YOUR CHILD BE KEPT PRIVATE?

Making sure that information about your child remains private is important to us. To protect your child's privacy in this research study, we will assign a special number to your child. This number will be used instead of your child's name to identify the information and laboratory tests collected during the study. The list containing the special number assigned to your child is kept in a password-protected database at CCHMC. Thus, no one other than Dr. Dolan and his research team at CCHMC will be able to link any of the information collected in the study to your child.

WILL IT COST YOU ANYTHING EXTRA FOR YOUR CHILD TO BE IN THE RESEARCH STUDY?

Your time is valuable and, therefore, would be the most costly part of your involvement in the study. The only other cost to you would be for transportation to and from the study site**.**

WILL YOU/YOUR CHILD BE PAID TO BE IN THIS RESEARCH STUDY?

You and your child will be reimbursed for your time, effort and travel while you are in this research study.

Your child will be paid $60 for completing the study visit and an extra $20 for bringing in a 1st morning urine sample.

You will receive $40 for completing the study visit.

If you are able to complete only a portion of the study visit, you will be asked to schedule a second visit to complete the remainder of the study procedures. Based on the time spent at the visit, your payment will be pro-rated accordingly for each visit.

We may ask your child to repeat one or both urine samples. Your child will be paid an extra $20 for providing these urine samples.

WHAT HAPPENS IF YOUR CHILD IS INJURED FROM BEING IN THIS STUDY?

If you believe that your child has been injured as a result of this research you should contact Dr. Dolan as soon as possible to discuss the concerns. Treatment for injuries is available at CCHMC. If your child goes to the Emergency Room or to another hospital or doctor, it is important that you tell them that your child is in a research study. If possible, you should give them a copy of this parental permission form.

CCHMC follows a policy of making all decisions about compensation for the medical treatment of physical injuries that happened during or were caused by research on an individual basis.

WHO DO YOU CALL IF YOU HAVE QUESTIONS OR PROBLEMS?

For questions, concerns, or complaints about this research study you can contact the study person listed on page 1 of this document. If you would like to talk to someone that is not part of the research staff or if you have general questions about your research study rights or questions, concerns, or complaints about the research, you can call the CCHMC Institutional Review Board at 513-636-8039.

AUTHORIZATION FOR USE/DISCLOSURE OF HEALTH INFORMATION FOR RESEARCH

To be in this research study you must also give your permission (or authorization) to use and disclose (or share) your child's "protected health information" (called PHI for short).

What protected health information will be used and shared during this study?
CCHMC will need to use and share your child's PHI as part of this study. This PHI will come from:

- Your child's CCHMC medical records
- Your child's research records

The types of information that will be used and shared from these records include:

- Laboratory test results, diagnosis, and medications
- Reports and notes from clinical and research observations
- Imaging (like CT scans, MRI scans, x-rays, etc.) studies and reports
- If applicable, information concerning HIV testing or the treatment of AIDS or AIDS-related conditions, drug or alcohol abuse, drug-related conditions, alcoholism, and/or psychiatric/psychological conditions (but not psychotherapy notes).

Who will share, receive and/or use your child's protected health information in this study?

- Staff at all the research study sites (including CCHMC)
- Personnel who provide services to your child as part of this study
- Other individuals and organizations that need to use your child's PHI in connection with the research, including people at the sponsor and organizations that the sponsor may use to oversee or conduct the study.
- The members of the CCHMC Institutional Review Board and staff of the Office of Research Compliance and Regulatory Affairs.

How will you know that your child's PHI is not misused?

People that receive your child's PHI as part of the research are generally limited in how they can use your child's PHI. In addition, most people who receive your child's PHI are also required by federal privacy laws to protect your child's PHI. However, some people that may receive your child's PHI may not be required to protect it and may share the information with others without your permission, if permitted by the laws that apply to them.

Can you change your mind?

You may choose to withdraw your permission at any time. A withdrawal of your permission to use and share your child's PHI would also include a withdrawal from participation in the research study. If you wish to withdraw your permission to use and share your child's PHI you need to notify the study doctor, listed on the first page of this document, in writing. Your request will be effective immediately and no new PHI about your child will be used or shared. The only exceptions are (1) any use or sharing of PHI that has already occurred or was in process prior to you withdrawing your permission and (2) any use or sharing that is needed to maintain the integrity of the research.

Will this permission expire?

Your permission will expire at the end of the study. If the study involves the creation or maintenance of a research database repository, this authorization will not expire.

Will your child's other medical care be impacted?
By signing this document you agree for child to participate in this research study and give permission to CCHMC to use and share your child's PHI for the purpose of this research study. If you refuse to sign this document your child will not be able to participate in the study. However, your child's rights concerning treatment not related to this study, payment for services, enrollment in a health plan or eligibility of benefits will not be affected.

SIGNATURES

The research team has discussed this study with you and answered all of your questions. Like any research, the researchers cannot predict exactly what will happen. Once you have had enough time to consider whether your child should participate in this research you will document your permission by signature below.

You will receive a copy of this signed document for your records.

_____
Printed Name of Research Participant

_____ _____
Signature of Research Participant Indicating Consent or Assent — Date

_____ _____
Signature of Parent or Legally Authorized Representative* — Date

_____
* If signed by a legally authorized representative, a description of such representative's authority must be provided

_____ _____
Signature of Individual Obtaining Consent — Date

STUDY TITLE: SEARCH FOR DIABETES IN YOUTH
(STUDY VISIT: 2012 REGISTRY)

STUDY NUMBER: 2011-0407

FUNDING ORGANIZATION: Centers for Disease Control and Prevention; National Institutes of Health

Lawrence Dolan, MD
Name of Principal Investigator

513-636-2444
Telephone Number

INTRODUCTION

We are asking you to be in a research study so we can learn new information that may help others. If you decide not to be in this study, we will still take good care of you. If you decide to be in this study, you may change your mind at any time during the study and you can stop being in the study. Take all the time you need to make your choice. Ask us any questions you have. It is also okay to ask more questions after you decide to be in the study. You can ask questions at any time.

WHY ARE WE DOING THIS RESEARCH?

In this research study we want to learn more about diabetes in people less than 20 years of age.

We are asking you and others with diabetes to be in the research, because we want to count the number of children and teens with diabetes. We also want to learn more about all the types of diabetes that affect children and teens.

WHO IS IN CHARGE OF THE RESEARCH?

Dr. Lawrence Dolan is the researcher at Cincinnati Children's Hospital Medical Center (CCHMC) who is in charge of this study.

CCHMC is being paid by the CDC (Centers for Disease Control and Prevention) and the NIH (National Institutes of Health) to do this study.

WHO SHOULD NOT BE IN THE STUDY

You cannot be in this study if you do not have diabetes.

- If you are pregnant, you will not be able to take part in the study visit until 4 months after delivery or end of the pregnancy.

WHAT WILL HAPPEN IN THE STUDY?

The research staff will explain the visit to you. You will be able to ask questions to make sure you understand what will happen to you.

If you qualify and you decide you want to be in the study, you will come to CCHMC one time. This visit will last about one hour. You may be contacted once a year by mail to update any changes in your address or phone number. If your address/phone number has changed, we may attempt to update your contact information through a public database, such as LexisNexis.

These are the things that will happen to you while in the study:

- Fast for 8-10 hours before the visit (no food or drinks, except water)
- Bring in a urine sample to be tested for albumin and creatinine to see how well your kidneys are working
- Measure height, weight, waist, and blood pressure. Each will be done 2-3 times.
- Look at skin on back of neck
- Another urine sample will be collected during your visit. It will also be tested for albumin and creatinine.
- Blood will be taken from your arm or hand to measure blood sugar, hemoglobin A1c (measures average blood sugar over past 3 months), c-peptide (measures your own insulin production), creatinine (measures kidney function), different types of cholesterol (fat), and diabetes antibodies (markers in the blood for type 1 diabetes). The amount of blood needed for these tests is about 4 teaspoons.

➢ If you agree, extra blood will be collected and saved for the duration of the study. This blood may be used in the future as new tests are developed to tell your type of diabetes and your risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and being overweight. The amount of blood needed is about 3¾ teaspoons.

☐ I agree to have my blood and urine stored. _____initials

☐ I do not agree to have my blood and urine stored. _____initials

- If you agree, extra blood will be collected for DNA. This blood sample may be tested to identify your genetic makeup. This blood sample or the test results may be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease. When your blood or test results and clinical information are sent to the storage center, no personal information, such as your name, date of birth, or address will be included. Thus, researchers will not be able to link this information back to you. The amount of blood needed is about 1¾ teaspoons.

☐ I agree to have my blood stored and tested for DNA. _____initials

☐ I do not agree to have my blood stored and tested for DNA. _____initials

- After the blood test is done, you will be given breakfast. You may take your diabetes medicine at that time.
- You will be asked questions about your diabetes, medical care, current medications, family history of diabetes, education, family income level, and health insurance.

WHAT ARE THE GOOD THINGS THAT CAN HAPPEN FROM THIS RESEARCH?

Being in this research may not help you right now. When we finish the study, we hope that we will know more about diabetes. This may help others with diabetes later on.

As part of this research you will receive blood and urine test results at no charge. At your request, we will send copies of your test results to your healthcare provider. This may allow the provider to change, if indicated, how they take care of your diabetes and to treat any complications that may be present.

- If you agree, your results will be shared with your provider(s).

☐ I agree to have my results shared with my healthcare provider. _____initials

☐ I do not agree to have my results shared with my healthcare provider. _____initials

WHAT ARE THE BAD THINGS THAT CAN HAPPEN FROM THIS RESEARCH?

The risks of drawing blood from a vein in the lower arm include mild pain,

bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, experienced medical staff will draw blood. A local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

You will be fasting for 8-10 hours before your appointment. To help prevent and treat low or high blood sugars, your blood sugar will be checked; and you may take diabetes medicine or a fast-acting carbohydrate as needed to control the blood sugar level.

Some of the tests will look for the presence or risk of developing the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you anxious. If this happens, you will be referred to a local mental health professional for evaluation and treatment.

There may be other risks that we do not know about yet.

WHAT OTHER CHOICES ARE THERE?

Instead of being in this study, you can choose not to be in it.

HOW WILL INFORMATION ABOUT YOU BE KEPT PRIVATE?

Making sure that information about you remains private is important to us. To protect your privacy in this research study, we will assign a special number to you. This number will be used instead of your name to identify the information and laboratory tests collected during the study. The list containing the special number assigned to you is kept in a password-protected database at CCHMC. Thus, no one other than Dr. Dolan and his research team at CCHMC will be able to link any of the information collected in the study to you.

WILL IT COST YOU ANYTHING EXTRA FOR YOU TO BE IN THE RESEARCH STUDY?

Your time is valuable and, therefore, would be the most costly part of your involvement in the study. The only other cost to you would be for transportation to and from the study site**.**

WILL YOU BE PAID TO BE IN THIS RESEARCH STUDY?

You will be reimbursed for your time, effort and travel while you are in this research study.

You will be paid $60 for completing the study visit and an extra $20 for bringing in a 1st morning urine sample.

We may ask you to repeat one or both urine samples. You will be paid an extra $20 for providing these urine samples.

WHAT HAPPENS IF YOU ARE INJURED FROM BEING IN THIS STUDY?

If you believe you have been injured as a result of this research you should contact Dr. Dolan as soon as possible to discuss the concerns. Treatment for injuries is available at CCHMC. If you go to the Emergency Room or to another hospital or doctor, it is important that you tell them that you are in a research study. If possible, you should give them a copy of this consent form.

CCHMC follows a policy of making all decisions about compensation for the medical treatment of physical injuries that happened during or were caused by research on an individual basis.

WHO DO YOU CALL IF YOU HAVE QUESTIONS OR PROBLEMS?

For questions, concerns, or complaints about this research study you can contact the study person listed on page 1 of this document. If you would like to talk to someone that is not part of the research staff or if you have general questions about your research study rights or questions, concerns, or complaints about the research, you can call the CCHMC Institutional Review Board at 513-636-8039.

AUTHORIZATION FOR USE/DISCLOSURE OF HEALTH INFORMATION FOR RESEARCH

To be in this research study you must also give your permission (or authorization) to use and disclose (or share) your "protected health information" (called PHI for short).

What protected health information will be used and shared during this study?

CCHMC will need to use and share your PHI as part of this study. This PHI will come from:

- Your CCHMC medical records
- Your research records

The types of information that will be used and shared from these records include:

- Laboratory test results, diagnosis, and medications

- Reports and notes from clinical and research observations
- Imaging (like CT scans, MRI scans, x-rays, etc.) studies and reports
- If applicable, information concerning HIV testing or the treatment of AIDS or AIDS-related conditions, drug or alcohol abuse, drug-related conditions, alcoholism, and/or psychiatric/psychological conditions (but not psychotherapy notes).

Who will share, receive and/or use your protected health information in this study?

- Staff at all the research study sites (including CCHMC)
- Personnel who provide services to you as part of this study
- Other individuals and organizations that need to use your PHI in connection with the research, including people at the sponsor and organizations that the sponsor may use to oversee or conduct the study.
- The members of the CCHMC Institutional Review Board and staff of the Office of Research Compliance and Regulatory Affairs.

How will you know that your PHI is not misused?

People that receive your PHI as part of the research are generally limited in how they can use your PHI. In addition, most people who receive your PHI are also required by federal privacy laws to protect your PHI. However, some people that may receive your PHI may not be required to protect it and may share the information with others without your permission, if permitted by the laws that apply to them.

Can you change your mind?

You may choose to withdraw your permission at any time. A withdrawal of your permission to use and share your PHI would also include a withdrawal from participation in the research study. If you wish to withdraw your permission to use and share your PHI you need to notify the study doctor, listed on the first page of this document, in writing. Your request will be effective immediately and no new PHI about you will be used or shared. The only exceptions are (1) any use or sharing of PHI that has already occurred or was in process prior to you withdrawing your permission and (2) any use or sharing that is needed to maintain the integrity of the research.

Will this permission expire?

Your permission will expire at the end of the study. If the study involves the creation or maintenance of a research database repository, this authorization will not expire.

Will your other medical care be impacted?

By signing this document you agree to participate in this research study and give permission to CCHMC to use and share your PHI for the purpose of this research study. If you refuse to sign this document you will not be able to participate in the study. However, your rights concerning treatment <u>not</u> related

to this study, payment for services, enrollment in a health plan or eligibility of benefits will not be affected.

SIGNATURES

The research team has discussed this study with you and answered all of your questions. Like any research, the researchers cannot predict exactly what will happen. Once you have had enough time to consider whether you should participate in this research you will document your permission by signature below.

You will receive a copy of this signed document for your records.

_____
Printed Name of Research Participant

_____ _____
Signature of Research Participant Indicating Consent — Date

_____ _____
Signature of Legally Authorized Representative* — Date

_____
* If signed by a legally authorized representative, a description of such representative's authority must be provided

_____ _____
Signature of Individual Obtaining Consent — Date

STUDY TITLE: SEARCH FOR DIABETES IN YOUTH
(STUDY VISIT: 2012 REGISTRY)

STUDY NUMBER: 2011-0407

FUNDING ORGANIZATION: Centers for Disease Control and Prevention; National Institutes of Health

Lawrence Dolan, MD
Name of Principal Investigator

513-636-2444
Telephone Number

INTRODUCTION

We are asking for your permission for your child to be in a research study so we can learn new information that may help others. If you decide not to give your permission for your child to be in this study, we will still take good care of him/her. If you decide to allow your child to be in this study, you may change your mind at any time during the study and your child can stop being in the study. Take all the time you need to make your choice. Ask us any questions you have. It is also okay to ask more questions after you decide to allow your child to be in the study. You can ask questions at any time.

WHY ARE WE DOING THIS RESEARCH?

In this research study we want to learn more about diabetes in people less than 20 years of age.

We are asking your child and other children with diabetes to be in the research, because we want to count the number of children and teens with diabetes. We also want to learn more about all the types of diabetes that affect children and teens.

WHO IS IN CHARGE OF THE RESEARCH?

Dr. Lawrence Dolan is the researcher at Cincinnati Children's Hospital Medical Center (CCHMC) who is in charge of this study.

CCHMC is being paid by the CDC (Centers for Disease Control and Prevention) and the NIH (National Institutes of Health) to do this study.

WHO SHOULD NOT BE IN THE STUDY

Your child cannot be in this study if your child does not have diabetes.

- If your child is pregnant, she will not be able to take part in the study visit until 4 months after delivery or end of the pregnancy.

WHAT WILL HAPPEN IN THE STUDY?

The research staff will explain the visit to you. You will be able to ask questions to make sure you understand what will happen to your child.

If your child qualifies and you decide you want your child to be in the study, your child will come to CCHMC one time. This visit will last about one hour. You may be contacted once a year by mail to update any changes in your address or phone number. If your address/phone number has changed, we may attempt to update your contact information through a public database, such as LexisNexis.

These are the things that will happen to your child while in the study:

- Fast for 8-10 hours before the visit (no food or drinks, except water)
- Bring in a urine sample to be tested for albumin and creatinine to see how well your child's kidneys are working
- Measure height, weight, waist, and blood pressure. Each will be done 2-3 times.
- Look at skin on back of neck
- Another urine sample will be collected during your visit. It will also be tested for albumin and creatinine.
- Blood will be taken from your child's arm or hand to measure blood sugar, hemoglobin A1c (measures average blood sugar over past 3 months), c-peptide (measures your child's own insulin production), creatinine (measures kidney function), different types of cholesterol (fat), and diabetes antibodies (markers in the blood for type 1 diabetes). The amount of blood needed for these tests is between ½ and 3½ teaspoons. Smaller amounts will be used for very young children.

➢ If you agree, extra blood will be collected and saved for the duration of the study. This blood may be used in the future as new tests are developed to tell your child's type of diabetes and your child's risk of developing the complications of diabetes, insulin resistance (insulin is not working as well as it should), and being overweight. The amount of blood needed is about 3¾ teaspoons.

☐ I agree to have my child's blood and urine stored. _____initials

☐ I do not agree to have my child's blood and urine stored. _____initials

- If you agree, extra blood will be collected for DNA. This blood sample may be tested to identify your child's genetic makeup. This blood sample or the test results may be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease. When your child's blood or test results and clinical information are sent to the storage center, no personal information, such as your child's name, date of birth, or address will be included. Thus, researchers will not be able to link this information back to your child. The amount of blood needed is about 1¾ teaspoons.

☐ I agree to have my child's blood stored and tested for DNA. _____initials

☐ I do not agree to have my blood stored and tested for DNA. _____initials

- After the blood test is done, your child will be given breakfast. Your child may take his/her diabetes medicine at that time.
- You will be asked questions about your child's diabetes, medical care, current medications, family history of diabetes, education, family income level, and health insurance.

WHAT ARE THE GOOD THINGS THAT CAN HAPPEN FROM THIS RESEARCH?

Being in this research may not help your child right now. When we finish the study, we hope that we will know more about diabetes. This may help other children with diabetes later on.

As part of this research you will receive blood and urine test results at no charge. At your request, we will send copies of your child's test results to your child's healthcare provider. This may allow the provider to change, if indicated, how they take care of your child's diabetes and to treat any complications that may be present.

- If you agree, your child's results will be shared with your child's provider(s).

☐ I agree to have my child's results shared with my child's healthcare provider. _____initials

☐ I do not agree to have my child's results shared with my child's healthcare provider. _____initials

WHAT ARE THE BAD THINGS THAT CAN HAPPEN FROM THIS RESEARCH?

The risks of drawing blood from a vein in the lower arm include mild pain, bruising at the site of the blood draw, and occasionally fainting. To lower the possibility of these risks, experienced medical staff will draw blood. A local numbing medicine may be placed on the skin before the blood is drawn to decrease any pain.

Your child will be fasting for 8-10 hours before your appointment. To help prevent and treat low or high blood sugars, your child's blood sugar will be checked; and your child may take diabetes medicine or a fast-acting carbohydrate as needed to control the blood sugar level.

Some of the tests will look for the presence or risk of developing the complications of diabetes. If these tests identify complications of diabetes or risk of developing the complications, the results may make you or your child anxious. If this happens, you or your child will be referred to local mental health professionals for evaluation and treatment.

There may be other risks that we do not know about yet.

WHAT OTHER CHOICES ARE THERE?

Instead of being in this study, you can choose not to have your child be in it.

HOW WILL INFORMATION ABOUT YOUR CHILD BE KEPT PRIVATE?

Making sure that information about your child remains private is important to us. To protect your child's privacy in this research study, we will assign a special number to your child. This number will be used instead of your child's name to identify the information and laboratory tests collected during the study. The list containing the special number assigned to your child is kept in a password-protected database at CCHMC. Thus, no one other than Dr. Dolan and his research team at CCHMC will be able to link any of the information collected in the study to your child.

WILL IT COST YOU ANYTHING EXTRA FOR YOUR CHILD TO BE IN THE RESEARCH STUDY?

Your time is valuable and, therefore, would be the most costly part of your involvement in the study. The only other cost to you would be for transportation to and from the study site**.**

WILL YOU/YOUR CHILD BE PAID TO BE IN THIS RESEARCH STUDY?

You and your child will be reimbursed for your time, effort and travel while you are in this research study.

Your child will be paid $40 for completing the study visit and an extra $20 for bringing in a 1st morning urine sample.

You will receive $20 for completing the study visit.

We may ask your child to repeat one or both urine samples. Your child will be paid an extra $20 for providing these urine samples.

WHAT HAPPENS IF YOUR CHILD IS INJURED FROM BEING IN THIS STUDY?

If you believe that your child has been injured as a result of this research you should contact Dr. Dolan as soon as possible to discuss the concerns. Treatment for injuries is available at CCHMC. If your child goes to the Emergency Room or to another hospital or doctor, it is important that you tell them that your child is in a research study. If possible, you should give them a copy of this parental permission form.

CCHMC follows a policy of making all decisions about compensation for the medical treatment of physical injuries that happened during or were caused by research on an individual basis.

WHO DO YOU CALL IF YOU HAVE QUESTIONS OR PROBLEMS?

For questions, concerns, or complaints about this research study you can contact the study person listed on page 1 of this document. If you would like to talk to someone that is not part of the research staff or if you have general questions about your research study rights or questions, concerns, or complaints about the research, you can call the CCHMC Institutional Review Board at 513-636-8039.

AUTHORIZATION FOR USE/DISCLOSURE OF HEALTH INFORMATION FOR RESEARCH

To be in this research study you must also give your permission (or authorization) to use and disclose (or share) your child's "protected health information" (called PHI for short).

What protected health information will be used and shared during this study?

CCHMC will need to use and share your child's PHI as part of this study. This PHI will come from:

- Your child's CCHMC medical records
- Your child's research records

The types of information that will be used and shared from these records include:

- Laboratory test results, diagnosis, and medications
- Reports and notes from clinical and research observations
- Imaging (like CT scans, MRI scans, x-rays, etc.) studies and reports
- If applicable, information concerning HIV testing or the treatment of AIDS or AIDS-related conditions, drug or alcohol abuse, drug-related conditions, alcoholism, and/or psychiatric/psychological conditions (but not psychotherapy notes).

Who will share, receive and/or use your child's protected health information in this study?

- Staff at all the research study sites (including CCHMC)
- Personnel who provide services to your child as part of this study
- Other individuals and organizations that need to use your child's PHI in connection with the research, including people at the sponsor and organizations that the sponsor may use to oversee or conduct the study.
- The members of the CCHMC Institutional Review Board and staff of the Office of Research Compliance and Regulatory Affairs.

How will you know that your child's PHI is not misused?

People that receive your child's PHI as part of the research are generally limited in how they can use your child's PHI. In addition, most people who receive your child's PHI are also required by federal privacy laws to protect your child's PHI. However, some people that may receive your child's PHI may not be required to protect it and may share the information with others without your permission, if permitted by the laws that apply to them.

Can you change your mind?

You may choose to withdraw your permission at any time. A withdrawal of your permission to use and share your child's PHI would also include a withdrawal from participation in the research study. If you wish to withdraw your permission to use and share your child's PHI you need to notify the study doctor, listed on the first page of this document, in writing. Your request will be effective immediately and no new PHI about your child will be used or shared. The only exceptions are (1) any use or sharing of PHI that has already occurred or was in process prior to you withdrawing your permission and (2) any use or sharing that is needed to maintain the integrity of the research.

Will this permission expire?

Your permission will expire at the end of the study. If the study involves the

creation or maintenance of a research database repository, this authorization will not expire.

Will your child's other medical care be impacted?
By signing this document you agree for child to participate in this research study and give permission to CCHMC to use and share your child's PHI for the purpose of this research study. If you refuse to sign this document your child will not be able to participate in the study. However, your child's rights concerning treatment not related to this study, payment for services, enrollment in a health plan or eligibility of benefits will not be affected.

SIGNATURES

The research team has discussed this study with you and answered all of your questions. Like any research, the researchers cannot predict exactly what will happen. Once you have had enough time to consider whether your child should participate in this research you will document your permission by signature below.

You will receive a copy of this signed document for your records.

_____
Printed Name of Research Participant

_____ _____
Signature of Research Participant Indicating Consent or Assent — Date

_____ _____
Signature of Parent or Legally Authorized Representative* — Date

_____
* If signed by a legally authorized representative, a description of such representative's authority must be provided

_____ _____
Signature of Individual Obtaining Consent — Date

Washington Consents

PARENTAL PERMISSION FORM
CONSENT FORM: Ages 18 and up
ASSENT FORM: Ages 14-17

COHORT VISIT

Study Title: SEARCH for Diabetes in Youth

Principal Researcher: Catherine Pihoker, MD

The Research Team:

Name/Degree	Title	Department	Phone Number
Catherine Pihoker, MD	Principal Investigator	Endocrinology	206 987-5037
Lenna Liu, MD MPH	Co-Investigator	Pediatrics	206 987-5037
Maryam Afkarian, MD	Co-Investigator	Nephrology	206 987-5037
Irl Hirsch, MD	Co-Investigator	Medicine	206 987-5037
Joyce Yi-Frazier, PhD	Co-Investigator	Endocrinology	206 987-5037
Carla Greenbaum, MD	Co-Investigator	Benaroya Res Instit	206 987-5037
Martin Goldsmith, MD	Co-Investigator	Peds Northwest	206 987-5037
Beth Babler, ARNP	Co-Investigator	Mary Bridge	206 987-5037
Patricia Fechner, MD	Co-Investigator	Endocrinology	206 987-5037
Christian Roth, MD	Co-Investigator	Endocrinology	206 987-5037
Ildi Koves, MD	Co-Investigator	Endocrinology	206 987-5037
Craig Taplin, MD	Co-Investigator	Endocrinology	206 987-5037
Kate Ness, MD	Co-Investigator	Endocrinology	206 987-5037
Carolina DiBlasi, MD	Co-Investigator	Endocrinology	206 987-5037
Jason Mendoza, MD MPH	Co-Investigator	CHBD	206 884-1261
Erin Alving, ARNP	Co-Investigator	Endocrinology	206 987-5037
Karen Aitken, ARNP	Co-Investigator	Endocrinology	206 987-5037
Sara Benitez, PA	Co-Investigator	Endocrinology	206 987-5037
Gwyn Recupero, PA	Co-Investigator	Endocrinology	206 987-5037
Beth Loots, MPH MSW	Research Manager	Endocrinology	206-987-2540
Sue Kearns, RN	Study Coordinator	Endocrinology	206 987-2540
Mary Klingsheim, RN BSN	Study Coordinator	Endocrinology	206 987-2540

Name/Degree	Title	Department	Phone Number
Jessica Fosse, MPH RN BSN	Study Coordinator	Endocrinology	206 987-2540
Katherine Cochrane, BS	Clinical Research Associate	Endocrinology	206 987-2540
Patricia D'Alessandro, MA	Clinical Research Associate	Endocrinology	206 987-2540
Michael Pascual, BA	Clinical Research Associate	Endocrinology	206 987-2540
Connor Mitrovich, BA	Clinical Research Associate	Endocrinology	206 987-2540
Natalie Beauregard, BA	Clinical Research Associate	Endocrinology	206 987-2540

If you have questions about your rights as a research study participant, you can call the Multicare Health System Institutional Review Board (IRB) at 253-403-3844.

24 hour Emergency Contact Number: 206 987-2000 Ask for the Endocrinologist on call

1. Researchers' Statement:

You have the option to take part in a research study. The goals of this form are to give you information about what would happen in the study if you choose to take part and to help you decide if you want to be in the study.

Feel free to take notes, write questions or highlight any part of this form.

Potential Participants 18 years and older: This is a consent form. It provides a summary of the information the research team will discuss with you. If you decide that you would like to take part in this research study, you would sign this form to confirm your decision. If you sign this form, you will receive a signed copy of this form for your records.

Potential Teen Participants: This form also serves as an assent form. That means that if you choose to take part in this research study, you would sign this form to confirm your choice. Your parent or guardian would also need to give their permission and sign this form for you to join the study.

Parents/Guardians: You have the option of having your child or teen join a research study. This is a parental permission form. It provides a summary of the information the research team

will discuss with you. If you decide that your child can take part in this study, you would sign this form to confirm your decision. If you sign this form, you will receive a signed copy for your records.

The word **"you"** in this form refers to your child/teen.

Joining the study as a parent:
Parents also have the option to take part in this research study. There is a page at the end of this form explaining what it would mean to participate as a parent.

2. What you should know about this study:

- This form explains what would happen if you join this research study.
- Please read it carefully. Take as much time as you need.
- Please ask the research team questions about anything that is not clear.
- You can ask questions about the study any time.
- If you choose not to be in the study, it will not affect your care at Seattle Children's.
- If you say 'Yes' now, you can still change your mind later.
- You can quit the study at anytime.
- You would not lose benefits or be penalized if you decide not to take part in the study or to quit the study later.

3. What is the goal of this study?

Diabetes is the third most common chronic or ongoing disease in individuals under 20 years of age. The total number of cases of diabetes in this age group is increasing, and types of diabetes that have not been seen in young people are now being seen. These changes have resulted in gaps in our knowledge about the total number of cases and types of diabetes in the United States, the type of care young people with diabetes receive, the complications they experience, and the effect diabetes has on their lives.

The goal of any research study is to answer questions. We (the research team listed on the front of this form and our staff) are doing this research study to answer the following questions:

- How common are long-term complications related to diabetes, including: retinopathy (damage to back of the eye), nephropathy (kidney damage), neuropathy (nerve damage), and damage to the heart and blood vessels?
- How common are short-term complications, including hypoglycemia (low blood sugar) and diabetic ketoacidosis (DKA)?
- What type of medical care are young people with diabetes receiving, and how does diabetes affect the lives of these individuals?

4. Why do I have the option of joining the study?

You have the option to take part in this research study because you have completed a SEARCH baseline in-person visit and have had diabetes for (about) 5 years or more.

5. How many people will take part in the study?

We think that about 610 people will take part in the SEARCH cohort visit at Seattle Children's. A total of about 3,900 people will take part in the cohort visit at hospitals and clinics around the country.

6. If I agree to join this study, what would I need to do?

The cohort study visit includes:

- Blood draw
- Urine collections
- Brief physical exam
- Questionnaires
- Nerve tests
- Blood vessel test
- Eye test
- Medical record review
- Follow up contact

Blood Draw and Urine Collection

You/your child would be scheduled for an in-person study visit(s) at the Clinical Research Center at Seattle Children's or at another SEARCH outreach clinic. We would work with you to schedule 1 or 2 visits to complete the cohort study measurements at time(s) that are convenient for you. At least one of these visits would be a "fasting" visit, which means that no food or fluids, other than water, could be consumed for at least 8 hours before coming to your visit. You/your child would be asked not to take insulin or other diabetes medications the morning before the test, except for basal insulin, which should be taken as usual. If you come to the visit nonfasting, we might ask you to return another day to redraw all or part of the blood sample.

Before your scheduled appointment, you would receive a container with detailed instructions to collect one urine sample at home the morning of your visit. We will ask that you collect the urine from the first time you urinate in the morning. You would be asked to bring this urine sample

with you to your visit. Your urine would be tested for microalbumin (small particles of protein) to see how well your kidneys are working.

When you arrive at your appointment, we would review the consent/assent form(s). This would take about 20 – 30 minutes. If you/your child would like a numbing agent for the blood draw, this part may take about an additional 30 minutes.

A blood sample would be drawn from your/your child's arm to measure blood sugar, hemoglobin A1c (a test measuring your/your child's average blood glucose level over the past 3 months), C-peptide (a measure of your/your child's own insulin production), different types of cholesterol (fat), islet cell antibodies (markers in the blood for type 1 diabetes), and several blood markers associated with risk for developing heart disease or stroke. Based on age and size, the amount of blood that would be needed for this would be between 1 teaspoon and 3 tablespoons.

If possible, we would collect all blood samples at the same time that a routine blood draw would be done. If you/your child take part in more than one research study at the same visit, we would try to combine tests and results when we can.

A urine sample would also be obtained during the visit and tested for several markers associated with the risk of diabetes complications, such as heart disease and stroke.

The SEARCH study would like to keep some of the blood and urine that would be collected during the study but is not used for other tests. Should we have questions about some of tests, the storage sample would allow us to repeat the tests without needing to ask for a second blood draw from you/your child. In addition, we would like to collect another sample of blood for storage for future research.

We will also ask your permission to obtain and store a sample of blood to look at DNA, the genetic material that is found in all of your cells. Researchers may look at specific genes, or they may look at all of your genes together. If researchers were to look at specific genes, you have the option of receiving the results of this testing if it would effect your clinical care. However, if they were to look at all of your genes together, you would not receive the results. The information researchers find out about your DNA would be sent to a national storage center called dbGaP (part of the National Institutes of Health) to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease. When your DNA and clinical information would be sent to the storage center, no personal information would be included, such as your name, date of birth, or address. Thus, researchers would not be able to link this information back to you. The research that would be done with your blood and urine samples would not be designed to specifically help you. It might help people who have diabetes and other diseases in the future.

The total amount of blood that would be needed for the storage sample would be 1 teaspoon for young children and up to 2 tablespoons for older children, dependent on age and weight. This part of the visit would take 10 – 20 minutes.

The total volume of blood for this visit would be up to approximately 3 tablespoons.

After the fasting blood and urine samples are collected, a free snack and/or meal or meal voucher would be provided and you/your child would also take your routine medication.

Physical Exam

A trained member of the research team would perform a brief physical examination including: height, weight, waist measurements, blood pressure, and examination of the skin of the neck. The time to complete this exam would be about 20 minutes.

Nerve Tests

The purpose of these tests is to learn more about nerve damage in people with diabetes. We would ask you not to exercise heavily the day before the tests. If you get sick or get very upset in the day or two before the tests, or you eat or drink things that may affect the tests, we may ask you to reschedule these tests.
These are the nerve tests:

1) MNSI, or Michigan Neuropathy Screening Instrument, is a 1-page survey and a brief foot exam.

You would fill out the survey yourself; it has 15 “yes or no” questions about pain, numbness, and temperature sensitivity in your legs and feet.

The foot exam is short and tests for your vibration sense, your reflexes, and your sensitivity to monofilaments. Monofilaments are just small pieces of lightweight plastic, much like fishing lines. The study coordinator would first test your vibration sense by placing a vibrating instrument on your big toe. They would then use a rubber “hammer” to test the reflexes in your ankle. These tests are not painful, and your regular doctor has probably used them with you before. Finally, the study coordinator would place a monofilament on your toe to test your sense of touch. These small pieces of plastic are not painful. The study coordinator would just ask you if you could feel them on your toe or not.

The MNSI would take about 10 minutes to complete.

2) HRV, or Heart Rate Variability, would find out the health of your heart nerves. The test uses an ECG, or electrocardiogram. This is a test that doctors regularly use to study the heart, and your doctor may have used it with you before. The study coordinator would apply three electrode stickers (special stickers that help transmit information) on your wrists and left ankle/leg. These pads would be attached to wires and would record your heartbeat. During the test, you would simply breathe normally for ten minutes while the ECG records your heartbeat. The Heart Rate Variability test would take about 20 minutes to complete.

Blood Vessel Test

We would perform a test to measure how your blood vessels function. This test is called an arterial stiffness test. You/your child would be asked to remove your outer clothing and to put on a patient gown if you are not wearing loose-fitting shorts. A trained study coordinator would check your pulse on your upper, inner thigh (groin), but would not expose private parts. A chaperone would be present during these procedures.

The following test would then be performed:

The study coordinator would measure the distance from your neck to the top of your sternum (breast bone), from your neck to your wrist, from your sternum to your belly button, from your belly button to your groin, and from your groin to your foot. The electrode pads would be left in place on your wrists and leg during this part of the test.

Your wrist would be touched with a small instrument shaped like a pen; and the stiffness of your blood vessels would be measured. This instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test would be repeated 3 times.

Then the same pen-shaped instrument would be touched on the side of your neck, your groin, and your foot to measure the speed of your pulse. This test would be repeated 3 times.

The blood vessel test would take about one hour. After the test you would receive a meal or meal voucher.

Eye Test

You/your child would be asked about your eyes and your eye doctor if you have one.
We would take 2 pictures of each of your/your child's eyes. You/your child would be asked to sit in front of a special camera and place your chin in a chin rest. The study coordinator would darken the room so that your pupils would dilate (open) and we could align and focus the camera on your retina (the back of your eye). No drops would be put in your eyes, and the camera would not touch your eye. The study coordinator would sit on the other side of the camera to record information into a computer and prepare the camera. While we do this, you would see some small red bars and a multi-colored "x" in the camera lens. We would ask you to look at the "x". Just before we take the pictures, we would ask you to blink your eyes and then open them really wide. The camera would flash a light from within the camera lens as the picture is taken. This flash does not hurt the eye. Just after the picture is taken, you may see a blue or red circular spot in front of your eye. This spot would not harm you and would go away in about 5 to 7 minutes. We would wait a little while until your eyes dilate (open) again, and then we would take another picture of this eye. We would then take 2 pictures of your other eye. We might need to take extra pictures if the first ones don't come out OK.

These pictures would be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who would study the blood vessels and look for any unusual changes.

Doing the eye test would take about 30 minutes.

Questionnaires

You/your child would answer questions about the effects of diabetes on your/your child's lives, including current medications, personal and family medical history, financial information, the type of diabetes education available, health insurance, diabetes self-care habits, diet and household food availability and food assistance, your/your child's self-report on stage of puberty, and information about your/your child's medical care. If you are 18 years old or older, we would also ask about your employment and income. If it looks like it is difficult for you to access food, we may refer you to a social worker to help you find available resources.

If you are 10 years of age or older, you would be asked to answer additional questions about physical activity, smoking, alcohol, eating, and depression. You would also be asked about the food that is available to eat and how it makes you feel. Some of the questions may be sensitive, for example, there are questions about mood, how well you/your child get along in school, how you/your child gets along with family, friends, and others.

You/your child are free to not answer any questions you don't want to answer, and may stop the interview at any time. If you/your child decide not to answer any of the questions, you can still take part in the rest of the research study.

One of the questionnaires assesses risk for depression, and it would be scored while you are at your/your child's appointment. If you/your child scores in a range at risk for depression that result would be shared with your parent/you and a referral list would be shared with you if you need it.

These questionnaires would take 55 – 65 minutes to complete.

Medical Records Review

We ask your permission for the researchers involved in this study to review your/your child's medical record. Any information obtained from the medical charts is for use in this research study only. It may be necessary to review your diabetes-related inpatient and outpatient medical records. These records may include, but are not limited to visit notes, progress notes, discharge summaries, consultation notes, medication records, history and physical, emergency room records, and lab and other test reports.

Follow up

We will send you requests to update your contact information about every year. Part of this update includes a question about your/your child's social security number, which we will use to track mortality among SEARCH study participants. If this study is expanded, or if other diabetes studies are developed, we may contact you/your child in the future to ask if you/your child want to participate further. As with this study, taking part in any future study is voluntary.

7. How long would I be in the study?

The study is currently funded through September 2015.

The total time to complete the cohort visit would be about 3 ½ to 4 hours. You may complete the visit on one or two days, based on your preference and the research staff's availability. You may be able to complete some of the questionnaires at home or over the phone to shorten the length of the in-person visit.

If you join the study, you can decide to stop **at any time for any reason**. Please discuss your decision to stop with Dr. Pihoker or the research team.

If you would like your/your child's stored samples removed from storage, we would send a request to the central laboratory. They would then destroy the sample, and send us a letter certifying that the sample has been destroyed. We would send you a copy of this letter.

The research study doctor could also decide to take you out of this study. This might happen if we find out that it is not safe for you to stay in the study. Or it might happen if you cannot complete to enough of the study elements. If we ask you to leave the study, we would always explain why.

8. What are the potential harms or risks if I join this study?

If you feel uncomfortable at any time during any of these tests, just tell the study coordinator and they would immediately stop the tests. All reasonable precautions would be taken to reduce risks.

Some of the questions we ask may be sensitive in nature and may make you feel embarrassed or upset. You are free to not answer any questions you don't want to answer, and you may stop taking any survey at any time. If you decide not to answer any of the questions, you can still take part in the rest of the research study.

When taking a blood sample, there may be brief discomfort, and a bruise may form where the needle poke occurs. To reduce the possibility of these risks, a local anesthetic (numbing cream or liquid) may be applied to the skin before blood is taken.

The blood tests require that you/your child not have any food or fluids overnight, other than water. In order to prevent low or high blood sugars, you/your child's blood sugar would be checked by finger-stick and your diabetes medication would be given as needed to control your/your child's blood sugar.

Some of the tests would look for the presence of health problems associated with diabetes, such as high cholesterol. If researchers find signs of these health problems, it may cause you/your child some anxiety or concern. If this happens, you/your child would be referred to the appropriate local health professionals for evaluation and treatment.

There are no majors risks associated with the MNSI foot exam. All of the devices used (a reflex hammer, a tuning fork, and a monofilament) are used daily in doctors' offices; your doctor has probably used them with you before. The tests are not painful, but some people may be slightly anxious or uncomfortable when these instruments are used.

There are no major risks associated with the Heart Rate Variability nerve test. ECGs are used daily in hospitals; you may have had one before. No electrical current is sent through the body, so there is no risk of electrical shock. Application of the patches may feel cold, and in very rare cases, a patient may develop a skin rash or irritation where the patches were applied. Some people become slightly anxious when this test is done.

You may feel some pressure for a few seconds when the arterial stiffness blood vessel device is placed on your skin.

There are no known risks associated with taking these pictures of the eye. People who are light-sensitive may see a blue or red spot after the camera flashes, but this would not hurt the eye, and it would go away within a few minutes.

If you find out that you have eye damage it could make you worried. We would share the results with your provider, and would refer you to your provider or another doctor for appropriate treatment. We would also be available to explain the results to you to help reduce your worry.

There could be harms associated with sharing your genetic information despite our safety measures to protect your genetic information. They include:

- Someone could break into the computer system. They could then find the code that links your genetic and medical information to you. This is very unlikely, but is possible.
- Find a way to link your genetic or medical information in a database back to you. Your genetic information is unique to you. But you do share some genetic information with your children, parents, brothers, sisters and other blood relatives. So it might be possible for someone to use genetic information from your relatives to help figure out who you are. That person would need to be able to access the database. They would also need genetic information from you or one of your relatives. Again, it is unlikely this would happen.

- Since some genetic information may predict health problems you or your relatives could have in the future. This information might be of interest to health providers, life insurance companies and others. There are state and federal laws that protect against genetic discrimination. There is a new federal law called the Genetic Information Nondiscrimination Act (GINA). This law makes it illegal for health insurance companies, group health plans and most employers to discriminate against you based on your genetic information. However, it does not completely protect you from discrimination.
- Genetic information could also be used by law enforcement agencies to identify a person or his/her blood relatives.
- There could be privacy risks we don't know about.

As with any research study, there may be additional risks that are unknown or unexpected.

9. What are the potential benefits if I join this study?

Potential Benefits for You:

You/your child may not directly benefit from participating in this research study. However, this study may more clearly tell us about your/your child's type of diabetes and whether you/your child has any of the complication of diabetes.

You would receive results of your/your child's blood and urine tests usually within 6-8 weeks of the study visit. These results would include the Hemoglobin A1C, lipid profile (cholesterol), and urine microalbumin (urine protein). These are standard tests. The report you receive would explain the results to you. Your/your child's doctor would also receive these standard test results, plus results of the research laboratory tests that are being studied to determine the type of diabetes.

You/your child and your/your child's diabetes provider may receive the results of genetic tests done for research purposes while taking part in this research study if it is determined that the results of such tests could impact clinical care.

We would give you information about any eye problems that we find. If something is found that needs urgent attention, we would phone/contact you and your health care provider as soon as we receive these results (usually within 2 – 3 days). This eye test does not take the place of a visit to your own personal doctor nor does it replace your regular dilated comprehensive eye examinations. It is not a test of your/your child's vision.

You would not receive any results or feedback on the nerve tests or blood vessel test as part of this study. These tests are for research purposes only and do not replace the normal care provided to you by your regular health care provider.

Potential Benefits for Others:

We hope that the information learned in this research study will benefit young people with diabetes in the future. This is a large research study being carried out at five major medical centers across the United States. The information we learn in this research study will improve our understanding of how education, diagnosis, and the costs of having diabetes can affect the people who live with this disease every day. The tests we do may help us better understand the short and long term effects of diabetes. This may help improve diabetes-related care in the future.

10. What other options do I have?

Taking part in research is voluntary. You/your child may choose not to take part in this study or in parts of the study.

11. How would you keep my information confidential?

All information gathered during this study would be held in strict confidence. Any publication resulting from participation in this study would not identify you/your child by name. A one of a kind number, called a research study number, would be assigned to you/your child. No other identifying information would be used. The research study number would be used to identify only the test and interview information that was collected during the research study. The research number assigned to you/your child, and not your child's name, would be sent to the study Coordinating Center at Wake Forest University in order to study the information. The list containing the research study number assigned to you/your child would be kept in a locked file in the research office of Dr. Pihoker, the research study's Principal Investigator. No one other than Dr. Pihoker and her research team would be able to connect any of research study information to you/your child.

Any stored samples would be kept in a central laboratory and stored for upcoming studies of diabetes. The central laboratory is at the University of Washington. The samples would be banked with a code, with no information at the laboratory that could link the samples to you/your child. Dr. Pihoker and the study coordinators on this project would be the only people with access to the code. The banked samples would be stored indefinitely, although would likely be used within 7 years. When there is another researcher who wants to do a diabetes study and use the stored samples, he/she would need to talk to Dr. Pihoker. If the study seems to be important and reasonable, an Institutional Review Board (IRB) would review the study, and

samples can be used only after the study is approved. The IRB is a committee responsible for protecting the rights of persons taking part in research.

The nerve test results would be sent to the University of Michigan and the SEARCH Coordinating Center. The eye test results would be sent to the Ocular Epidemiology Reading Center (OERC) at the University of Wisconsin – Madison and the SEARCH Coordinating center. Investigators would analyze these results along with other data collected in the SEARCH study.

All answers that you/your child give and other information gathered about you/your child during this study would be kept private. This is so because this study has been given a Certificate of Confidentiality. This means that anything you/your child tells us or information we learn about you/your child would not have to be given out to anyone, even if a court orders us to do so, unless you say it's OK. But under the law, we must report to the state suspected cases of child abuse or if you/your child tell us he/she is planning to cause serious harm to self or others.

If you take part, we would make every effort to keep your information confidential.

If you join this study, we may put information about this study in your medical record. We do this because the research study involves patient care.

Information collected about you during the study would be kept until all information has been studied and results have been published. Future funding may allow the study to continue for a longer period of time, however, the information about you would be destroyed as soon as it is no longer necessary for the conduct of the research study.

12. Would it cost me money to be in the study?

If you take part in this study, there would be no cost to you and no cost to your insurance company.

13. What if I were injured because I joined the study?

If you were injured as the direct result of this research study, Seattle Children's Hospital would provide treatment. We would refer you for treatment if needed.

You would NOT need to pay for this treatment and neither would your insurance company. This is the only compensation offered for study-related injuries. It is important that you tell the Principal Researcher Catherine Pihoker, if you think that you have been injured as a result of taking part in this study. You can call her at 206-987-5037.

14. Would I be paid if I join this study?

If needed, we may be able to offer some assistance with travel costs, dependent on availability of study funds. **Important:** You would need to give us receipts that clearly show your costs.

Once you complete all of the study procedures, we would give you/your child $120 in gift cards. You would be paid a smaller amount if you complete only part of the study procedures. In the rare circumstance that a blood redraw is necessary, you would receive an additional $20 gift card.

We will be asking a small number of study participants to repeat the Heart Rate Variability and Blood Vessel tests in order to assess the research team's quality control. If you were asked to participate in these repeat measurements and you agree to participate, you would be given either an additional $10 or an additional $20 gift card, depending on the number of measurements completed. The Study coordinator would let you know ahead of time what measurements you would be asked to complete, and the dollar amount of the gift card that you would receive.

If you are fasting for the visit, we will provide a snack after you complete the blood draw and/or a $6 meal or meal voucher after the blood vessel tests.

The IRS has certain rules about paying people who take part in research studies. If you took part in this study, we would ask you to provide your name, mailing address, and social security number so we could pay you.

You can be in this study even if you do not give us this information. If you decide not to give us this information, you could receive a gift card or no payment.

The payments you would receive for being in this study might be taxable. Seattle Children's is required to report to the IRS study payments of $600 or more made to anyone in any year.

Your samples could be used to make new products, tests or findings. These may have value and may be developed and owned by the research team and/or others. If this happens, there are no plans to provide any money to you.

15. Who do I call if I have problems or questions?

If I have questions or would like to know about …	You can call …	At …
• Emergencies • General study	Catherine Pihoker, MD or Endocrinologist on call	Phone: 206-987-2000

If I have questions or would like to know about …	You can call …	At …
questions • Research-related injuries • Any research concerns or complaints		
• Emergencies • General study questions • Research-related injuries • Any research concerns or complaints	Diabetes Research Team	Phone: 206-987-2540
• Your rights as a research participant	Multicare Health System Institutional Review Board This is a group of scientists and community members who make sure research meet legal and ethical standards.	Phone: (253) 403-3844
• Assistance with figuring out what questions to ask the research team • Help understanding the research process	Research and Family Liaison A person who works with families to ensure they receive the information they need to make an informed decision about taking part in a research study.	Phone: (206) 884-7858 Pager: (206) 469-3983

16. If I join the study, can I stop?

Yes. Taking part in research is always a choice. If you decide to be in the study, you can change your mind at any time. We ask that you tell the study team. You can contact this person by calling 206-987-2540.

If you choose to leave the study, it will not affect your care at Seattle Children's. You will not lose any benefits or be penalized if you choose to leave the study.

17. What would my signature on this form mean?

Your signature on this form would mean:

- The research study was explained to you.
- You had a chance to ask all the questions you have at this time. All your questions have been answered in a way that is clear.
- You understand that the persons listed on this form will answer any other questions you may have about the study or your rights as a research study participant.
- **You have rights as a research participant. We will tell you about new information or changes to the study that may affect your health or your willingness to stay in the study.**
- By signing this consent form, you do not give up any of your legal rights. The researcher(s) or sponsor(s) are not relieved of any liability they may have.
  - o You agree to take part in the research study.
  - o If the person reading this form is a parent/guardian, you agree to have your child take part in this research study.

Please Note: If the person taking part in this research study is a foster child or a ward of the state, then please tell the researcher or their staff.

_____

Printed Name of Research Participant

_____

Signature of Research Participant (required if 14 years or older) *Date/Time*

_____

Printed Name of Parent or Legal Guardian

_____

Signature of Parent or Legal Guardian *Date/Time*

Permissions:

Storage of Blood and Urine Samples

Do you give permission to have your/your child's blood and urine samples saved and used in current and future research studies?

☐ Yes, I give my permission

☐ No, I do not give permission

Storage of DNA Samples (looking at specific genes)

Do you give permission to have your/your child's DNA saved and used in current and future research studies?

☐ Yes, I give my permission
☐ No, I do not give permission

Genetic Test Results (looking at specific genes)

If researchers determine that genetic results could impact clinical care, would you like to have the results of genetic tests sent to you and your/your child's diabetes provider?

☐ Yes, I give my permission
☐ No, I do not give permission

Full Gene Analysis (looking at all of your genes) and the National Storage Center (NIH/dbGaP)

Do you give permission to have your/your child's DNA analyzed to identify a complete picture of your genetic makeup? This information would be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases. When your DNA and clinical information is sent to the storage center, no personal information would be included, such as your name, date of birth, or address. Thus, researchers would not be able to link this information back to you.

☐ Yes, I give my permission
☐ No, I do not give permission

Medical Record Review

Do you give permission to have your/your child's medical chart, reviewed by research study members, as described above?

☐ Yes, I give my permission
☐ No, I do not give permission

Future contact

Do you give permission for researchers to contact you/your child in the future, to ask if you/your child are interested in participating in new research studies that are developed? As with this research study, taking part in any future studies is voluntary. Participation in this present study does not mean that you/your child are automatically volunteering to take part in any future studies. You/your child would be asked to sign a consent form for any future research studies in which you/your child agree to participate.

☐ Yes, I give my permission

☐ No, I do not give permission

18. Researcher's Signature

I have fully explained the research study described by this form. I have answered the participant and/or parent/guardians questions and will answer any future questions to the best of my ability. I will tell the family and/or the person taking part in this research of any changes in the procedures or in the possible harms/possible benefits of the study that may affect their health or their willingness to stay in the study.

_____

Printed Name of Researcher Obtaining Parental Permission or Consent

_____

Signature of Researcher Obtaining Parental Permission or Consent *Date/Time*

19. Interpreter Information

_____

Printed Name of Interpreter during initial presentation of study *Date/Time*

_____

Printed Name of Interpreter when translated form is presented (if applicable) *Date/Time*

PARENT PARTICIPANT ADDENDUM

Parent Participants

Why do parents have the option of taking part?
As a part of this research study, we would like to ask you to complete a brief survey on the amount of food that is available in your household and any assistance you may receive to provide enough food for your family. If it looks like it is hard for you to access food, we may refer you to a social worker to help you find available resources. This study will look at how difficult it is for families of youth with diabetes to access food and how that may affect youth with diabetes. Completing this questionnaire should take about 5 minutes.

Do parents have to take part?
Taking part in research is optional. If you decide not to join you will not be penalized or lose any benefits that you are otherwise entitled to.

What are the possible risks?
The main risk of participating as a parent participating in this study would be breach of confidentiality. Some of the questions may be sensitive in nature and may make you feel embarrassed or upset. You are free not to answer any questions you don't want to answer, and you may stop taking the survey at any time. If you decide not to answer any of the questions, your child can still take part in the rest of the research study.

What are the possible benefits?
We do not expect you to benefit directly from participating in this research study. We hope that the information learned in this research study will benefit young people with diabetes in the future.

How will you protect my information?
The same procedures that are in place to protect your child's medical information are also in place to protect your confidentiality. You can find these in the form under the section "How would you keep my or my child's information confidential?"

Can I change my mind?
You can decide to take part and change your mind at anytime. Taking part in research is voluntary.

If you have questions about the study, your rights, or feel you have been harmed by the study, please contact the study team members listed on the front of this form.

What would my signature mean?

- You agree to take part in the research study.
- You keep all your legal rights. The researcher(s) or sponsor(s) are not relieved of any liability they may have.

_____

Printed Name of Parent or Legal Guardian

_____

Signature of Parent or Legal Guardian

_____ _____

Date *Time*

_____

Printed Name of Parent or Legal Guardian

_____

Signature of Parent or Legal Guardian

_____ _____

Date *Time*

Original form to:
Research Team File
Copies to:
Participant
Parents/Guardians (if applicable)
Medical Records (if applicable)

PARENTAL PERMISSION FORM
CONSENT FORM: Ages 18 and up
ASSENT FORM: Ages 14-17

REGISTRY VISIT (2012 cohort)

Study Title: SEARCH for Diabetes in Youth

Principal Researcher: Catherine Pihoker, MD

The Research Team:

Name/Degree	Title	Department	Phone Number
Catherine Pihoker, MD	Principal Investigator	Endocrinology	206 987-5037
Lenna Liu, MD MPH	Co-Investigator	Pediatrics	206 987-5037
Maryam Afkarian, MD	Co-Investigator	Nephrology	206 987-5037
Irl Hirsch, MD	Co-Investigator	Medicine	206 987-5037
Joyce Yi-Frazier, PhD	Co-Investigator	Endocrinology	206 987-5037
Carla Greenbaum, MD	Co-Investigator	Benaroya Res Instit	206 987-5037
Martin Goldsmith, MD	Co-Investigator	Peds Northwest	206 987-5037
Beth Babler, ARNP	Co-Investigator	Mary Bridge	206 987-5037
Patricia Fechner, MD	Co-Investigator	Endocrinology	206 987-5037
Christian Roth, MD	Co-Investigator	Endocrinology	206 987-5037
Ildi Koves, MD	Co-Investigator	Endocrinology	206 987-5037
Craig Taplin, MD	Co-Investigator	Endocrinology	206 987-5037
Kate Ness, MD	Co-Investigator	Endocrinology	206 987-5037
Carolina DiBlasi, MD	Co-Investigator	Endocrinology	206 987-5037
Jason Mendoza, MD MPH	Co-Investigator	CHBD	206-884-1261
Erin Alving, ARNP	Co-Investigator	Endocrinology	206 987-5037
Karen Aitken, ARNP	Co-Investigator	Endocrinology	206 987-5037
Sara Benitez, PA	Co-Investigator	Endocrinology	206 987-5037
Gwyn Recupero, PA	Co-Investigator	Endocrinology	206 987-5037
Beth Loots, MPH MSW	Research Manager	Endocrinology	206-987-2540
Sue Kearns, RN	Study Coordinator	Endocrinology	206 987-2540
Mary Klingsheim, RN BSN	Study Coordinator	Endocrinology	206 987-2540
Jessica Fosse, MPH RN BSN	Study Coordinator	Endocrinology	206 987-2540

Katherine Cochrane, BS	Clinical Research Associate	Endocrinology	206 987-2540
Patricia D'Alessandro, MA	Clinical Research Associate	Endocrinology	206 987-2540
Michael Pascual, BA	Clinical Research Associate	Endocrinology	206 987-2540
Connor Mitrovich, BA	Clinical Research Associate	Endocrinology	206 987-2540
Natalie Beauregard, BA	Clinical Research Associate	Endocrinology	206 987-2540

If you have questions about your rights as a research study participant, you can call the Multicare Health System Institutional Review Board (IRB) at 253-403-3844.

24 hour Emergency Contact Number(s): 206 987-2000 Ask for the Endocrinologist on call

1. Researchers' Statement:

You have the option to take part in a research study. The goals of this form are to give you information about what would happen in the study if you choose to take part and to help you decide if you want to be in the study.

Feel free to take notes, write questions or highlight any part of this form.

Potential Participants 18 years and older: This is a consent form. It provides a summary of the information the research team will discuss with you. If you decide that you would like to take part in this research study, you would sign this form to confirm your decision. If you sign this form, you will receive a signed copy of this form for your records.

Potential Teen Participants: This form also serves as an assent form. That means that if you choose to take part in this research study, you would sign this form to confirm your choice. Your parent or guardian would also need to give their permission and sign this form for you to join the study.
Parents/Guardians: You have the option of having your child or teen join a research study. This is a parental permission form. It provides a summary of the information the research team will discuss with you. If you decide that your child can take part in this study, you would sign this form to confirm your decision. If you sign this form, you will receive a signed copy for your records.

The word **"you"** in this form refers to your child/teen.

Joining the study as a parent:

Parents also have the option to take part in this research study. There is a page at the end of this form explaining what it would mean to participate as a parent.

2. What you should know about this study:

- This form explains what would happen if you join this research study.
- Please read it carefully. Take as much time as you need.
- Please ask the research team questions about anything that is not clear.
- You can ask questions about the study any time.
- If you choose not to be in the study, it will not affect your care at Seattle Children's.
- If you say 'Yes' now, you can still change your mind later.
- You can quit the study at anytime.
- You would not lose benefits or be penalized if you decide not to take part in the study or to quit the study later.

3. What is the goal of this study?

Diabetes is the third most common chronic or ongoing disease in individuals under 20 years of age. The total number of cases of diabetes in this age group is increasing, and types of diabetes that have not been seen in young people are now being seen. These changes have resulted in gaps in our knowledge about the total number of cases and types of diabetes in the United States, the type of care young people with diabetes receive, the complications they experience, and the effect diabetes has on their lives.

The goal of any research study is to answer questions. We (the research team listed on the front of this form and our staff) are doing this research study to answer the following questions:

- How many cases of diabetes there are in the United States among youth;
- What are the characteristics of each type of diabetes;
- What medical care is being given to young people who have different forms of diabetes;
- How is diabetes affecting the lives of young people with diabetes.

4. Why do I have the option of joining the study?

You have the option to take part in this research study because you have any type of diabetes, were diagnosed under the age of 20 in 2012, and lived in King, Kitsap, Pierce, Snohomish, or Thurston county in 2012.

5. How many people will take part in the study?

We think that about 1,220 people will take part in the SEARCH registry study at Seattle Children's. About 225 people at this site will complete a registry visit. A total of about 6,440 people will take part in the registry study at hospitals and clinics around the country.

6. If I agree to join this study, what would I need to do?

The registry study includes:

- Written questionnaires
- Blood draw
- Urine collections
- Brief physical exam
- Medical record review
- Follow up contact

Written Questionnaires

Prior to your visit, you/your child will have been asked to answer a short series of questions – in person, via mail, online, or on the telephone – about the effects of diabetes on your/your child's lives, your family's education and income level, and general medical care. If you are 10 years of age or older, you would also be asked to answer questions about the food that is available to eat and how this makes you feel. If you are 18 years old or older, we would also ask you about any food assistance that you may receive; and we would ask you about your employment and income. If it looks like it is difficult for you to access food, we may refer you to a social worker to help you find available resources. We would ask your parents similar questions.

These surveys will have taken about 25 minutes. During your visit, we will ask you to complete an additional brief survey about the medications that you/your child takes.

Blood Draw and Urine Collection

You/your child would be scheduled for an in-person study visit at the Clinical Research Center at Seattle Children's or at another SEARCH outreach clinic that is convenient to you. This would be a "fasting" visit, which means that no food or fluids, other than water, could be consumed for at least 8 hours before coming to your visit. You/your child would be asked not to take insulin or other diabetes medications the morning before the test, except for basal insulin, which should be taken as usual. If you come to the visit nonfasting, we might ask you to return another day to redraw all or part of the blood sample.

Before your scheduled appointment, you would receive a container with detailed instructions to collect one urine sample at home the morning of your visit. We will ask that you collect the urine from the first time you urinate in the morning. You would be asked to bring this urine sample with you to your visit. Your urine would be tested for microalbumin (small particles of protein) to see how well your kidneys are working.

When you arrive at your appointment, we would review the consent/assent form(s). This would take about 20 – 30 minutes. If you/your child would like a numbing agent for the blood draw, this part may take about an additional 30 minutes.

A blood sample would be drawn from your/your child's arm to measure blood sugar, hemoglobin A1c (a test measuring your/your child's average blood glucose level over the past 3 months), C-peptide (a measure of your/your child's own insulin production), different types of cholesterol (fat), islet cell antibodies (markers in the blood for type 1 diabetes), and genetic markers for diabetes. Based on age and size, the total amount of blood that would be needed would be between 1 teaspoon and 3 tablespoons.

If possible, we would collect all blood samples at the same time that a routine blood draw would be done. If you/your child take part in more than one research study at the same visit, we would try to combine tests and results when we can.

A urine samples would also be obtained during the visit and tested for several markers associated with the risk of diabetes complications, such as heart disease and stroke.

The SEARCH study would like to keep some of the blood and urine that would be collected during the study but is not used for other tests. Should we have questions about some of tests, the storage sample would allow us to repeat the tests without needing to ask for a second blood draw from you/your child. In addition, we would like to collect another sample of blood for storage for future research.

We will also ask your permission to obtain and store a sample of blood to look at DNA, the genetic material that is found in all of your cells. Researchers may look at specific genes, or they may look at all of your genes together. If researchers were to look at specific genes, you have the option of receiving the results of this testing if it would effect your clinical care. However, if they were to look at all of your genes together, you would not receive the results. The information researchers find out about your DNA would be sent to a national storage center called dbGaP (part of the National Institutes of Health) to help researchers better understand how genes affect the risk of developing diseases such as asthma, cancer, diabetes, and heart disease. When your DNA and clinical information would be sent to the storage center, no personal information would be included, such as your name, date of birth, or address. Thus, researchers would not be able to link this information back to you. The research that would be done with your blood and urine samples would not be designed to specifically help you. It might help people who have diabetes and other diseases in the future.

The total amount of blood that would be needed for the storage sample would be 1 teaspoon for young children and up to 2 tablespoons for older children, dependent on age and weight. This part of the visit would take 10 – 20 minutes.

The total volume of blood for this visit would be up to approximately 3 tablespoons.

After the fasting blood and urine samples are collected, a free breakfast or meal voucher would be provided and you/your child would take your routine medication.

Physical Exam

A trained member of the research team would perform a brief physical examination including: height, weight, waist measurements, blood pressure, and examination of the skin of the neck. The time to complete this exam would be about 20 minutes.

Follow up

We will send you requests to update your contact information about every year. Part of this update includes a question about your/your child's social security number, which we will use to track mortality among SEARCH study participants. If this study is expanded, or if other diabetes studies are developed, we may contact you/your child in the future to ask if you/your child want to participate further. As with this study, taking part in any future study is voluntary.

7. How long would I be in the study?

The study is currently funded through September 2015.

The time to complete the registry visit would be about 1 hour.

If you join the study, you can decide to stop **at anytime for any reason**. Please discuss your decision to stop with Dr. Pihoker or the research team.

If you would like your/your child's stored samples removed from storage, we would send a request to the central laboratory. They would then destroy the sample, and send us a letter certifying that the sample has been destroyed. We would send you a copy of this letter.

The research study doctor could also decide to take you out of this study. This might happen if we find out that it is not safe for you to stay in the study. Or it might happen if you cannot complete to enough of the study elements. If we ask you to leave the study, we would always explain why.

8. What are the potential harms or risks if I join this study?

If you feel uncomfortable at any time during any of these tests, just tell the study coordinator and they would immediately stop the tests. All reasonable precautions would be taken to reduce risks.

Some of the questions we ask may be sensitive in nature and may make you feel embarrassed or upset. You are free to not answer any questions you don't want to answer, and you may stop taking any survey at any time. If you decide not to answer any of the questions, you can still take part in the rest of the research study.

When taking a blood sample, there may be brief discomfort, and a bruise may form where the needle poke occurs. To reduce the possibility of these risks, a local anesthetic (numbing cream or liquid) may be applied to the skin before blood is taken.

The blood tests require that you/your child not have any food or fluids overnight, other than water. In order to prevent low or high blood sugars, you/your child's blood sugar would be checked by finger-stick and your diabetes medication would be given as needed to control your/your child's blood sugar.

Some of the tests would look for the presence of health problems associated with diabetes, such as high cholesterol. If researchers find signs of these health problems, it may cause you/your child some anxiety or concern. If this happens, you/your child would be referred to the appropriate local health professionals for evaluation and treatment.

There could be harms associated with sharing your genetic information despite our safety measures to protect your genetic information. They include:

- Someone could break into the computer system. They could then find the code that links your genetic and medical information to you. This is very unlikely, but is possible.
- Find a way to link your genetic or medical information in a database back to you. Your genetic information is unique to you. But you do share some genetic information with your children, parents, brothers, sisters and other blood relatives. So it might be possible for someone to use genetic information from your relatives to help figure out who you are. That person would need to be able to access the database. They would also need genetic information from you or one of your relatives. Again, it is unlikely this would happen.
- Since some genetic information may predict health problems you or your relatives could have in the future. This information might be of interest to health providers, life insurance companies and others. There are state and federal laws that protect against genetic discrimination. There is a new federal law called the Genetic Information Nondiscrimination Act (GINA). This law makes it illegal for health insurance companies, group health plans and most employers to discriminate against you based on your genetic information. However, it does not completely protect you from discrimination.
- Genetic information could also be used by law enforcement agencies to identify a person or his/her blood relatives.
- There could be privacy risks we don't know about.

As with any research study, there may be additional risks that are unknown or unexpected.

9. What are the potential benefits if I join this study?

Potential Benefits for You:

You/your child may not directly benefit from participating in this research study. However, this study may more clearly tell us about your/your child's type of diabetes and whether you/your child has complication of diabetes.

You would receive results of your/your child's blood and urine tests usually within 6-8 weeks of the study visit. These results would include Hemoglobin A1C, lipid profile (cholesterol), and urine microalbumin (urine protein). These are standard tests. The report you receive would explain the results to you. Your/your child's doctor would also receive these standard test results, plus results of the research laboratory tests that are being studied to determine the type of diabetes.

You/your child and your/your child's diabetes provider may receive the results of genetic tests done for research purposes while taking part in this research study if it is determined that the results of such tests could impact clinical care.

Potential Benefits for Others:

We hope that the information learned in this research study will benefit young people with diabetes in the future. This is a large research study being carried out at five major medical centers across the United States. The information we learn in this research study will improve our understanding of how education, diagnosis, and the costs of having diabetes can affect the people who live with this disease every day.

10. What other options do I have?

Taking part in research is voluntary. You/your child may choose not to take part in this study or in parts of the study.

11. How would you keep my information confidential?

All information gathered during this study would be held in strict confidence. Any publication resulting from participation in this study would not identify you/your child by name. A one of a kind number, called a research study number, would be assigned to you/your child. No other identifying information would be used. The research study number would be used to identify only the tests and interview information that was collected during the research study. The research number assigned to you/your child, and not your child's name, would be sent to the study Coordinating Center at Wake Forest University in order to study the information. The list containing the research study number assigned to you/your child would be kept in a locked file in the research office of Dr. Pihoker, the research study's Principal Investigator. No one other than Dr. Pihoker and her research team would be able to connect any of research study information to you/your child.

Any stored samples would be kept in a central laboratory and stored for upcoming studies of diabetes. The central laboratory is at the University of Washington. The samples would be banked with a code, with no information at the laboratory that could link the samples to you/your child. Dr. Pihoker and the study coordinators on this project would be the only people with access to the code. The banked samples would be stored indefinitely, although would likely be

used within 7 years. When there is another researcher who wants to do a diabetes study and use the stored samples, he/she would need to talk to Dr. Pihoker. If the study seems to be important and reasonable, an Institutional Review Board (IRB) would review the study, and samples could be used only after the study is approved. The IRB is a committee responsible for protecting the rights of persons taking part in research.

All answers that you/your child give and other information gathered about you/your child during this study would be kept private. This is so because this study has been given a Certificate of Confidentiality. This means that anything you/your child tells us or information we learn about you/your child would not have to be given out to anyone, even if a court orders us to do so, unless you say it's OK. But under the law, we must report to the state suspected cases of child abuse or if you/your child tell us he/she is planning to cause serious harm to self or others.

If you take part, we would make every effort to keep your information confidential.

If you join this study, we may put information about this study in your medical record. We do this because the research study involves patient care.

Information collected about you during the study would be kept until all information has been studied and results have been published. Future funding may allow the study to continue for a longer period of time, however, the information about you would be destroyed as soon as it is no longer necessary for the conduct of the research study.

12. Would it cost me money to be in the study?

If you take part in this study, there would be no cost to you and no cost to your insurance company.

13. What if I were injured because I joined the study?

If you were injured as the direct result of this research study, Seattle Children's Hospital would provide treatment. We would refer you for treatment if needed.

You would NOT need to pay for this treatment and neither would your insurance company. This is the only compensation offered for study-related injuries. It is important that you tell the Principal Researcher Catherine Pihoker, if you think that you have been injured as a result of taking part in this study. You can call her at 206-987-5037.

14. Would I be paid if I join this study?

If needed, we may be able to offer some assistance with travel costs, dependent on availability of study funds. **Important:** You would need to give us receipts that clearly show your costs. To thank you for taking part in the study we would give you/your child a $10 gift card for completion of the Initial Participant Survey, and an $80 gift card for completion of the visit. In the rare circumstance that a blood redraw is necessary, you would receive an additional $20 gift card. If you are fasting for the visit, we will provide a $6 breakfast voucher, or breakfast, after you complete the blood draw.

The IRS has certain rules about paying people who take part in research studies. If you took part in this study, we would ask you to provide your name, mailing address, and social security number so we could pay you.

You can be in this study even if you do not give us this information. If you decide not to give us this information, you could receive a gift card or no payment.

The payments you would receive for being in this study might be taxable. Seattle Children's is required to report to the IRS study payments of $600 or more made to anyone in any year.

Your samples could be used to make new products, tests or findings. These may have value and may be developed and owned by the research team and/or others. If this happens, there are no plans to provide any money to you.

15. Who do I call if I have problems or questions?

If I have questions or would like to know about …	You can call …	At …
• Emergencies • General study questions • Research-related injuries • Any research concerns or complaints	Catherine Pihoker, MD or Endocrinologist on call	Phone: 206-987-2000
• Emergencies • General study questions • Research-related injuries • Any research concerns or complaints	Diabetes Research Team	Phone: 206-987-2540
• Your rights as a	Multicare Health System	

If I have questions or would like to know about …	You can call …	At …
research participant	**Institutional Review Board** **This is a group of scientists and community members who make sure research meet legal and ethical standards.**	**Phone: (253) 403-3844**
• **Assistance with figuring out what questions to ask the research team** • **Help understanding the research process**	**Research and Family Liaison** **A person who works with families to ensure they receive the information they need to make an informed decision about taking part in a research study.**	**Phone: (206) 884-7858** **Pager: (206) 469-3983**

16. If I join the study, can I stop?

Yes. Taking part in research is always a choice. If you decide to be in the study, you can change your mind at any time. We ask that you tell the study team at 206-987-2540.

If you choose to leave the study, it will not affect your care at Seattle Children's. You will not lose any benefits or be penalized if you choose to leave the study.

17. What would my signature on this form mean?

Your signature on this form would mean:

- The research study was explained to you.
- You had a chance to ask all the questions you have at this time. All your questions have been answered in a way that is clear.
- You understand that the persons listed on this form will answer any other questions you may have about the study or your rights as a research study participant.
- **You have rights as a research participant. We will tell you about new information or changes to the study that may affect your health or your willingness to stay in the study.**
- By signing this consent form, you do not give up any of your legal rights. The researcher(s) or sponsor(s) are not relieved of any liability they may have.
  - You agree to take part in the research study.
  - If the person reading this form is a parent/guardian, you agree to have your child take part in this research study.

Please Note: If the person taking part in this research study is a foster child or a ward of the state, then please tell the researcher or their staff.

_____

Printed Name of Research Participant

_____

Signature of Research Participant (required if 14 years or older) *Date/Time*

_____

Printed Name of Parent or Legal Guardian

_____

Signature of Parent or Legal Guardian *Date/Time*

Permissions:

Storage of Blood and Urine Samples

Do you give permission to have your/your child's blood and urine samples saved and used in current and future research?

☐ Yes, I give my permission

☐ No, I do not give permission

Storage of DNA Samples (looking at specific genes)

Do you give permission to have your/your child's DNA saved and used in current and future research?

☐ Yes, I give my permission

☐ No, I do not give permission

Genetic Test Results (looking at specific genes)

If researchers determine that genetic results could impact clinical care, would you like the results sent to you and your/your child's diabetes provider?

☐ Yes, I give my permission

☐ No, I do not give permission

Full Gene Analysis (looking at all of your genes) and the National Storage Center (NIH/dbGaP)

Do you give permission to have your/your child's DNA analyzed to identify a complete picture of your genetic makeup? This information would be sent to a national storage center to help researchers better understand how genes affect the risk of developing diseases. When your DNA and clinical information is sent to the storage center, no personal information would be included, such as your name, date of birth, or address. Thus, researchers would not be able to link this information back to you.

☐ Yes, I give my permission

☐ No, I do not give permission

Future contact

Do you give permission for researchers to contact you/your child in the future, to ask if you/your child are interested in participating in new research studies that are developed? As with this research study, taking part in any future studies is voluntary. Participation in this present study does not mean that you/your child are automatically volunteering to take part in any future studies. You/your child would be asked to sign a consent form for any future research studies in which you/your child agree to participate.

☐ Yes, I give my permission

☐ No, I do not give permission

18. Researcher's Signature

I have fully explained the research study described by this form. I have answered the participant and/or parent/guardians questions and will answer any future questions to the best of my ability. I will tell the family and/or the person taking part in this research of any changes in the procedures or in the possible harms/possible benefits of the study that may affect their health or their willingness to stay in the study.

_____

Printed Name of Researcher Obtaining Parental Permission or Consent

_____

Signature of Researcher Obtaining Parental Permission or Consent *Date/Time*

19. Interpreter Information

Printed Name of Interpreter during initial presentation of study *Date/Time*

Printed Name of Interpreter when translated form is presented (if applicable) *Date/Time*

PARENT PARTICIPANT ADDENDUM

Parent Participants

Why do parents have the option of taking part?
As a part of this research study, we would like to ask you to complete a brief survey on the amount of food that is available in your household and any assistance you may receive to provide enough food for your family. If it looks like it is hard for you to access food, we may refer you to a social worker to help you find available resources. This study will look at how difficult it is for families of youth with diabetes to access food and how that may affect youth with diabetes. Completing this questionnaire should take about 5 minutes.

Do parents have to take part?
Taking part in research is optional. If you decide not to join you will not be penalized or lose any benefits that you are otherwise entitled to.

What are the possible risks?
The main risk of participating as a parent participating in this study would be breach of confidentiality. Some of the questions may be sensitive in nature and may make you feel embarrassed or upset. You are free not to answer any questions you don't want to answer, and you may stop taking the survey at any time. If you decide not to answer any of the questions, your child can still take part in the rest of the research study.

What are the possible benefits?
We do not expect you to benefit directly from participating in this research study. We hope that the information learned in this research study will benefit young people with diabetes in the future.

How will you protect my information?
The same procedures that are in place to protect your child's medical information are also in place to protect your confidentiality. You can find these in the form under the section "How would you keep my or my child's information confidential?"

Can I change my mind?
You can decide to take part and change your mind at anytime. Taking part in research is voluntary.

If you have questions about the study, your rights, or feel you have been harmed by the study, please contact the study team members listed on the front of this form.

What would my signature mean?
- You agree to take part in the research study.

- You keep all your legal rights. The researcher(s) or sponsor(s) are not relieved of any liability they may have.

_____

Printed Name of Parent or Legal Guardian

_____

Signature of Parent or Legal Guardian

_____ _____

Date *Time*

Original form to:
Research Team File

Copies to:
Participant
Parents/Guardians (if applicable)
Medical Records (if applicable)

Navajo Consents

PROTOCOL TITLE: SEARCH for Diabetes in Youth -Phase 3 – Registry Component

Principal Investigator: Dana Dabelea, MD, PhD
University of Colorado Denver

SUBJECT CONSENT FORM
January 2013

Project Description and Purpose: You (in this form "you" refers to you and/or your child) are being asked to participate in a research study to determine how many children have diabetes and to better determine what type of diabetes you have. You are being asked to participate in this study because you have diabetes and were diagnosed under the age of 20. This form is to help you decide if you want to take part in this research study. First, we want you to know that taking part is up to you. You may stop taking part at any time, without penalty or loss of care or services to which you are otherwise entitled. There will be approximately 100 people enrolled locally and 6000 enrolled nationally in this study.

Diabetes is the third most common chronic disease in individuals under 20 years of age. The total number of cases of diabetes in this age group is increasing. Also, types of diabetes not seen before in young people are now present. We do not know if diabetes is increasing among Navajo Nation youth. We also do not know the type of care young people with diabetes get and the effect that diabetes has on their lives. This research study will explore these questions.

The purpose of this study is to learn:

a. How many cases of diabetes there are in parts of the United States in people under 20 years old;
b. Whether diabetes is increasing among youth in the United States
c. What medical care is given, and;
d. How diabetes affects the lives of youth with diabetes.

Procedures: If you agree, you will be asked to complete one survey and have your medical records reviewed to get more information about your diabetes. If you were diagnosed in 2012 you will also be asked to participate in an in-person visit. All aspects of this study are for research purposes only and are in addition to your regular health care. You may choose not to take part in any part of this study.

1) Initial Participant survey (IPS): The questionnaire will gather information about your diabetes type, current treatment including the medications you take and you or your family's income and education. You may choose not to answer any questions at any time. If you need help with the form, a staff member will help you. An interpreter will be provided if you need help from a Navajo-speaking staff member. The estimated time to complete this survey is 15 minutes.

2) Medical Record Review: Your medical records will be reviewed to get information about your diagnosis. We will record your date of birth, date of diagnosis, type of diabetes, as well as your weight and height at diagnosis, whether you had complications.

3) In person Visit:

a) Lab tests and physical exam: You will be scheduled for a morning appointment. Before your scheduled appointment, you will be mailed or given a container with detailed instructions to collect your first urine at home on the morning of the visit. You will be asked to bring the urine container with you on the day of your visit. Your urine will be tested for microalbumin (small particles of protein) to see how well your kidneys are working. You will come to the visit after not having anything to eat or drink other than water for 8 to 12 hours. You will not take your diabetes pills or shots until after you arrive, and you should bring your medication with you. When you arrive, blood will be drawn from your arm to measure blood sugar, hemoglobin A1c, c-peptide (a measure of your insulin production), different types of cholesterol (fat), and islet cell antibodies (markers in the blood for type 1 diabetes). A urine sample will also be obtained and tested to see if diabetes is affecting your kidneys. After these tests are completed, you may take your medication and you will be given breakfast snack.

APPROVED: January 21, 2014 OFFICIAL USE ONLY EXPIRES: January 28, 2015

Beverly Becenti-Pigman

NAVAJO NATION HUMAN RESEARCH REVIEW BOARD DATE SIGNED: January 21, 2013

Initials_____

After the breakfast snack, you will have a personal and family medical history and a short examination done by trained study personnel. The physical examination will include height, weight, waist measurement, heart rate, blood pressure, and examination of the skin of the neck. The time to complete this section of the visit is about 45 minutes.

The total time for the in-person visit is approximately one hour.

Please read the following sections and initial each activity that you would like to participate in:

1. **Disclosure of laboratory results** to your diabetes provider and to the Navajo Nation: The research team will inform you of your test results that may affect your health or health care. With your permission, this information will also be shared with the health care providers who are taking care of you and given to the Navajo Nation.

I wish to have the results of my tests given to my diabetes care provider.

_____ Yes initial

_____ No initial

If yes, please indicate which record you would like us to use:

_____ Indian Health Service Clinic or Hospital

_____ Other doctor or facility:

name: _____

address: _____

2. **Storage of blood and urine**: You are being asked for permission to use your blood and urine in future non-genetic studies by having a sample of your blood and urine stored. If you agree, an additional sample of blood (1.5 tablespoons) will be taken, and the excess urine sample will be saved. Your samples will be used only for obtaining information related to diabetes and its complications. Whenever possible, blood for storage will be drawn at the same time the other blood samples are being collected. If it is not possible, an additional needle stick will be required.

The specific test(s) to be done on the samples have not been established at this time. We expect that our studies of factors involved in diabetes and related conditions (such as high cholesterol and heart disease) will take some years to complete. We may never identify the specific factors involved in these conditions.

Your stored samples will be kept until the end of the study in 2015. A code number identifies samples and the link between the code and your personal information is stored in a password protected secure location at the local site in Shiprock, New Mexico. Your samples will not be directly identified with your name. Your samples would be released to a SEARCH investigator only after the *SEARCH Executive Committee has approved the proposed study.*

You may request that your sample be permanently removed at any time from the blood bank if you choose to withdraw your consent. To request that your sample be permanently removed from the blood bank, by completing and signing a "SEARCH-Navajo Study Withdrawal Form" that can be provided by the local SEARCH staff upon request, OR you may contact:

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Beverly Becenti-Pigman

NAVAJO NATION HUMAN RESEARCH REVIEW BOARD DATE SIGNED: January 21, 2014

Dr. Dana Dabelea
University of Colorado Denver
CSPH Department of Epidemiology
13001 East 17th Place, Bldg 500, Box B119
Aurora, CO 80045
Ph. 303-724-4414 Toll free 1-866-484-3411 FAX 303-724-4491

I give permission for my **blood** to be stored in a central bank, at the University of Washington, for future use by the study investigators in studies of diabetes and diabetes risk factors and/or complications until study activities end in 2015:

_____ Yes initial
_____ No initial

I give permission for my **urine** to be stored in a central bank, at the University of Washington, for future use by the study investigators in studies of diabetes and diabetes risk factors and/or complications until study activities end in 2015:

_____ Yes initial
_____ No initial

3. ***Future Contact:*** *If you agree to future contact, researchers can contact you, as new research studies are developed, to let you know about the studies and ask you to participate in these studies. As with the present study, participation in any future study is up to you. Taking part in the present study does not mean that you agree to take part in any future study.*

_____ Yes initial
_____ No Initial

Risk: *The blood tests require that you do not eat or drink anything overnight for 8 to 12 hours. You will need to check your blood sugar as you would at home and you may give your insulin or take sugar as needed to control your blood sugars. Approximately 3 tablespoons (45cc) of blood will be removed by putting a needle into your vein. This is the standard method used to obtain blood for tests. You will feel pain when the needle goes into the vein. To reduce the pain we can use a skin numbing cream (EMLA or ELA-MAX) before the blood is drawn. On rare occasions, EMLA cream may cause skin irritation. A bruise may form at the site.*
Some of the tests will look for risk factors for complications of diabetes. If these tests identify complications of diabetes, the results may make you nervous or depressed about the complications. If this happens, you may be referred to a local mental health professional for evaluation and treatment.

Sample Storage Risks: You, your family, or your doctor will not receive results of these studies and the results will not become a part of your medical record because this research is not expected to affect your medical care. The study investigators will make every effort to maintain confidentiality by labeling your samples with a number rather than with your name or other personal information. However, in the unusual circumstance that your test results are unintentionally made known to a third party, or revealed to you because they are deemed to be important to your medical care, you will need to consider the risks associated with having this information. First, as with any medical study, there is a risk that the result may be in error. Next, having information that you are at risk for a condition related to that disease might be emotionally stressful. Knowing that you are at risk for a related condition might change your eligibility to obtain new health, disability, or life insurance.

There is a chance that this research project, like all research, may have other unforeseen risks, other than those listed above.

Benefits: You will receive no direct health benefit from participating in this research study and there are risks as mentioned in the *Risk section, however:*

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Beverly Becenti-Pigman

NAVAJO NATION HUMAN RESEARCH REVIEW BOARD DATE SIGNED: January 21, 2014

1. This study will allow collection of accurate data regarding diabetes in Navajo children and youth, like yourself.
2. Study results will help the understanding of diabetes in children and youth in the U.S. in different age and ethnic groups.
3. Information gained will aid in developing ways to tell what type of diabetes a child has, so there is less error in treating youth with diabetes.
4. You will benefit by having the most up to date blood testing done for antibodies (markers in the blood) and c-peptide (your body's response to the food you eat) levels to determine what type of diabetes you have. This may change your treatment of diabetes and make problems less likely.
5. Navajo Nation may benefit by having information on the types of diabetes found locally. Communities will also be able to determine if more youth are getting diabetes. This information will be important for improving care and focus on how to keep more kids from getting diabetes.

Alternative Treatments: There are no treatments proposed in this study, and the decision to participate in this study will not affect your medical care.

Source of Funding: *This study is funded by the Centers for Disease Control and Prevention (CDC), grant no. 2U18DP000247-06A1.*

Cost to Subject: There is no cost to you.

Subject Payment: You or your parent/guardian will be given a gift card worth $10 for completion of the Initial Patient Survey. An additional $80 in gift cards will be given for completion of the blood draw and physical exam.

Study Withdrawal: *You may choose not to enter the study or leave from the study at any time and your health care provider will* continue to take care of you without you losing your medical care or services. Your doctor may also choose to take you out of the study at any time if he/she feels that it would be bad for your health to continue or risks are too severe. Important new findings that relate to your participation in this study will be discussed with you. As noted under the Storage of Blood and Urine section, you may ask to have any stored samples destroyed at any time.

Invitation for Questions: You will receive a copy of this consent form. Please ask questions about this research or consent either now or in the future. You may direct your questions to the Navajo Nation Human Research Review Board, whose toll free number is 1-877-873-4356, or to Dr. Dana Dabelea at 303-724-4414, Dr. Richard Hamman at 303-724-4448, Carmelita Sorrelman at 505-368-6322 or Beverly Becenti-Pigman at 928-871-6650. The SEARCH-Colorado toll free number is 1-866-484-3411. The SEARCH-Navajo toll free number is 1-800-549-5644 ext. 6322

If you have questions regarding your rights as a research subject, please call Beverly Becenti-Pigman at the Navajo Nation Human Research Review Board in Window Rock at 928-871-6650, toll free at 1-877-873-4356.

Confidentiality: Information about you will be confidential. Only study staff members employed by the Indian Health Service will be permitted access to your records and only for study purposes. Upon entry into the study, a unique number will be assigned to you. The number will be used to identify the information and laboratory tests that will be performed during this study. The unique identifying number and the information collected during this study will be sent to a central database at Wake Forest University in order to analyze the information. The list containing the number assigned to you will be kept in a locked file at the local site in Shiprock, New Mexico. *Thus, no one other than the local research team will be able to link any of the information collected to you.*

Your investigator, their research team and the CDC will treat your identity with professional standards or confidentiality. However, information form this study may be submitted to the sponsor. Medical records which identify you and the consent form signed by you may be inspected and/or copied by:

- The Centers for Disease Control and Prevention (CDC)
- The Department of Health and Human Services (DHHS) agencies

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- COMIRB (Colorado Multiple Institutional Review Board)
- Navajo Nation Institutional Research Review Board

Safeguards will be used to protect your confidentiality, including rare situations where sharing your data with the above groups would be unavoidable for accomplishing the goals of the study. The results of this research study may be presented at meetings or in publications; however, your identity will not be disclosed in those presentations.

CDC Certification of Confidentiality: All answers that you give will be kept private. This is so because this study has been given a certificate of confidentiality. This means that anything you tell us will not have to be given to anyone even if a court orders us to do so unless you say it's OK. But, under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious damage to yourself or others.

Injury: If you are injured because of this study, your local Indian Health Service Medical Center or your tribal health care corporation will provide you with treatment in its usual manner. No commitment is made by the University of Colorado Denver to provide free medical care to participants in this study. **If you have any questions about these issues, or believe that you have been treated carelessly in this study, please contact Beverly Becenti-Pigman at the Navajo Nation Human Research Review Board in Window Rock at 928-871-6650, toll free at 1-877-873-4356.** Any subject that feels they have been injured by this study will be referred to the local IHS or health care corporation facility study liaison for address of the complaints; and you may call: Dr. Dabelea at 303-724-4414, Dr. Hamman at 303-724-4448; both toll free at 1-866-484-3411; and/or Carmelita Sorrelman at 505-368-6322, toll free at 1-800-549-5644 ext. 6322.

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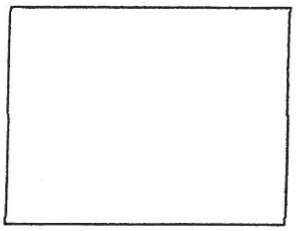
AUTHORIZATION: I have read this paper about the study or it was read to me, I understand the possible risks and benefits of this study. I know that being in this study is voluntary. I choose to be (or to have my child) in this study. I know I can stop being in the study at any time and I (my child) will still get the usual medical care. I will get a copy of this consent form (Initial all the previous pages of the consent form).

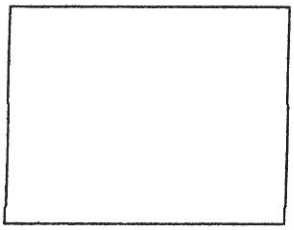
Signature: _____ Print Name: _____ Date: _____
parent or guardian

Thumb print (only if unable to sign):



Signature: _____ Print Name: _____ Date: _____
subject

Thumb print (only if unable to sign):



Consent form explained by:

Signature: _____ Print Name: _____ Date: _____

Investigator: _____ Date: _____

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PROTOCOL TITLE: SEARCH for Diabetes in Youth – Phase 3 – Cohort Component

Principal Investigator: Dana Dabelea, MD, PhD
University of Colorado Denver

SUBJECT CONSENT FORM
January 2013

Project Description and Purpose: *You (in this form "you" refers to you and/or your child) are being asked to participate in a* research study to determine the effects of diabetes on the health of children and young adults with diabetes. You are being asked to participate in this study because you have had diabetes for at least five years and have previously completed an in-person SEARCH study visit. This form is to help you decide if you want to take part in this research study. First, we want you to know that taking part is up to you. You may stop taking part at any time, without penalty or loss of care or services to which you are otherwise entitled. There will be approximately 55 people enrolled locally and 3900 enrolled nationally in this study.

Diabetes is the third most common chronic disease in individuals under 20 years of age. The total number of cases of diabetes in this age group is increasing. Also, types of diabetes not seen before in young people are now present. We do not know how many cases and types of diabetes there are among the Navajo Nation. We also do not know the type of care young people with diabetes get and the effect that diabetes has on their lives. This research study will explore these questions.

The purpose of this study is to learn:

a. How common are long-term complications related to diabetes, including: retinopathy (damage to the back of the eye), nephropathy (damage to the kidneys), neuropathy (nerve damage), and damage to the heart and blood vessels?
b. How common are short-term complications, including hypoglycemia (low blood sugar) and diabetic ketoacidosis (high blood sugar)?
c. What type of medical care are young people receiving and how does diabetes affect the lives of these individuals?

Procedures: If you agree, you will participate in an in-person visit and questionnaires. A brief survey will also be sent in order to *maintain contact information, no matter what parts of the study you choose to participate in. All aspects of this study are for research* purposes only and are in addition to your regular health care. You may choose not to take part in any part of this study.

In person Visit:

a) **Lab tests and physical exam:** You will be scheduled for a morning appointment. You will come to the visit after not having anything to eat or drink other than water for 8 to 12 hours. You will not take your diabetes pills or shots until after you arrive, and you should bring your medication with you. When you arrive, blood will be drawn from your arm to measure blood sugar, hemoglobin A1c, c-peptide (a measure of your insulin production), different types of cholesterol (fat), and islet cell antibodies (markers in the blood for type 1 diabetes) and several new blood markers associated with risk for developing heart disease or stroke (apolipoprotein B, C-reactive protein, interleukin-6, leptin, and adiponectin).

Before your scheduled appointment, you will be mailed or given a container with detailed instructions to collect your first urine at home on the morning of the visit. You will be asked to bring the urine container with you on the day of your visit. Your urine will be tested for microalbumin (small particles of protein) to see how well your kidneys are working. A urine sample will also be obtained and tested at the visit. After these tests are obtained, you will take your medication and you will be given breakfast snack.

After the breakfast snack, you will have a personal and family medical history and a short examination done by trained study personnel. The physical examination will include height, weight, waist measurement, heart rate, blood pressure, and examination of the skin of the neck for a condition called acanthosis nigricans. The time to complete this section of the visit is about 45 minutes.

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b) Questionnaires: These can be done either during the same visit or at another time. These questionnaires will gather information about the effect that diabetes has had on your life, your and your family's income and education, types of diabetes education you got, your diabetes self-care habits, who takes care of your diabetes and general medical care and what barriers to diabetes care you have experienced. You may choose not to answer any questions at any time. If you need help with the forms, a staff member will help you. An interpreter will be provided if you need help from a Navajo-speaking staff member. The estimated time to complete the main questionnaire is 50 minutes.

If you are over 10 years of age, you will be asked to complete a health questionnaire dealing with the following issues – physical activity, smoking, eating and sleeping habits, depression, and how many children you may have had. Your answers will not be shared with your parents unless there are health problems that need to be treated. Your answers will not be shared with your parents so that you will be able to answer the questions more accurately. The types of questions asked will be shared with your parents if you are under 18. Your parent must show they agree NOT to see your answers and let you do the questionnaires by initialing here:

_____ Yes, my child can participate in the questionnaire and I agree to NOT seeing the answers.
_____ No, my child can NOT participate in the questionnaire.
_____ Not applicable

c.) Photographs of Your Eyes

Diabetic retinopathy is a complication of diabetes that results from damage to the blood vessels at the back of the eye (retina). Trained study personnel will be taking 2 pictures of each of your eyes. These pictures will be sent to the Ocular Epidemiology Reading Center in Madison, Wisconsin to be read by trained eye specialists who will study the blood vessels and look for any unusual changes.

You will be asked to sit in a darkened room before a special camera with your chin in a chin rest. After your pupils have dilated, we will take 2 photographs of the back of each of your eyes (the retinas). No drops will be put in your eyes; and the camera will not touch your eyes. After each picture is taken, you may see a blue or red spot which will disappear within 5 to 7 minutes and cause no damage to the eye. We will pause for approximately 3-5 minutes between photographs to allow your eyes time to re-adjust to the darkened room so the pupils will dilate once again.

You will also be asked for the name and phone number of your eye doctor, and whether or not you have ever had laser treatments on the back of your eyes. Doing the eye photographs will take about 20 minutes. We will send you the results of your eye photographs.

d.) Nerve Test

Diabetic neuropathy is a complication of diabetes that results from damage to the nerves. We will be looking for signs of early nerve damage by asking you to complete a short questionnaire, doing a physical examination of your feet, and doing an electrocardiogram (ECG) test.

We will ask you to answer 15 questions about foot sensation including pain, numbness, and temperature sensitivity. We will examine your feet to test your reflexes, and your ability to feel vibrations and light touch to your feet. The examiner will use a rubber "hammer" to test the reflexes in your ankle. The examiner will test your vibration sense by placing a vibrating instrument on your big toe. To test your sense of touch, the examiner will touch your toe several times with a thin piece of plastic
Doing the nerve tests will take about 10 minutes. The results of your nerve exam and tests will be sent to the University of Michigan for analysis.

Heart Rate Variability

HRV, or Heart Rate Variability, is a tool used to assess the health of your heart nerves. The test uses an ECG, or electrocardiogram. This is a machine that doctors routinely use to study the heart; your doctor may have used it with you before. It involves placing three patches on your chest/abdomen. These patches will record your heartbeat. The examiner will also take your blood pressure with a blood pressure cuff at least once during this exam. During the exam, you will simply breathe normally for five minutes while the ECG records your heartbeat and blood pressure. Then you will breathe deeply for one minute. The ECG machine will also record your heartbeat and blood pressure during this minute, and compare it to your heartbeat and blood pressure at rest. This test should take about 10 minutes total.

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e.) Blood Vessel Tests

We will perform a test to measure how your blood vessels function. The test is called an arterial stiffness test. You will be asked to remove your outer clothing and to put on a patient gown if you are not wearing shorts. A trained member of the research team will check your pulse on your upper, inner thigh, but will not expose private parts. At your request a chaperone will be present during these procedures.

The following test will then be performed:

After a 5-minute rest period, your blood pressure and heart rate will be measured, using a blood pressure cuff placed on your upper arm. This test will be repeated 3 times.

A staff member will then measure the distance from your neck to the bottom of your sternum (breast bone), from your sternum to your wrist, from your sternum to the top of your leg, and from your thigh to your foot. Electrode pads (special stickers that help transmit information) will then be placed on your chest.

Your wrist will be touched with a small instrument shaped like a pen; and the stiffness of your blood vessels will be measured. This instrument detects pressure changes with a tiny, highly-sensitive pressure sensor in the flat end of the device that is shaped like a pencil eraser. It does not use radiation (X-rays), sound waves (ultrasound), or needles. This test will be repeated 3 times.

Then the same pen-shaped instrument will be touched on the side of your neck, the top of your leg, and your foot to measure the speed of your pulse. This test will be repeated 3 times.

These tests will take about one hour.

This test is designed to be short, simple, and painless. This is a test that doctors use every day, and they are not dangerous. But if you feel uncomfortable at any time during any of these tests, just tell the examiner. The examiner will immediately stop the tests if you ask.

Depending on your age, the total time for the in-person visit is approximately three to four hours.

Please read the following sections and initial each activity that you would like to participate in:

1. **Disclosure of laboratory results** to your diabetes provider and to the Navajo Nation: The research team will inform you of your test results that may affect your health or health care. With your permission, this information will also be shared with the health care providers who are taking care of you and given to the Navajo Nation.

I wish to have the results of my tests given to my diabetes care provider.

_____ Yes initial
_____ *No initial*
If yes, please indicate which record you would like us to use:
_____ Indian Health Service Clinic or Hospital
_____ Other doctor or facility:
name: _____
address: _____

2. **Storage of blood and urine**: You are being asked for permission to use your blood and urine in future non-genetic studies by having a sample of your blood and urine stored. If you agree, an additional sample of blood (1.5 tablespoons) will be taken, and the excess urine sample will be saved. Your samples will be used only for obtaining information related to diabetes and its complications. Whenever possible, blood for storage will be drawn at the same time the other blood samples are being collected. If it is not possible, an additional needle stick will be required.

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The specific test(s) to be done on the samples have not been established at this time. We expect that our studies of factors involved in diabetes and related conditions (such as high cholesterol and heart disease) will take some years to complete. We may never identify the specific factors involved in these conditions.

Your samples will be kept until the end of the study in 2015. Your samples will not be labeled with your name. A code number identifies the samples and the link between the code and your name is stored in a password protected secure location at the local site in Shiprock, New Mexico. Your samples would be released to a SEARCH investigator only after the SEARCH Executive Committee has approved the proposed study.

You may request that your sample be permanently removed at any time from the blood bank if you choose to withdraw your consent. To request that your sample be permanently removed from the blood bank, by completing and signing a "SEARCH-Navajo Study Withdrawal Form" that can be provided by the local SEARCH staff upon request, OR you may contact:

Dr. Dana Dabelea
University of Colorado Denver
CSPH Department of Epidemiology
13001 East 17th Place, Bldg 500, Box B119
Aurora, CO 80045
Ph. 303-724-4414 Toll free 1-866-484-3411 FAX 303-724-4491

I give permission for my **blood** to be stored in a central bank, at the University of Washington, for future use by the study investigators in studies of diabetes and diabetes risk factors and/or complications until study activities end in 2015:

_____ Yes initial
_____ No initial

I give permission for my **urine** to be stored in a central bank, at the University of Washington, for future use by the study investigators in studies of diabetes and diabetes risk factors and/or complications study activities end in 2015:

_____ *Yes initial*
_____ No initial

3. **Future Contact:** If you agree to future contact, researchers can contact you, as new research studies are developed, to let you know about the studies and ask you to participate in these studies. As with the present study, participation in any future study is up to you. Taking part in the present study does not mean that you agree to take part in any future study.

_____ Yes initial
_____ No Initial

Risk: The blood tests require that you do not eat or drink anything overnight for 8 to 12 hours. You will need to check your blood sugar as you would at home and you may give your insulin or take sugar as needed to control your blood sugars. Approximately 3 tablespoons of blood (45cc) of blood will be removed by putting a needle into your vein. This is the standard method used to obtain blood for tests. You will feel pain when the needle goes into the vein. To reduce the pain we can use a skin numbing cream (EMLA or ELA-MAX) before the blood is drawn. On rare occasions, EMLA cream may cause skin irritation. A bruise may form at the site. Some of the tests will look for risk factors for complications of diabetes. If these tests identify complications of diabetes, the results may make you nervous or depressed about the complications. If this happens, you may be referred to a local mental health professional for evaluation and treatment.

Sample Storage Risks: You, your family, or your doctor will not receive results of these studies and the results will not become a part of your medical record because this research is not expected to affect your medical care. The study investigators will make every effort to maintain confidentiality by labeling your samples with a number rather than with your name or other personal information.

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However, in the unusual circumstance that your test results are unintentionally made known to a third party, or revealed to you because they are deemed to be important to your medical care, you will need to consider the risks associated with having this information. First, as with any medical study, there is a risk that the result may be in error. Next, having information that you are at risk for a condition related to that disease might be emotionally stressful. Knowing that you are at risk for a related condition might change your eligibility to obtain new health, disability, or life insurance.

There is a chance that this research project, like all research, may have other unforeseen risks, other than those listed above.

Benefits: You will receive no direct health benefit from participating in this research study and there are risks as mentioned in the Risk section, however:

1. This study will allow collection of accurate data regarding diabetes in Navajo children and youth, like yourself.
2. Study results will help the understanding of diabetes in children and youth in the U.S. in different age and ethnic groups.
3. Information gained will aid in developing ways to tell what type of diabetes a child has, so there is less error in treating youth with diabetes.
4. You will benefit by having the most up to date blood testing done for antibodies (markers in the blood) and c-peptide (your body's response to the food you eat) levels to determine what type of diabetes you have. This may change your treatment of diabetes and make problems less likely.
5. Navajo Nation may benefit by having information on the types of diabetes found locally. Communities will also be able to determine if more youth are getting diabetes. This information will be important for improving care and focus on how to keep more kids from getting diabetes.

Alternative Treatments: There are no treatments proposed in this study, and the decision to participate in this study will not affect your medical care.

Source of Funding: This study is funded by the Centers for Disease Control and Prevention (CDC), grant no. 2U18DP000247-06A1.

Cost to Subject: There is no cost to you.

Subject Payment: You or your parent/guardian will be given gift cards worth $120 for your visit.

Study Withdrawal: You may choose not to enter the study or leave from the study at any time and your health care provider will continue to take care of you without you losing your medical care or services. Your doctor may also choose to take you out of the study at any time if he/she feels that it would be bad for your health to continue or risks are too severe. Important new findings that relate to your participation in this study will be discussed with you. As noted under the Storage of Blood and Urine section, you may ask to have any stored samples destroyed at any time.

Invitation for Questions: You will receive a copy of this consent form. Please ask questions about this research or consent either now or in the future. You may direct your questions to the Navajo Nation Human Research Review Board, whose toll free number is 1-877-873-4356, or to Dr. Dana Dabelea at 303-724-4414, Dr. Richard Hamman at 303-724-4448, Carmelita Sorrelman at 505-368-6322 or Beverly Becenti-Pigman at 928-871-6650. The SEARCH-Colorado toll free number is 1-866-484-3411. The SEARCH-Navajo toll free number is 1-800-549-5644 ext. 6322.

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Confidentiality: Information about you will be confidential. Only study staff members employed by the Indian Health Service will be permitted access to your records and only for study purposes. Upon entry into the study, a unique number will be assigned to you. The number will be used to identify the information and laboratory tests that will be performed during this study. The unique identifying number and the information collected during this study will be sent to a central database at Wake Forest University in order to analyze

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the information. The list containing the number assigned to you will be kept in a locked file at the local site in Shiprock, New Mexico. Thus, no one other than the local research team will be able to link any of the information collected to you.

Your investigator, their research team and the CDC will treat your identity with professional standards or confidentiality. However, information form this study may be submitted to the sponsor. Medical records which identify you and the consent form signed by you may be inspected and/or copied by:

- The Centers for Disease Control and Prevention (CDC)
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- Navajo Nation Institutional Research Review Board

Safeguards will be used to protect your confidentiality, including rare situations where sharing your data with the above groups would be unavoidable for accomplishing the goals of the study. The results of this research study may be presented at meetings or in publications; however, your identity will not be disclosed in those presentations.

CDC Certification of Confidentiality: All answers that you give will be kept private. This is so because this study has been given a certificate of confidentiality. This means that anything you tell us will not have to be given to anyone even if a court orders us to do so unless you say it's OK. But, under the law, we must report to the state suspected cases of child abuse or if you tell us you are planning to cause serious damage to yourself or others.

Injury: If you are injured because of this study, your local Indian Health Service Medical Center or your tribal health care corporation will provide you with treatment in its usual manner. No commitment is made by the University of Colorado Denver to provide free medical care to participants in this study. **If you have any questions about these issues, or believe that you have been treated carelessly in this study, please contact Beverly Becenti-Pigman at the Navajo Nation Human Research Review Board in Window Rock at 928-871-6650, toll free at 1-877-873-4356.** Any subject that feels they have been injured by this study will be referred to the local IHS or health care corporation facility study liaison for address of the complaints; and you may call: Dr. Dabelea at 303-724-4414, Dr. Hamman at 303-724-4448; both toll free at 1-866-484-3411; and/or Carmelita Sorrelman at 505-368-6322, toll free at 1-800-549-5644 ext. 6322.

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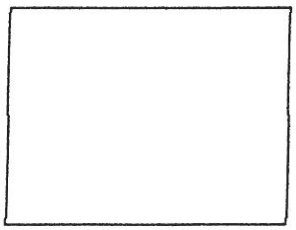
AUTHORIZATION: I have read this paper about the study or it was read to me, I understand the possible risks and benefits of this study. I know that being in this study is voluntary. I choose to be (or to have my child) in this study. I know I can stop being in the study at any time and I (my child) will still get the usual medical care. I will get a copy of this consent form (Initial all the previous pages of the consent form).

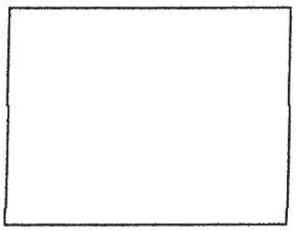
Signature: _____ Print Name: _____ Date: _____
parent or guardian

Thumb print (only if unable to sign):



Signature: _____ Print Name: _____ Date: _____
subject

Thumb print (only if unable to sign):



Consent form explained by:

Signature: _____ Print Name: _____ Date: _____

Investigator: _____ Date: _____

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