

Physical Measures Child Anthropometry Instrument

|  |  |
| --- | --- |
| **Event:** | 6-, 12-, or 24-Month |
| **Participant:** | Child |
| **Domain:** | Physical Measures |
| **Type of Document:****Allowable Mode:****Allowable Method:** | Data Collection InstrumentIn PersonCAPI  |
| **Recruitment Groups:** | EH, PB, HI  |
| **Version:** | 1.0 |
| **Release:** | MDES 3.0  |

This page intentionally left blank.

 Physical Measures Child Anthropometry Instrument

**TABLE OF CONTENTS**

[Physical Measures Child Anthropometry Instrument 1](#_Toc316288860)

[APPENDIX A: ANTHROPOMETRY EDIT RANGES 27](#_Toc316288861)

Physical Measures Child Anthropometry Instrument

**(TIME\_STAMP\_AN\_ST) PROGRAMMER INSTRUCTION:**

* INSERT DATE/TIME STAMP

AN001/(ANTHRO\_INTRO). Thank you for agreeing to participate in the National Children’s Study. We will be measuring {C\_FNAME/the child}’s weight and length as well as {his/her/their} head, waist, arm, and leg.

**DATA COLLECTOR INSTRUCTIONS:**

* EXPLAIN THE ANTHROPOMETRY PROTOCOL TO THE PARENT OR CAREGIVER.
* IF THE PARENT OR CAREGIVER REFUSED THE MEASUREMENTS, SELECT REFUSED. OTHERWISE, SELECT CONTINUE.

CONTINUE 1 **(RESP\_REL)**

REFUSED -1

PROGRAMMER INSTRUCTIONS:

* IF C\_FNAME COLLECTED DURING PREVIOUS INTEVIEW AND VALID RESPONSE PROVIDED, PRELOAD C\_FNAME.
* OTHERWISE, IF C\_FNAME NOT COLLECTED DURING PREVIOUS INTERVIEW OR VALID RESPONSE NOT PROVIDED, DISPLAY “the child”.
* PRELOAD CHILD\_SEX FROM MOST RECENT INTERVIEW:
	+ IF CHILD\_SEX =1, DISPLAY “his”.
	+ IF CHILD\_SEX = 2, DISPLAY “her”.

**AN002/(AN\_REF\_REASON).** I am sorry that you have chosen not to participate in this activity. Can you please tell me why?

**DATA COLLECTOR INSTRUCTION:**

* SELECT ALL THAT APPLY.

CONCERN ABOUT DISCOMFORT 1

CHILD TIRED/UNHAPPY 2

LANGUAGE ISSUE, SPANISH 3

LANGUAGE ISSUE, NON SPANISH 4

PARTICIPANT ILL/ EMERGENCY 5

NO TIME 6

EQUIPMENT FAILURE 7

SAFETY EXCLUSION 8

PHYSICAL LIMITATION 9

TECHNICIAN ERROR 10

OTHER -5

NONE GIVEN -7

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE -7 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_END\_REF.
* IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 SELECTED OR JUST ONE OF 1 THROUGH 10, GO TO AN\_END\_REF.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 AND -5 SELECTED, GO TO AN\_REF\_REASON\_OTH.

**AN003/(AN\_REF\_REASON\_OTH).**

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1 **(AN\_END\_REF)**

DON’T KNOW -2 **(AN\_END\_REF)**

**PROGRAMMER INSTRUCTION:**

* LIMIT FREE TEXT TO 255 CHARACTERS.

**AN004/(AN\_END\_REF).** That’s fine. Thank you for your time.

**PROGRAMMER INSTRUCTION:**

* GO TO **TIME\_STAMP\_AN\_ET.**

**AN005/(RESP\_REL).** WHAT IS THE RELATIONSHIP OF THE PARENT OR CAREGIVER TO CHILD?

MOTHER 1 **(AN\_WT\_MEAS1)**

FATHER 2 **(AN\_WT\_MEAS1)**

OTHER -5

**AN010/(RESP\_REL\_OTH).**

SPECIFY\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PROGRAMMER INSTRUCTION:**

* LIMIT TEXT TO 255 CHARACTERS.

AN015/(AN\_WT\_MEAS1). WEIGHT MEASUREMENT 1.

 MEASURED WEIGHT \_\_ \_\_ \_\_ . \_\_ kg

 EXCEEDS CAPACITY -6 (AN\_RECUMB\_LENGTH1)

 REFUSED -1 (AN\_WT\_REFUS\_REASON)

 COULD NOT OBTAIN -2 (AN\_RECUMB\_LENGTH1)

**PROGRAMMER INSTRUCTIONS:**

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED WEIGHT BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 1 OR > 199 KG, DISPLAY HARD EDIT.

AN020/(AN\_WT\_MEAS2). WEIGHT MEASUREMENT 2.

 MEASURED WEIGHT \_\_ \_\_ \_\_ . \_\_ kg

 REFUSED -1 (AN\_WT\_REFUS\_REASON)

 COULD NOT OBTAIN -2

**PROGRAMMER INSTRUCTIONS:**

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED WEIGHT BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 1 OR > 199 KG, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_WT\_MEAS1 AND AN\_WT\_MEAS2, CALCULATE THE DIFFERENCE BETWEEN AN\_WT\_MEAS1 AND AN\_WT\_MEAS2:
	+ IF AN\_WT\_MEAS1 AND AN\_WT\_MEAS2 DIFFER BY ≤ 0.3 KG, CALCULATE THE MEAN OF AN\_WT\_MEAS1 AND AN\_WT\_MEAS2, SAVE AS AN\_WT\_MEAS\_MEAN. THEN GO TO AN\_RECUMB\_LENGTH1.
	+ IF AN\_WT\_MEAS1 AND AN\_WT\_MEAS2 DIFFER BY > 0.3 KG, GO TO AN\_WT\_MEAS3.
	+ GO TO AN\_RECUMB\_LENGTH1.
* IF AN\_WT\_MEAS2 = -1:
	+ SAVE AN\_WT\_MEAS2 AS AN\_WT\_MEAS\_MEAN.
	+ GO TO AN\_WT\_REFUS\_REASON.
* IF AN\_WT\_MEAS2 = -2:
	+ SAVE AN\_WT\_MEAS2 AS AN\_WT\_MEAS\_MEAN A
	+ GO TO AN\_RECUMB\_LENGTH1.

AN025/(AN\_WT\_MEAS3). THIRD WEIGHT MEASUREMENT

 MEASURED WEIGHT \_\_ \_\_ \_\_ . \_\_ kg

 REFUSED -1 (AN\_WT\_REFUS\_REASON)

 COULD NOT OBTAIN -2

**PROGRAMMER INSTRUCTIONS:**

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED WEIGHT BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 1 OR > 199 KG, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_WT\_MEAS1, AN\_WT\_MEAS2, AND AN\_WT\_STAND\_MEAS3:
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE EQUIDISTANT FROM THE MIDDLE MEASURE, THEN SAVE THE MIDDLE MEASURE AS AN\_WT\_MEAS\_MEAN.
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE NOT EQUIDISTANT FROM THE MIDDLE MEASURE, CALCULATE THE MEAN OF THE TWO CLOSEST MEASUREMENTS OF AN\_WT\_MEAS1, AN\_WT\_MEAS2, AND AN\_WT\_MEAS3 AND SAVE AS AN\_WT\_MEAS\_MEAN.
	+ GO TO AN\_RECUMB\_LENGTH1.
* IF AN\_WT\_MEAS3 = -1:
	+ CALCULATE THE MEAN OF AN\_WT\_MEAS1 AND AN\_WT\_MEAS2, AND SAVE AS AN\_WT\_MEAS\_MEAN.
	+ GO TO AN\_WT\_REFUS\_REASON.
* IF AN\_WT\_MEAS3 = -2:
	+ CALCULATE THE MEAN OF AN\_WT\_MEAS1 AND AN\_WT\_MEAS2, AND SAVE AS AN\_WT\_MEAS\_MEAN.
	+ GO TO AN\_RECUMB\_LENGTH1.

AN026/(AN\_WT\_REFUS\_REASON).

DATA COLLECTOR INSTRUCTIONS:

* ENTER REASON YOU COULD NOT OBTAIN THE WEIGHT MEASURE.
* SELECT ALL THAT APPLY.

CONCERN ABOUT DISCOMFORT 1

CHILD TIRED/UNHAPPY 2

LANGUAGE ISSUE, SPANISH 3

LANGUAGE ISSUE, NON SPANISH 4

PARTICIPANT ILL/ EMERGENCY 5

NO TIME 6

EQUIPMENT FAILURE 7

SAFETY EXCLUSION 8

PHYSICAL LIMITATION 9

TECHNICIAN ERROR 10

OTHER -5

NONE GIVEN -7

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE -7 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_RECUMB\_LENGTH1.
* IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 SELECTED OR JUST ONE RESPONSE OF 1 THROUGH 10 SELECTED, GO TO AN\_RECUMB\_LENGTH1.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 AND -5 SELECTED, GO TO AN\_WT\_REFUS\_REASON\_OTH.

AN018/(AN\_WT\_REFUS\_REASON\_OTH)

SPECIFY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PROGRAMMER INSTRUCTIONS:

* LIMIT FREE TEXT TO 255 CHARACTERS.

AN030/(AN\_RECUMB\_LENGTH1). FIRST RECUMBENT LENGTH.

 MEASURED RECUMBENT LENGTH \_\_ \_\_ \_\_ . \_\_ cm

 EXCEEDS CAPACITY -6

 REFUSED -1 (AN\_LENGTH\_REFUS\_REASON)

 COULD NOT OBTAIN -2 (AN\_MEASUREMENT\_WT\_LENGTH\_COM)

AN035/(AN\_RECUMB\_LENGTH2). SECOND RECUMBENT LENGTH.

 MEASURED RECUMBENT LENGTH \_\_ \_\_ \_\_ . \_\_ cm

 REFUSED -1 (AN\_LENGTH\_REFUS\_REASON)

 COULD NOT OBTAIN -2

PROGRAMMER INSTRUCTIONS:

* IF VALID MEASURES PROVIDED FOR AN\_RECUMB\_LENGTH1 AND AN\_RECUMB\_LENGTH2, CALCULATE THE DIFFERENCE BETWEEN AN\_RECUMB\_LENGTH1 AND AN\_RECUMB\_LENGTH2:
	+ IF AN\_RECUMB\_LENGTH1 AND AN\_RECUMB\_LENGTH2 DIFFER BY ≤ 1.0 CM, CALCULATE THE MEAN OF AN\_RECUMB\_LENGTH1 AND AN\_RECUMB\_LENGTH2, SAVE AS AN\_RECUMB\_LENGTH\_MEAN, AND THEN GO TO AN\_ABOVE\_WAIST\_ADJ\_RECUMB.
	+ IF AN\_RECUMB\_LENGTH1 AND AN\_RECUMB\_LENGTH2 DIFFER BY > 1.0 CM, GO TO AN\_RECUMB\_LENGTH3.
* IF AN\_RECUMB\_LENGTH2 = -1:
	+ SAVE AN\_RECUMB\_LENGTH1 AS AN\_RECUMB\_LENGTH\_MEAN.
	+ GO TO AN\_LENGTH\_REFUS\_REASON.
* IF AN\_RECUMB\_LENGTH2 = -2:
	+ SAVE AN\_RECUMB\_LENGTH1 AS AN\_RECUMB\_LENGTH\_MEAN.
	+ GO TO AN\_ABOVE\_WAIST\_ADJ\_RECUMB.

AN040/(AN\_RECUMB\_LENGTH3). THIRD RECUMBENT LENGTH.

 MEASURED RECUMBENT LENGTH \_\_ \_\_ \_\_ . \_\_ cm

 REFUSED -1 (AN\_LENGTH\_REFUS\_REASON)

 COULD NOT OBTAIN -2

PROGRAMMER INSTRUCTIONS:

* IF VALID MEASURES PROVIDED FOR AN\_RECUMB\_LENGTH1, AN\_RECUMB\_LENGTH2, AND AN\_RECUMB\_LENGTH\_3:
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE EQUIDISTANT FROM THE MIDDLE MEASURE, THEN SAVE THE MIDDLE MEASURE AS AN\_RECUMB\_LENGTH\_MEAN.
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE NOT EQUIDISTANT FROM THE MIDDLE MEASURE, CALCULATE THE MEAN OF THE TWO CLOSEST MEASUREMENTS OF AN\_RECUMB\_LENGTH1, AN\_RECUMB\_LENGTH2, AND AN\_RECUMB\_LENGTH3 AND SAVE AS AN\_RECUMB\_LENGTH\_MEAN.
* IF AN\_RECUMB\_LENGTH3 = -1:
	+ CALCULATE THE MEAN OF AN\_RECUMB\_LENGTH1 AND AN\_RECUMB\_LENGTH2, AND SAVE AS AN\_RECUMB\_LENGTH\_MEAN.
	+ GO TO AN\_LENGTH\_REFUS\_REASON.
* OTHERWISE, IF AN\_RECUMB\_LENGTH3 = -2:
	+ CALCULATE THE MEAN OF AN\_RECUMB\_LENGTH1 AND AN\_RECUMB\_LENGTH2, AND SAVE AS AN\_RECUMB\_LENGTH\_MEAN.
	+ GO TO AN\_ABOVE\_WAIST\_ADJ\_RECUMB.
* FOR AN\_ABOVE\_WAIST\_ADJUST\_RECUMB AND AN\_BELOW\_WAIST\_ADJUST\_RECUMB BELOW, DISPLAY HARD EDIT IF WAIST ADJUSTEMENT IS < 0 OR >15.2 CM.

AN045/(AN\_ABOVE\_WAIST\_ADJ\_RECUMB). ABOVE WAIST ADJUSTMENT (RECUMBENT).

DATA COLLECTOR INSTRUCTION:

* ENTER “0” IF NO ADJUSTMENT IS NEEDED.

ABOVE WAIST ADJUSTMENT \_\_ \_\_ \_\_ . \_\_ cm

AN050/(AN\_BELOW\_WAIST\_ADJ\_RECUMB). BELOW WAIST ADJUSTMENT (RECUMBENT).

DATA COLLECTOR INSTRUCTION:

* ENTER “0” IF NO ADJUSTMENT IS NEEDED.

BELOW WAIST ADJUSTMENT \_\_ \_\_ \_\_ . \_\_ cm

AN055/(AN\_ADJ\_RECUMB\_LENGTH). ADJUSTED RECUMBENT LENGTH.

ADJUSTED RECUMBENT LENGTH \_\_ \_\_ \_\_ . \_\_ cm

 PROGRAMMER INSTRUCTION:

* SUBTRACT AN\_ABOVE\_WAIST\_ADJ\_RECUMB AND AN\_BELOW\_WAIST\_ADJ\_RECUMB FROM AN\_RECUMB\_LENGTH\_MEAN AND SAVE AS AN\_ADJ\_RECUMB\_LENGTH.
* IF VALID MEASURES PROVIDED FOR AN\_RECUMB\_LENGTH1 AND AN\_RECUMB\_LENGTH2, GO TO AN\_MEASUREMENT\_ WT\_LENGTH\_COM.

AN056/(AN\_LENGTH\_REFUS\_REASON).

DATA COLLECTOR INSTRUCTION:

* ENTER REASON FOR REFUSING THE LENGTH MEASURE(S).
* SELECT ALL THAT APPLY.

CONCERN ABOUT DISCOMFORT 1

CHILD TIRED/UNHAPPY 2

LANGUAGE ISSUE, SPANISH 3

LANGUAGE ISSUE, NON SPANISH 4

PARTICIPANT ILL/ EMERGENCY 5

NO TIME 6

EQUIPMENT FAILURE 7

SAFETY EXCLUSION 8

PHYSICAL LIMITATION 9

TECHNICIAN ERROR 10

OTHER -5

NONE GIVEN -7

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE -7 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_MEASUREMENT\_RECUM\_LENGTH\_COM.
* IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 SELECTED OR JUST ONE RESPONSE OF 1 THROUGH 10 SELECTED, GO TO AN\_MEASUREMENT\_RECUM\_LENGTH\_COM.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 AND -5 SELECTED, GO TO AN\_LENGTH\_REFUS\_REASON\_OTH.

AN057/(AN\_LENGTH\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

AN060/(AN\_MEASUREMENT\_ RECUM\_LENGTH\_COM).

DATA COLLECTION INSTRUCTION:

* SELECT ALL THAT APPLY.
* ENTER COMMENTS ABOUT WEIGHT AND LENGTH/HEIGHT MEASUREMENTS AND ABOVE/BELOW WAIST ADJUSTMENTS.

 NONE………………………. 1 (AN\_FEMUR\_LENGTH)

 POSITION NOT STRAIGHT FOR LENGTH…………….. 2 (AN\_FEMUR\_LENGTH)

 MEDICAL APPLIANCE/CAST NOT REMOVED…… 3 (AN\_FEMUR\_LENGTH)

 AMPUTATION – LEG………………………………… 4 (AN\_FEMUR\_LENGTH)

 AMPUTATION – ARM……… 5 (AN\_FEMUR\_LENGTH)

OTHER -5

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE OF 1 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES.
* IF ANY COMBINATION OF RESPONSE CODES 2 THROUGH 5 SELECTED OR JUST ONE OF THE RESPONSES 2 THROUGH 5 SELECTED, GO TO AN\_FEMUR\_LENGTH.
* IF RESPONSE CODE -5 SELECTED OR ANY COMBINATION OF 2 THROUGH 5 AND -5 SELECTED, GO TO AN\_MEASUREMENT\_RECUMB\_LENGTH\_COM\_OTH.
* IF AN\_WT\_MEAS1, AN\_WT\_MEAS2, OR AN\_WT\_MEAS3 = -2, DISPLAY “PLEASE ENTER THE REASON YOU COULD NOT OBTAIN THE WEIGHT MEASURE.”
* IF AN\_RECUMB\_LENGTH1, AN\_RECUMB\_LENGTH2, OR AN\_RECUMB\_LENGTH3 = -2, DISPLAY “PLEASE ENTER THE REASON YOU COULD NOT OBTAIN THE LENGTH MEASURE.”

AN061/(AN\_MEASUREMENT\_RECUMB\_LENGTH\_COM\_OTH).

SPECIFY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PROGRAMMER INSTRUCTIONS:

* LIMIT FREE TEXT TO 255 CHARACTERS.

AN065/(AN\_ FEMUR\_LENGTH). FEMUR LENGTH

 MEASURED FEMUR LENGTH ………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1 (AN\_WAIST\_CIR1)

 COULD NOT OBTAIN ………………………………….. -2 (AN\_WAIST\_CIR1)

**AN070/(AN\_MID\_FEMUR\_LENGTH).**

PROGRAMMER INSTRUCTIONS:

* CREATE DERIVED VARIABLE AN\_MID\_FEMUR\_LENGTH WHERE AN\_MID\_FEMUR\_LENGTH = AN\_FEMUR\_LENGTH/2 AND STORE AND DISPLAY ON SCREEN AS AN\_FEMUR\_LENGTH/2.

AN075/(AN\_THIGH\_CIR1). THIGH CIRCUMFERENCE 1

 MEASURED THIGH CIRCUMFERENCE ………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1 (AN\_WAIST\_CIR1)

 COULD NOT OBTAIN ………………………………….. -2 (AN\_WAIST\_CIR1)

DATA COLLECTOR INSTRUCTION:

* TAKE THIGH CIRCUMFERENCE AT THE MIDPOINT OF FEMUR LENGTH.

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF PARTICIPANT IS 24 MONTHS OR OLDER BASED ON CALCULATION OF CHILD AGE USING CHILD\_DOB AND VISIT\_DATE, DISPLAY SOFT EDIT IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED THIGH CIRCUMFERENCE BASED ON AGE AND GENDER.
	+ IF MEASUREMENT IS <0 OR > 200 CM, DISPLAY HARD EDIT.

AN080/(AN\_THIGH\_CIR2). THIGH CIRCUMFERENCE 2

 MEASURED THIGH CIRCUMFERENCE ………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

DATA COLLECTOR INSTRUCTION:

* TAKE THIGH CIRCUMFERENCE AT THE MIDPOINT OF FEMUR LENGTH.

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF PARTICIPANT IS 24 MONTHS OR OLDER BASED ON CALCULATION OF CHILD AGE USING CHILD\_DOB AND VISIT\_DATE, DISPLAY SOFT EDIT IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED THIGH CIRCUMFERENCE BASED ON AGE AND GENDER.
	+ IF MEASUREMENT IS <0 OR > 200 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_THIGH\_CIR1 AND AN\_THIGH\_CIR2, CALCULATE THE DIFFERENCE BETWEEN AN\_THIGH\_CIR1 AND AN\_THIGH\_CIR2:
	+ IF AN\_THIGH\_CIR1 AND AN\_THIGH\_CIR2 DIFFER BY ≤ 0.5 CM, CALCULATE THE MEAN OF AN\_THIGH\_CIR1 AND AN\_THIGH\_CIR2, SAVE AS AN\_THIGH\_CIR\_MEAN, AND THEN GO TO AN\_MEASUREMENT\_THIGH\_CIR\_COM.
	+ IF AN\_THIGH\_CIR1 AND AN\_THIGH\_CIR2 DIFFER BY > 0.5 CM, GO TO AN\_THIGH\_CIR3.
	+ GO TO AN\_MEASUREMENT\_THIGH\_CIR\_COM.
* IF AN\_THIGH\_CIR2 = -1:
	+ SAVE AN\_THIGH\_CIR1 AS AN\_THIGH\_CIR\_MEAN.
	+ GO TO AN\_THIGH\_CIRC\_REFUS\_REASON.
* OTHERWISE, IF AN\_THIGH\_CIR2 = -2:
	+ SAVE AN\_THIGH\_CIR1 AS AN\_THIGH\_CIR\_MEAN.
	+ GO TO AN\_MEASUREMENT\_THIGH\_CIR\_COM.

AN085/(AN\_MID\_THIGH\_CIR3). THIGH CIRCUMFERENCE 3

 MEASURED THIGH CIRCUMFERENCE ………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

DATA COLLECTOR INSTRUCTION:

* TAKE THIGH CIRCUMFERENCE AT THE MIDPOINT OF FEMUR LENGTH.

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF PARTICIPANT IS 24 MONTHS OR OLDER BASED ON CALCULATION OF CHILD AGE USING CHILD\_DOB AND VISIT\_DATE, DISPLAY SOFT EDIT IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED THIGH CIRCUMFERENCE BASED ON AGE AND GENDER.
	+ IF MEASUREMENT IS <0 OR > 200 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_THIGH\_CIR1, AN\_THIGH\_CIR2, AND AN\_THIGH\_CIR3:
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE EQUIDISTANT FROM THE MIDDLE MEASURE, THEN SAVE THE MIDDLE MEASURE AS AN\_THIGH\_CIR\_MEAN.
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE NOT EQUIDISTANT FROM THE MIDDLE MEASURE, CALCULATE THE MEAN OF THE TWO CLOSEST MEASUREMENTS OF AN\_THIGH\_CIR1, AN\_THIGH\_CIR2, AND AN\_THIGH\_CIR3 AND SAVE THE VALUE AS AN\_THIGH\_CIR\_MEAN.
	+ GO TO AN\_MEASUREMENT\_THIGH\_CIR\_COM.
* IF AN\_THIGH\_CIR3 = -1:
	+ CALCULATE THE MEAN OF AN\_THIGH\_CIR2 AND AN\_THIGH\_CIR2, AND SAVE AS AN\_THIGH\_CIR\_MEAN.
	+ GO TO AN\_THIGH\_CIRC\_REFUS\_REASON.
* OTHERWISE, IF AN\_THIGH\_CIR3 = -2:
	+ CALCULATE THE MEAN OF AN\_THIGH\_CIR2 AND AN\_THIGH\_CIR2, AND SAVE AS AN\_THIGH\_CIR\_MEAN.
	+ GO TO AN\_MEASUREMENT\_THIGH\_CIR\_COM.

AN086/(AN\_THIGH\_CIRC\_REFUS\_REASON).

DATA COLLECTOR INSTRUCTION:

* SELECT ALL THAT APPLY.
* ENTER REASON FOR REFUSING THE CIRCUMFERENCE MEASURE.

CONCERN ABOUT DISCOMFORT 1

CHILD TIRED/UNHAPPY 2

LANGUAGE ISSUE, SPANISH 3

LANGUAGE ISSUE, NON SPANISH 4

PARTICIPANT ILL/ EMERGENCY 5

NO TIME 6

EQUIPMENT FAILURE 7

SAFETY EXCLUSION 8

PHYSICAL LIMITATION 9

TECHNICIAN ERROR 10

OTHER -5

NONE GIVEN -7

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE -7 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_MEASUREMENT\_THIGH\_CIR\_COM.
* IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 SELECTED OR JUST ONE RESPONSE OF 1 THROUGH 10 SELECTED, GO TO AN\_MEASUREMENT\_THIGH\_CIR\_COM.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 AND -5 SELECTED, GO TO AN\_THIGH\_CIRC\_REFUS\_REASON\_OTH.

AN087/(AN\_THIGH\_CIRC\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

AN090/(AN\_MEASUREMENT\_THIGH\_CIR\_COM).

DATA COLLECTION INSTRUCTION:

* SELECT ALL THAT APPLY.
* ENTER COMMENTS ABOUT FEMUR LENGTH AND THIGH CIRCUMFERENCE MEASUREMENTS.

 NONE………………………………………… 1

 MEASUREMENT TAKEN OVER THICK CLOTHING 2

 MEASUREMENT TAKEN ON LEFT THIGH 3

MEDICAL APPLIANCE/CAST NOT REMOVED…… 4

 AMPUTATION – LEG………………………………… 5

 OTHER -5

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE 1 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_WAIST\_CIR1.
* IF ANY COMBINATION OF RESPONSE CODES 2 THROUGH 3 SELECTED, GO TO AN\_WAIST\_CIR1.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 2 THROUGH 3 AND -5 SELECTED, GO TO AN\_MEASUREMENT\_THIGH\_CIR\_OTH.
* IF AN\_MID\_THIGH\_CIR1, AN\_MID\_THIGH\_CIR2, OR AN\_MID\_THIGH\_CIR3 = -2, DISPLAY “PLEASE ENTER THE REASON YOU COULD NOT OBTAIN THE MID THIGH CIRCUMFERENCE MEASURE.”

AN095/(AN\_MEASUREMENT\_THIGH\_CIR\_COM\_OTH). DATA COLLECTOR MEASUREMENT COMMENTS

SPECIFY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PROGRAMMER INSTRUCTION:

* LIMIT FREE TEXT TO 255 CHARACTERS.

AN100/(AN\_WAIST\_CIR1). WAIST CIRCUMFERENCE 1

 MEASURED WAIST CIRCUMFERENCE ………………………… \_\_ \_\_ \_\_ . \_\_ cm.

REFUSED -1 (AN\_WAIST\_CIRC\_REFUS\_REASON)

COULD NOT OBTAIN -2 (AN\_MEASUREMENT\_WAIST\_CIR\_COM)

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED WAIST CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS <0 OR > 200 CM, DISPLAY HARD EDIT.

AN105/(AN\_WAIST\_CIR2). WAIST CIRCUMFERENCE 2

 MEASURED WAIST CIRCUMFERENCE ………………………… \_\_ \_\_ \_\_ . \_\_ cm.

REFUSED -1 (AN\_WAIST\_CIRC\_REFUS\_REASON)

COULD NOT OBTAIN -2 (AN\_MEASUREMENT\_WAIST\_CIR\_COM)

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED WAIST CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS <0 OR > 200 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_WAIST\_CIR1 AND AN\_WAIST\_CIR2, CALCULATE THE DIFFERENCE BETWEEN AN\_WAIST\_CIR1 AND AN\_WAIST\_CIR2:
	+ IF AN\_WAIST\_CIR1 AND AN\_WAIST\_CIR2 DIFFER BY ≤ 1.0 CM, CALCULATE THE MEAN OF AN\_WAIST\_CIR1 AND AN\_WAIST\_CIR2, SAVE AS AN\_WAIST\_CIR\_MEAN, AND THEN GO TO AN\_MEASUREMENT\_WAIST\_CIR\_COM.
	+ IF AN\_WAIST\_CIR1 AND AN\_WAIST\_CIR2 DIFFER BY > 1.0 CM, GO TO AN\_WAIST\_CIR3.
* IF AN\_WAIST\_CIR2 = -1:
	+ SAVE AN\_WAIST\_CIR1 AS AN\_WAIST\_CIR\_MEAN
	+ GO TO AN\_WAIST\_CIRC\_REFUS\_REASON.
* IF AN\_WAIST\_CIR2 = -2:
	+ SAVE AN\_WAIST\_CIR1 AS AN\_WAIST\_CIR\_MEAN
	+ GO TO AN\_MEASUREMENT\_WAIST\_CIR\_COM

AN110/(AN\_WAIST\_CIR3). WAIST CIRCUMFERENCE 3

 MEASURED WAIST CIRCUMFERENCE ………………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED -1

COULD NOT OBTAIN -2 (AN\_MEASUREMENT\_WAIST\_CIR\_COM)

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED WAIST CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS <0 OR > 200 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_WAIST\_CIR1, AN\_WAIST\_CIR2, AND AN\_WAIST\_CIR3:
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE EQUIDISTANT FROM THE MIDDLE MEASURE, THEN SAVE THE MIDDLE MEASURE AS AN\_WAIST\_CIR\_MEAN.
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE NOT EQUIDISTANT FROM THE MIDDLE MEASURE, CALCULATE THE MEAN OF THE TWO CLOSEST MEASUREMENTS OF AN\_WAIST\_CIR1, AN\_WAIST\_CIR2, AND AN\_WAIST\_CIR3 AND SAVE THE VALUE AS AN\_WAIST\_CIR\_MEAN.
	+ GO TO AN\_MEASUREMENT\_WAIST\_CIR\_COM.
* IF AN\_WAIST\_CIR3 = -1:
	+ CALCULATE THE MEAN OF AN\_WAIST\_CIR1 AND AN\_WAIST\_CIR2, AND SAVE AS AN\_WAIST\_CIR\_MEAN.
	+ GO TO AN\_WAIST\_CIRC\_REFUS\_REASON.
* IF AN\_WAIST\_CIR3 = -2:
	+ CALCULATE THE MEAN OF AN\_WAIST\_CIR1 AND AN\_WAIST\_CIR2, AND SAVE AS AN\_WAIST\_CIR\_MEAN.
	+ GO TO AN\_MEASUREMENT\_WAIST\_CIR\_COM

AN111/(AN\_WAIST\_CIRC\_REFUS\_REASON).

DATA COLLECTOR INSTRUCTION:

* SELECT ALL THAT APPLY.
* ENTER REASON FOR REFUSING THE CIRCUMFERENCE MEASURE.

CONCERN ABOUT DISCOMFORT 1

CHILD TIRED/UNHAPPY 2

LANGUAGE ISSUE, SPANISH 3

LANGUAGE ISSUE, NON SPANISH 4

PARTICIPANT ILL/ EMERGENCY 5

NO TIME 6

EQUIPMENT FAILURE 7

SAFETY EXCLUSION 8

PHYSICAL LIMITATION 9

TECHNICIAN ERROR 10

OTHER -5

NONE GIVEN -7

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE -7 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_MEASUREMENT\_WAIST\_CIR\_COM.
* IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 SELECTED OR JUST ONE RESPONSE OF 1 THROUGH 10 SELECTED, GO TO AN\_MEASUREMENT\_WAIST\_CIR\_COM.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 AND -5 SELECTED, GO TO AN\_WAIST\_CIRC\_REFUS\_REASON\_OTH.

AN112/(AN\_WAIST\_CIRC\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

PROGRAMMER INSTRUCTION:

* LIMIT FREE TEXT TO 255 CHARACTERS.

AN115/(AN\_MEASUREMENT\_WAIST\_CIR\_COM).

DATA COLLECTOR INSTRUCTIONS:

* SELECT ALL THAT APPLY
* ENTER COMMENTS ABOUT WAIST CIRCUMFERENCE MEASUREMENTS.

 NONE………………………………………… 1

 MEASUREMENT TAKEN OVER THICK CLOTHING 2

MEDICAL APPLIANCE/CAST NOT REMOVED…… 3

 OTHER -5

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE 1 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_HEAD\_CIR1.
* IF RESPONSE CODE 2 SELECTED, GO TO AN\_HEAD\_CIR1.
* OTHERWISE, IF RESPONSE CODE -5 SELECTED OR IF RESPONSE CODES 2 AND -5 SELECTED, GO TO AN\_MEASUREMENT\_WAIST\_CIR\_OTH.
* IF AN\_WAIST\_CIR1, AN\_WAIST\_CIR2, OR AN\_WAIST\_CIR3 = -2, DISPLAY “PLEASE ENTER THE REASON YOU COULD NOT OBTAIN THE WAIST CIRCUMFERENCE MEASURE.”

AN120/(AN\_MEASUREMENT\_WAIST\_CIR\_COM\_OTH). DATA COLLECTOR MEASUREMENT COMMENTS

SPECIFY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PROGRAMMER INSTRUCTION:

* LIMIT FREE TEXT TO 255 CHARACTERS.

AN125/(AN\_HEAD\_CIR1). HEAD CIRCUMFERENCE 1

 MEASURED HEAD CIRCUMFERENCE ………………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1 (AN\_HEAD\_CIRC\_REFUS\_REASON)

 COULD NOT OBTAIN ………………………………….. -2 (AN\_HEAD\_CIRC\_REFUS\_REASON)

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED HEAD CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 70 CM, DISPLAY HARD EDIT.

AN130/(AN\_HEAD\_CIR2). HEAD CIRCUMFERENCE 2

 MEASURED HEAD CIRCUMFERENCE ………………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED HEAD CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 70 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_HEAD\_CIR1 AND AN\_HEAD\_CIR2, CALCULATE THE DIFFERENCE BETWEEN AN\_HEAD\_CIR1 AND AN\_HEAD\_CIR2:
	+ IF AN\_HEAD\_CIR1 AND AN\_HEAD\_CIR2 DIFFER BY ≤ 0.3 CM, CALCULATE THE MEAN OF AN\_HEAD\_CIR1 AND AN\_HEAD\_CIR2, SAVE AS AN\_HEAD\_CIR\_MEAN, AND GO TO AN\_ HUMERUS\_LENGTH.
	+ IF AN\_HEAD\_CIR1 AND AN\_HEAD\_CIR2 DIFFER BY > 0.3 CM, GO TO AN\_HEAD\_CIR3.
* IF AN\_HEAD\_CIR2 = -1:
	+ SAVE AN\_HEAD\_CIR1 AS AN\_HEAD\_CIR\_MEAN.
	+ GO TO AN\_HEAD\_CIRC\_REFUS\_REASON.
* IF AN\_HEAD\_CIR2 = -2:
	+ SAVE AN\_HEAD\_CIR1 AS AN\_HEAD\_CIR\_MEAN.
	+ GO TO AN\_HUMERUS\_LENGTH.

AN135/(AN\_HEAD\_CIR3). HEAD CIRCUMFERENCE 3

 MEASURED HEAD CIRCUMFERENCE ………………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED HEAD CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 70 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_HEAD\_CIR1, AN\_HEAD\_CIR2, AND AN\_HEAD\_CIR3:
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE EQUIDISTANT FROM THE MIDDLE MEASURE, THEN SAVE THE MIDDLE MEASURE AS AN\_HEAD\_CIR\_MEAN.
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE NOT EQUIDISTANT FROM THE MIDDLE MEASURE, CALCULATE THE MEAN OF THE TWO CLOSEST MEASUREMENTS OF AN\_HEAD\_CIR1, AN\_HEAD\_CIR2, AND AN\_HEAD\_CIR3 AND SAVE THE VALUE AS AN\_HEAD\_CIR\_MEAN.
	+ GO TO AN\_HUMERUS\_LENGTH.
* IF AN\_HEAD\_CIR3 = -1:
	+ CALCULATE THE MEAN OF AN\_HEAD\_CIR1 AND AN\_HEAD\_CIR2, AND SAVE AS AN\_HEAD\_CIR\_MEAN.
	+ GO TO AN\_HEAD\_CIRC\_REFUS\_REASON.
* OTHERWISE, IF AN\_HEAD\_CIR3 = -2:
	+ CALCULATE THE MEAN OF AN\_HEAD\_CIR1 AND AN\_HEAD\_CIR2, AND SAVE AS AN\_HEAD\_CIR\_MEAN.
	+ GO TO AN\_HUMERUS\_LENGTH.
* FOR AN\_HUMERUS\_LENGTH BELOW, GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED HUMERUS LENGTH BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS <0 OR > 80 CM, DISPLAY HARD EDIT.

AN136/(AN\_HEAD\_CIRC\_REFUS\_REASON).

DATA COLLECTOR INSTRUCTION:

* SELECT ALL THAT APPLY.
* ENTER REASON FOR REFUSING THE CIRCUMFERENCE MEASURE.

CONCERN ABOUT DISCOMFORT 1

CHILD TIRED/UNHAPPY 2

LANGUAGE ISSUE, SPANISH 3

LANGUAGE ISSUE, NON SPANISH 4

PARTICIPANT ILL/ EMERGENCY 5

NO TIME 6

EQUIPMENT FAILURE 7

SAFETY EXCLUSION 8

PHYSICAL LIMITATION 9

TECHNICIAN ERROR 10

OTHER -5

NONE GIVEN -7

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE -7 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_HUMERUS\_LENGTH.
* IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 SELECTED OR JUST ONE RESPONSE OF 1 THROUGH 10 SELECTED, GO TO AN\_HUMERUS\_LENGTH.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 AND -5 SELECTED, GO TO AN\_HEAD\_CIRC\_REFUS\_REASON\_OTH.

AN137/(AN\_HEAD\_CIRC\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

PROGRAMMER INSTRUCTION:

* LIMIT FREE TEXT TO 255 CHARACTERS.

AN140/(AN\_HUMERUS\_LENGTH). HUMERUS LENGTH

 MEASURED HUMERUS LENGTH ………………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED…………………………………………………-1 (AN\_HUM\_LENGTH\_REFUS\_REASON)

 COULD NOT OBTAIN ………………………………….. -2 (AN\_ULNAR\_LENGTH)

AN145/(AN\_MID\_HUMERUS\_LENGTH).

PROGRAMMER INSTRUCTION:

* CREATE DERIVED VARIABLE, AN\_MID\_HUMERUS\_LENGTH, WHERE MID HUMERUS LENGTH = AN\_HUMERUS\_LENGTH/2 AND STORE AND DISPLAY ON SCREEN AS AN\_MID\_HUMERUS\_LENGTH.

AN136/(AN\_HUM\_LENGTH\_REFUS\_REASON). ENTER REASON FOR REFUSING THE MID HUMERUS LENGTH MEASURE.

CONCERN ABOUT DISCOMFORT 1

CHILD TIRED/UNHAPPY 2

LANGUAGE ISSUE, SPANISH 3

LANGUAGE ISSUE, NON SPANISH 4

PARTICIPANT ILL/ EMERGENCY 5

NO TIME 6

EQUIPMENT FAILURE 7

SAFETY EXCLUSION 8

PHYSICAL LIMITATION 9

TECHNICIAN ERROR 10

OTHER -5

NONE GIVEN -7

PROGRAMMER INSTRUCTIONS:

* IF RESPONSE CODE -7 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM.
* IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 SELECTED OR JUST ONE RESPONSE OF 1 THROUGH 10 SELECTED, GO TO AN\_HUMERUS\_LENGTH.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 1 THROUGH 10 AND -5 SELECTED, GO TO AN\_HEAD\_CIRC\_REFUS\_REASON\_OTH.

AN137/(AN\_HUM\_LENGTH\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

PROGRAMMER INSTRUCTION:

* GO TO AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM.

AN150/(AN\_UP\_ARM\_CIR1). UPPER ARM CIRCUMFERENCE 1.

DATA COLLECTOR INSTRUCTION:

* TAKE UPPER ARM CIRCUMFERENCE AT THE HUMERUS MIDPOINT.

 MEASURED UPPER ARM CIRCUMFERENCE………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1 (AN\_UP\_ARM\_CIRC\_REFUS\_REASON)

 COULD NOT OBTAIN ………………………………….. -2 (AN\_UP\_ARM\_CIRC\_REFUS\_REASON)

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A (ANTHROPOMETRY EDIT RANGES) TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED UPPER ARM CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS <0 OR > 70 CM, DISPLAY HARD EDIT.

AN155/(AN\_UP\_ARM\_CIR2). MID UPPER ARM CIRCUMFERENCE 2.

DATA COLLECTOR INSTRUCTION:

* TAKE UPPER ARM CIRCUMFERENCE AT THE HUMERUS MIDPOINT.

 MEASURED UPPER ARM CIRCUMFERENCE …………..…… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED UPPER ARM CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 70 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_UP\_ARM\_CIR1 AND AN\_UP\_ARM\_CIR2, CALCULATE THE DIFFERENCE BETWEEN AN\_UP\_ARM\_CIR1 AND AN\_UP\_ARM\_CIR2:
	+ IF AN\_UP\_ARM\_CIR1 AND AN\_UP\_ARM\_CIR2 DIFFER BY ≤ 0.5 CM, CALCULATE THE MEAN OF AN\_UP\_ARM\_CIR1 AND AN\_UP\_ARM\_CIR2, SAVE AS AN\_UP\_ARM\_CIR\_MEAN, AND THEN GO TO AN\_ULNAR\_LENGTH.
	+ IF AN\_ UP\_ARM\_CIR1 AND AN\_UP\_ARM\_CIR2 DIFFER BY > 0.5 CM, GO TO AN\_ UP\_ARM\_CIR3.
* IF AN\_UP\_ARM\_CIR2 = -1:
	+ SAVE AN\_UP\_ARM\_CIR1 AS AN\_UP\_ARM\_MEAN
	+ GO TO AN\_UP\_ARM\_CIRC\_REFUS\_REASON
* IF AN\_UP\_ARM\_CIR2 = -2:
	+ SAVE AN\_UP\_ARM\_CIR1 AS AN\_UP\_ARM\_MEAN
	+ GO TO AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM.

AN160/(AN\_UP\_ARM\_CIR3). UPPER ARM CIRCUMFERENCE 3.

 MEASURED UPPER ARM CIRCUMFERENCE …………..…… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

COLLECTOR INSTRUCTION:

* TAKE UPPER ARM CIRCUMFERENCE AT THE HUMERUS MIDPOINT.

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED UPPER ARM CIRCUMFERENCE BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS <0 OR > 70 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_UP\_ARM\_CIR1 AND AN\_UP\_ARM\_CIR2:
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE EQUIDISTANT FROM THE MIDDLE MEASURE, SAVE THE MIDDLE MEASURE AS AN\_UP\_ARM\_CIR\_MEAN.
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE NOT EQUIDISTANT FROM THE MIDDLE MEASURE, CALCULATE THE MEAN OF THE TWO CLOSEST MEASUREMENTS OF AN\_UP\_ARM\_CIR1, AN\_UP\_ARM\_CIR2, AND AN\_UP\_ARM\_CIR3 AND SAVE THE VALUE AS AN\_UP\_ARM\_CIR\_MEAN.
* IF AN\_UP\_ARM\_CIR3 = -1:
	+ CALCULATE THE MEAN OF AN\_UP\_ARM\_CIR1 AND AN\_UP\_ARM\_CIR2, AND SAVE AS AN\_UP\_ARM\_CIR\_MEAN.
	+ GO TO AN\_UP\_ARM\_CIRC\_REFUS\_REASON.
* OTHERWISE, IF AN\_UP\_ARM\_CIR3 = -2:
	+ CALCULATE THE MEAN OF AN\_UP\_ARM\_CIR1 AND AN\_UP\_ARM\_CIR2, AND SAVE AS AN\_UP\_ARM\_CIR\_MEAN.
	+ GO TO AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM.

AN161/(AN\_UP\_ARM\_CIRC\_REFUS\_REASON). ENTER REASON FOR REFUSING THE UPPER ARM CIRCUMFERENCE MEASURE.

CONCERN ABOUT DISCOMFORT 1 **(AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM)**

CHILD SICK 2 (**AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM)**

CHILD TIRED/UNHAPPY 3 **(AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM)**

NONE GIVEN -7 **(AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM)**

OTHER -5

AN162/(AN\_UP\_ARM\_CIRC\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

AN165/(AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM).

DATA COLLECTOR INSTRUCTION:

* SELECT ALL THAT APPLY.
* ENTER COMMENTS ABOUT UPPER ARM LENGTH AND CIRCUMFERENCE.

 NONE………………………………………… 1

 MEASUREMENT TAKEN OVER THICK CLOTHING 2

 MEASUREMENT TAKEN ON LEFT ARM 3

 OTHER -5

PROGRAMMER INSTRUCTIONS:

* IF AN\_UP\_ARM\_CIR1, AN\_UP\_ARM\_CIR2, OR AN\_UP\_ARM\_CIR3 = -2, DISPLAY “PLEASE ENTER THE REASON WHY YOU COULD NOT OBTAIN THE UPPER ARM CIRCUMFERENCE MEASURE.”
* IF RESPONSE CODE 1 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES, AND GO TO AN\_ULNAR\_LENGTH.
* IF ANY COMBINATION OF RESPONSE CODES 2 - 3 SELECTED, GO TO AN\_ULNAR\_LENGTH.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 2 - 3 AND -5 SELECTED, GO TO AN\_MEASUREMENT\_UP\_ARM\_COM\_OTH.

AN170/(AN\_MEASUREMENT\_UP\_ARM\_CIR\_COM\_OTH). DATA COLLECTOR MEASUREMENT COMMENTS

SPECIFY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PROGRAMMER INSTRUCTION:

* LIMIT FREE TEXT TO 255 CHARACTERS

AN175/(AN\_ULNAR\_LENGTH). ULNAR LENGTH

 MEASURED ULNAR LENGTH ………………………… \_\_ \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1 (AN\_ULNAR\_LENGTH\_REFUS\_REASON)

 COULD NOT OBTAIN …………………………………..-2 (AN\_MEASUREMENT\_ULNAR\_LENGTH\_COM)

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED HUMERUS LENGTH BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS <0 OR > 80 CM, DISPLAY HARD EDIT.
* IF VALID VALUE ENTERED, GO TO AN\_MEASUREMENT\_ULNAR\_LENGTH\_COM.

AN176/(AN\_ULNAR\_LENGTH\_REFUS\_REASON). ENTER REASON FOR REFUSING THE UPPER ARM CIRCUMFERENCE MEASURE.

CONCERN ABOUT DISCOMFORT 1 **(AN\_MEASUREMENT\_ULNAR\_ LENGTH\_COM)**

CHILD SICK 2 (**AN\_MEASUREMENT\_ULNAR\_ LENGTH\_COM)**

CHILD TIRED/UNHAPPY 3 **(AN\_MEASUREMENT\_ULNAR\_ LENGTH\_COM)**

NONE GIVEN -7 (**AN\_MEASUREMENT\_ULNAR\_ LENGTH\_COM)**

OTHER -5

AN177/(AN\_ULNAR\_LENGTH\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

AN180/(AN\_MEASUREMENT\_ ULNAR\_ LENGTH\_COM).

DATA COLLECTOR INSTRUCTION:

* SELECT ALL THAT APPLY.
* ENTER COMMENTS ABOUT ULNAR LENGTH MEASUREMENT.

 NONE………………………………………… 1

 MEASUREMENT TAKEN OVER THICK CLOTHING 2

 MEASUREMENT TAKEN ON LEFT ARM 3

 OTHER -5

PROGRAMMER INSTRUCTIONS:

* IF AN\_ULNAR\_LENGTH = -2, DISPLAY “PLEASE ENTER THE REASON YOU COULD NOT OBTAIN THE ULNAR LENGTH MEASURE.”
* IF RESPONSE CODE 1 SELECTED, DO NOT ALLOW SELECTION OF ADDITIONAL RESPONSE CODES AND GO TO AN\_TRICEPS\_SKINFOLD1.
* IF ANY COMBINATION OF RESPONSE CODES 2 AND 3 SELECTED, GO TO AN\_TRICEPS\_SKINFOLD1.
* IF RESPONSE CODE -5 SELECTED OR IF ANY COMBINATION OF RESPONSE CODES 2, 3 AND -5 SELECTED, GO TO AN\_MEASUREMENT\_ULNAR\_LENGTH\_COM\_OTH.

AN185/(AN\_MEASUREMENT\_ULNAR\_LENGTH\_COM\_OTH). DATA COLLECTOR MEASUREMENT COMMENTS

SPECIFY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PROGRAMMER INSTRUCTION:

* LIMIT FREE TEXT TO 255 CHARACTERS.

**AN190/(AN\_TRICEPS\_SKINFOLD1).** TRICEPS SKINFOLD MEASUREMENT 1

 MEASURED TRICEPS SKINFOLD ………………………… \_\_ \_\_. \_\_ cm.

 EXCEEDS CAPACITY……………………………… -6 (AN\_SUBSCAP\_SKINFOLD1)

 REFUSED …………………………………………… -1 (AN\_SUBSCAP\_SKINFOLD1)

 COULD NOT OBTAIN …………………………….. -2 (AN\_SUBSCAP\_SKINFOLD1)

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED TRICEPS SKINFOLD BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 67 CM, DISPLAY HARD EDIT.

AN195/(AN\_TRICEPS\_SKINFOLD2). TRICEPS SKINFOLD MEASUREMENT 2

 MEASURED TRICEPS SKINFOLD ………………………… \_\_ \_\_. \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED TRICEPS SKINFOLD BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 67 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_TRICEPS\_SKINFOLD1 AND AN\_TRICEPS\_SKINFOLD2, CALCULATE THE DIFFERENCE BETWEEN AN\_TRICEPS\_SKINFOLD1 AND AN\_TRICEPS\_SKINFOLD2:
	+ IF AN\_TRICEPS\_SKINFOLD1 AND AN\_TRICEPS\_SKINFOLD2 DIFFER BY ≤ 2.0 CM, CALCULATE THE MEAN OF AN\_TRICEPS\_SKINFOLD1 AND AN\_TRICEPS\_SKINFOLD2, SAVE AS AN\_TRICEPS\_SKINFOLD\_MEAN, AND THEN GO TO AN\_SUBSCAP\_SKINFOLD1.
	+ IF AN\_TRICEPS\_SKINFOLD1 AND AN\_TRICEPS\_SKINFOLD2 DIFFER BY > 2.0 CM, GO TO AN\_TRICEPS\_SKINFOLD3.
* IF AN\_TRICEPS \_SKINFOLD2 = -1:
	+ SAVE AN\_TRICEPS\_SKINFOLD1 AS AN\_TRICEPS\_SKINFOLD\_MEAN.
	+ GO TO AN\_TRI\_SKIN\_REFUS\_REASON.
* IF AN\_TRICEPS \_SKINFOLD2 = -2:
	+ SAVE AN\_TRICEPS\_SKINFOLD1 AS AN\_TRICEPS\_SKINFOLD\_MEAN.
	+ GO TO AN\_TRICEPS\_SKINFOLD3.

AN200/(AN\_TRICEPS\_SKINFOLD3). TRICEPS SKINFOLD MEASUREMENT 3

 MEASURED TRICEPS SKINFOLD ………………………… \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED TRICEPS SKINFOLD BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 67 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_TRICEPS\_SKINFOLD1, AN\_TRICEPS\_SKINFOLD2 AND AN\_TRICEPS\_SKINFOLD3:
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE EQUIDISTANT FROM THE MIDDLE MEASURE, THEN SAVE THE MIDDLE MEASURE AS AN\_TRICEPS\_SKINFOLD\_MEAN.
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE NOT EQUIDISTANT FROM THE MIDDLE MEASURE, CALCULATE THE MEAN OF THE TWO CLOSEST MEASUREMENTS OF AN\_TRICEPS\_SKINFOLD1, AN\_TRICEPS\_SKINFOLD2, AND AN\_TRICEPS\_SKINFOLD3 AND SAVE THE VALUE AS AN\_TRICEPS\_SKINFOLD\_MEAN.
	+ GO TO AN\_SUBSCAP\_SKINFOLD1.
* IF AN\_TRICEPS\_SKINFOLD3= -1:
	+ CALCULATE THE MEAN OF AN\_TRICEPS\_SKINFOLD1 AND AN\_TRICEPS\_SKINFOLD2, AND SAVE AS AN\_TRICEPS\_SKINFOLD\_MEAN.
	+ GO TO AN\_TRI\_SKIN\_REFUS\_REASON.
* OTHERWISE, IF AN\_TRICEPS\_SKINFOLD3= -2:
	+ CALCULATE THE MEAN OF AN\_TRICEPS\_SKINFOLD1 AND AN\_TRICEPS\_SKINFOLD2, AND SAVE AS AN\_TRICEPS\_SKINFOLD\_MEAN.
	+ GO TO AN\_SUBSCAP\_SKINFOLD1.

AN201/(AN\_TRI\_SKIN\_REFUS\_REASON). ENTER REASON FOR REFUSING THE TRICEP SKINFOLD MEASURE.

CONCERN ABOUT DISCOMFORT 1 **(AN\_SUBSCAP\_SKINFOLD1)**

CHILD SICK 2 (**AN\_SUBSCAP\_SKINFOLD1)**

CHILD TIRED/UNHAPPY 3 **(AN\_SUBSCAP\_SKINFOLD1)**

NONE GIVEN -7 (**AN\_SUBSCAP\_SKINFOLD1)**

OTHER -5

AN202/(AN\_TRI\_SKIN\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

PROGRAMMER INSTRUCTION:

* LIMIT FREE TEXT TO 255 CHARACTERS.

AN205/(AN\_SUBSCAP\_SKINFOLD1). SUBSCAPULAR SKINFOLD MEASUREMENT 1

 MEASURED SUBSCAPULAR SKINFOLD ………………………… \_\_ \_\_. \_\_ cm.

 EXCEEDS CAPACITY……………………………… -6

 REFUSED …………………………………………… -1 (PROGRAMMER INSTRUCTIONS FOLLOWING AN\_SUBSCAP\_SKINFOLD3)

 COULD NOT OBTAIN …………………………….. -2 (PROGRAMMER INSTRUCTIONS FOLLOWING AN\_SUBSCAP\_SKINFOLD3)

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED SUBSCAPULAR SKINFOLD BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 67 CM, DISPLAY HARD EDIT.

AN210/(AN\_SUBSCAP\_SKINFOLD2). SUBSCAPULAR SKINFOLD MEASUREMENT 2

 MEASURED SUBSCAPULAR SKINFOLD ……………………… \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED SUBSCAPULAR SKINFOLD BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 67 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_SUBSCAP\_SKINFOLD1 AND AN\_SUBSCAP\_SKINFOLD2, CALCULATE THE DIFFERENCE BETWEEN AN\_SUBSCAP\_SKINFOLD1 AND AN\_SUBSCAP\_SKINFOLD2:
	+ IF AN\_SUBSCAP\_SKINFOLD1 AND AN\_SUBSCAP\_SKINFOLD2 DIFFER BY ≤ 2.0 CM, CALCULATE THE MEAN OF AN\_SUBSCAP\_SKINFOLD1 AND AN\_ SUBSCAP\_SKINFOLD2, SAVE AS AN\_SUBSCAP\_SKINFOLD\_MEAN, AND GO TO PROGRAMMER INSTRUCTIONS FOLLOWING AN\_SUBSCAP\_SKINFOLD3.
	+ IF AN\_SUBSCAP\_SKINFOLD1 AND AN\_SUBSCAP\_SKINFOLD2 DIFFER BY > 2.0 cm, GO TO AN\_SUBSCAP\_SKINFOLD3.
* IF AN\_SUBSCAP\_SKINFOLD2 = -1 OR -2, SAVE AN\_SUBSCAP\_SKINFOLD1 AS AN\_SUBSCAP\_SKINFOLD\_MEAN AND GO TO PROGRAMMER INSTRUCTIONS FOLLOWING AN\_SUBSCAP\_SKINFOLD3.

AN215/(AN\_SUBSCAP\_SKINFOLD3). SUBSCAPULAR SKINFOLD MEASUREMENT 3

 MEASURED SUBSCAPULAR SKINFOLD ………………………… \_\_ \_\_ . \_\_ cm.

 REFUSED ………………………………………………… -1

 COULD NOT OBTAIN ………………………………….. -2

PROGRAMMER INSTRUCTIONS:

* GO TO APPENDIX A TO DETERMINE HARD AND SOFT EDITS:
	+ IF MEASUREMENT FALLS OUTSIDE MINIMUM OR MAXIMUM EXPECTED SUBSCAPULAR SKINFOLD BASED ON AGE AND GENDER, DISPLAY SOFT EDIT.
	+ IF MEASUREMENT IS < 0 OR > 67 CM, DISPLAY HARD EDIT.
* IF VALID MEASURES PROVIDED FOR AN\_SUBSCAP\_SKINFOLD1, AN\_SUBSCAP\_SKINFOLD2, AND AN\_SUBSCAP\_SKINFOLD3:
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE EQUIDISTANT FROM THE MIDDLE MEASURE, THEN SAVE THE MIDDLE MEASURE AS AN\_SUBSCAP\_SKINFOLD\_MEAN.
	+ IF THE TWO OUTSIDE MEASUREMENTS ARE NOT EQUIDISTANT FROM THE MIDDLE MEASURE, CALCULATE THE MEAN OF THE TWO CLOSEST MEASUREMENTS OF AN\_SUBSCAP\_SKINFOLD1, AN\_SUBSCAP\_SKINFOLD2, AND AN\_SUBSCAPS\_SKINFOLD3 AND SAVE THE VALUE AS AN\_SUBSCAP\_SKINFOLD\_MEAN.
	+ GO TO AN\_MEASUREMENT\_SUB\_SKIN\_COM.
* IF AN\_SUBSCAP\_SKINFOLD3= -1:
	+ CALCULATE THE MEAN OF AN\_SUBSCAP\_SKINFOLD1 AND AN\_SUBSCAP\_SKINFOLD2, AND SAVE AS AN\_SUBSCAP\_SKINFOLD\_MEAN.
	+ GO TO AN\_SUB\_SKIN\_REFUS\_REASON.
* OTHERWISE, IF AN\_SUBSCAP\_SKINFOLD3= -2:
	+ CALCULATE THE MEAN OF AN\_SUBSCAP\_SKINFOLD1 AND AN\_SUBSCAP\_SKINFOLD2, AND SAVE AS AN\_SUBSCAP\_SKINFOLD\_MEAN.
	+ GO TO AN\_MEASUREMENT\_SUB\_SKIN\_COM.

AN216/(AN\_SUB\_SKIN\_REFUS\_REASON). ENTER REASON FOR REFUSING THE SUBSCAPULAR SKINFOLD MEASURE.

CONCERN ABOUT DISCOMFORT 1 **(AN\_MEASUREMENT\_SUB\_SKIN\_COM)**

CHILD SICK 2 (**AN\_MEASUREMENT\_SUB\_SKIN\_COM)**

CHILD TIRED/UNHAPPY 3 **(AN\_MEASUREMENT\_SUB\_SKIN\_COM)**

NONE GIVEN -7 (**AN\_MEASUREMENT\_SUB\_SKIN\_COM)**

OTHER -5

AN217/(AN\_SUB\_SKIN\_REFUS\_REASON\_OTH).

SPECIFY:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REFUSED -1

DON’T KNOW -2

AN180/(AN\_MEASUREMENT\_SUB\_SKIN\_COM).

DATA COLLECTOR INSTRUCTION:

* SELECT ALL THAT APPLY
* ENTER COMMENTS ABOUT SKINFOLD MEASUREMENTS.

 NONE………………………………………… 1 (PROGRAMMER INSTRUCTIONS FOLLOWING AN\_MEASUREMENT\_SUB\_SKIN\_COM\_OTH)

 MEASUREMENT TAKEN OVER THICK CLOTHING 2 (PROGRAMMER INSTRUCTIONS FOLLOWING AN\_MEASUREMENT\_SUB\_SKIN\_COM\_OTH)

 OTHER -5

AN185/(AN\_MEASUREMENT\_SUB\_SKIN\_COM\_OTH). DATA COLLECTOR MEASUREMENT COMMENTS

SPECIFY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PROGRAMMER INSTRUCTION:

* LIMIT FREE TEXT TO 255 CHARACTERS.
* CREATE AN\_CONVERTED\_WEIGHT BY CONVERTING MEAN WEIGHT IN KILOGRAMS TO POUNDS. AN\_CONVERTED\_WEIGHT = [AN\_WEIGHT\_MEAS\_MEAN X 2.2046]. SAVE AN\_CONVERTED\_WEIGHT AS AN\_CONVERTED\_WEIGHT.
* CREATE AN\_CONVERTED\_WEIGHT\_LBS AND AN\_CONVERTED\_WEIGHT\_OZ BY CONVERTING AVERAGE WEIGHT IN KILOGRAMS TO POUNDS AND OUNCES. WEIGHT IN POUNDS = [AN\_WEIGHT\_MEAS\_MEAN X 2.2046]. ENTER WHOLE NUMBER IN AND SAVE AS AN\_COVERTED\_WEIGHT\_LBS. MULTIPLE DECIMAL FRACTION BY 16 AND ROUND TO NEAREST OUNCE. ENTER VALUE IN AND SAVE AS AN\_CONVERTED\_WEIGHT\_OUNCE.
* CREATE AN\_CONVERTED\_RECUMB\_LENGTH BY CONVERTING ADJUSTED RECUMBENT LENGTH IN CENTIMETERS TO INCHES. AN\_CONVERTED\_RECUMB\_LENGTH = [AN\_RECUMB\_LENGTH\_ADJUST X 0.39]. SAVE AN\_CONVERTED\_RECUMB\_LENGTH AS AN\_CONVERTED\_RECUMB\_LENGTH.

AN220/(AN\_CONV\_WEIGHT). WEIGHT IN POUNDS AND OUNCES.

PROGRAMMER INSTRUCTIONS:

* IF VALID MEASURE CALCULATED WHEN ANTHROPOMETRY INSTRUMENT, DISPLAY AN\_CONVERTED\_WEIGHT\_LBS
* AND AN\_CONVERTED\_WEIGHT\_OZ.
* OTHERWISE, IF VALID MEASURE COULD NOT BE OBTAINED, DISPLAY “COULD NOT BE OBTAINED”.

AN225/AN\_CONV\_RECUMBENT\_LENGTH). RECUMBENT LENGTH IN INCHES.

PROGRAMMER INSTRUCTION:

* IF VALID MEASURE CALCULATED WHEN ANTHROPOMETRY MODULE ADMINISTERED, DISPLAY AN\_CONVERTED\_RECUMBENT\_LENGTH.
* OTHERWISE, IF VALID MEASURE COULD NOT BE OBTAINED, DISPLAY “COULD NOT BE OBTAINED”.

**AN230.** Thank you for having {CHILD’S NAME/the child} complete these measures.

**(TIME\_STAMP\_AN\_ET) PROGRAMMER INSTRUCTION:**

* INSERT DATE/TIME STAMP

**APPENDIX A: ANTHROPOMETRY EDIT RANGES**

| **Measure** | **Age (years)** | **Gender** | **Soft edit** | **Hard edit** |
| --- | --- | --- | --- | --- |
| **Low** | **High** | **Low** | **High** |
| **Standing Weight (kg)** | < 1 | M | 5.4 | 12.1 | 0 | 200 |
|  |   | F | 4.8 | 11.8 | 0 | 200 |
|  | 1 - <2 | M | 8.7 | 16.5 | 0 | 200 |
|  |   | F | 8.2 | 15.5 | 0 | 200 |
|  | 2 - <3 | M | 10.5 | 18.3 | 0 | 200 |
|  |   | F | 11.0 | 23.5 | 0 | 200 |
| **Recumbent Length (cm)** | < 1 | M | 56.8 | 81.3 | 16 | 197.5 |
|  |   | F | 54.5 | 78.8 | 16 | 197.5 |
|  | 1 - <2 | M | 72.8 | 94.4 | 16 | 197.5 |
|  |   | F | 71.3 | 91.4 | 16 | 197.5 |
|  | 2 - <3 | M | 82.2 | 102.0 | 16 | 197.5 |
|  |   | F | 82.0 | 102.0 | 16 | 197.5 |
| **Height Adjustment-Below waist** | 0 - 100 | M | N/A | N/A | 0 | 15.2 |
|  |   | F | N/A | N/A | 0 | 15.2 |
|  |   |   |   |   |   |   |
| **Height Adjustment-Above waist** | 0 -100 | M | N/A | N/A | 0 | 15.2 |
|  |   | F | N/A | N/A | 0 | 15.2 |
|  |   |   |   |   |   |   |
| **Femur Length (cm)** | < 1 | M |   |   | 0 | 200 |
|  |   | F |   |   | 0 | 200 |
|  | 1 - <2 | M |   |   | 0 | 200 |
|  |   | F |   |   | 0 | 200 |
|  | 2 - <3 | M | 14.5 | 23.0 | 0 | 200 |
|  |   | F | 15.2 | 23.3 | 0 | 200 |
| **Thigh Circumference (cm)** | < 1 | M |   |   | 0 | 200 |
|  |   | F |   |   | 0 | 200 |
|  | 1 - <2 | M |   |   | 0 | 200 |
|  |   | F |   |   | 0 | 200 |
|  | 2 - <3 | M | 23.1 | 34.0 | 0 | 200 |
|  |   | F | 23.8 | 36.1 | 0 | 200 |
| **Waist Circumference (cm)** | < 1 | M |   |   | 0 | 200 |
|  |   | F |   |   | 0 | 200 |
|  | 1 - <2 | M |   |   | 0 | 200 |
|  |   | F |   |   | 0 | 200 |
|  | 2 - <3 | M | 41.2 | 55.6 | 0 | 200 |
|  |   | F | 41.2 | 58.3 | 0 | 200 |
| **Head Circumference (cm)** | 0 - 0.5 | M | 38.8 | 48.8 | 0 | 70 |
|  |   | F | 37.3 | 47.6 | 0 | 70 |
|  | 0 - 100 | M |   |   | 0 | 70 |
|  | 0 - 70 | F |   |   | 0 | 70 |
| **Humerus and Ulnar Length (cm)** | < 1 | M | 10.0 | 16.8 | 0 | 80 |
|  |   | F | 9.5 | 16.0 | 0 | 80 |
|  | 1 - <2 | M | 13.3 | 19.0 | 0 | 80 |
|  |   | F | 12.8 | 19.0 | 0 | 80 |
|  | 2 - <3 | M | 15.3 | 20.5 | 0 | 80 |
|  |   | F | 15.1 | 20.9 | 0 | 80 |
| **Upper Arm Circumference** | < 1 | M | 12.2 | 18.1 | 0 | 70 |
|  |   | F | 11.7 | 18.0 | 0 | 70 |
|  | 1 - <2 | M | 13.2 | 19.3 | 0 | 70 |
|  |   | F | 13.1 | 19.1 | 0 | 70 |
|  | 2 - <3 | M | 13.9 | 19.4 | 0 | 70 |
|  |   | F | 13.7 | 20.1 | 0 | 70 |
| **Triceps Skinfold (mm)** | < 1 | M | 6 | 16 | 0 | 67 |
|  |   | F | 6 | 16 | 0 | 67 |
|  | 1 - <2 | M | 5 | 15 | 0 | 67 |
|  |   | F | 6 | 16 | 0 | 67 |
|  | 2 - <3 | M | 5 | 14 | 0 | 67 |
|  |   | F | 6 | 16 | 0 | 67 |
| **Subscapular Skinfolds (mm)** | < 1 | M | 5 | 13 | 0 | 67 |
|  |   | F | 5 | 13 | 0 | 67 |
|  | 1 - <2 | M | 4 | 12 | 0 | 67 |
|  |   | F | 4 | 13 | 0 | 67 |
|  | 2 - <3 | M | 4 | 11 | 0 | 67 |
|  |   | F | 4 | 15 | 0 | 67 |
|  |  |  |  |  |  |  |