

National Health and Nutrition Examination Survey

From the Centers for Disease Control and Prevention/National Center for Health Statistics

Laboratory Tests on Blood

Below are brief descriptions of some of the blood tests you may have had as part of the health survey.

Complete Blood Count

Basophils: White blood cells that fight infection.

Blood: The blood is composed of several parts. These include white blood cells, red blood cells, hemoglobin, hematocrit, platelets, and other parts.

Eosinophils: White blood cells that fight infection that can cause allergic reactions.

Hematocrit: The percentage of your blood that is made up of red blood cells.

Hemoglobin: The molecule in red blood cells that carries oxygen to all body tissues.

Lymphocytes: White blood cells that fight viral infection in the body.

Mean Corpuscular Volume (MCV): MCV is the average red blood cell size.

Mean Corpuscular Hemoglobin (MCH): MCH is the average amount of hemoglobin in each red blood cell.

Mean Corpuscular Hemoglobin Concentration (MCHC): MCHC is the average concentration of hemoglobin in a red blood cell.

Monocytes: White blood cells that target infection and cancer.

Neutrophils: White blood cells that target bacterial infection in the body.

Nucleated Red Blood Cells (NRBC): Red blood cells that have a nucleus. These immature cells can be seen in newborns, but are not normal if seen in children and adults and can be found in blood diseases.

Platelets: Small disk-shaped blood cells involved in the process of blood clotting.

Red Blood Count (RBC): The number of red blood cells in your blood. Red blood cells provide oxygen to the different organs of the body. Oxygen allows the organs to function.

White Blood Count (WBC): The number of white blood cells in your blood. White blood cells help fight infection. There are different types of white blood cells.

Other Lab Tests

Alanine Aminotransferase (ALT): ALT is an enzyme involved in breakdown of body chemicals and is mostly found in the liver. ALT levels reflect the health of your liver.

Albumin: The major protein in your blood.

Alkaline Phosphatase: An enzyme found in your blood and comes from liver and bone cells.

Aspartate Aminotransferase (AST): AST is an enzyme involved in the breakdown of body chemicals, and AST levels reflect the health of your liver.

Bicarbonate: A chemical in blood that shows the balance between your breathing and chemical systems.

Bilirubin: A chemical produced when hemoglobin breaks down. Bilirubin is broken down by the liver and then it becomes a waste product. It is used as a measure of the health of your liver.

Blood Urea Nitrogen (BUN): Urea is a waste product that your kidneys filter out of your blood. This measure shows how much urea nitrogen is in your blood. This test helps show how well your kidneys are working.

Cadmium: Cadmium is a natural element found in tiny amounts in air, water, soil, and food. It can also be found in tobacco smoke. High levels can be harmful and is identified as a cancer causing by the National Cancer Institute.

Calcium: A mineral found mostly in the bones. Calcium is needed for muscle and nerve action, bone strength, and blood clotting.

Chloride: One of the major electrolytes found in your body's fluids. Chloride plays an important role in the balance of body fluids.

Cholesterol: A fat substance found in the bloodstream and in all your body's cells. It's normal to have cholesterol. But too much cholesterol in the blood is a major risk for a heart attack and stroke.



Creatine Phosphokinase (CPK): An enzyme found primarily in the heart and skeletal muscles. Injury to these tissues will lead to an increase in CPK levels.

Creatinine: A waste product of normal muscle breakdown filtered by the kidneys out of your blood into your urine. This test shows how well your kidneys are working.

Cytomegalovirus: A virus that infects people of all ages and can cause severe illness in persons with a weakened immune system.

Ferritin: A protein found inside cells that store iron so your body can use it later. This test measures the amount of iron stored in the body.

Folate (Red Blood Cell or RBC): An indicator of long-term folate stores in your body.

Folate (Serum): An indicator of recent folate intake. Folate is a water-soluble vitamin that helps the body form red blood cells and aids in the formation of genetic material within every body cell.

Gamma-glutamyl Transferase (GGT): GGT is an enzyme in your blood. This test looks at the health of your liver.

Glucose: The amount of sugar in your blood. Glucose is an important source of energy for all body organs and functions. High levels are seen in diabetes.

Hemoglobin A1c: Gives information about your average blood sugar level during the past 2–3 months. High levels are seen in diabetes.

High Density Lipoprotein (HDL): HDL cholesterol is known as the “good” cholesterol because it helps remove cholesterol from the body cells and helps prevent fatty buildup in blood vessels.

Iron: An important mineral found in your body’s cells. Iron helps make red blood cells that carry oxygen from our lungs to the rest of the body. It is also part of many proteins and enzymes in your body.

Iron-binding capacity: A blood test to see if you have too much or too little iron in your blood. Iron moves through the blood attached to a protein called transferrin. This test helps your health care provider know how well that protein can carry iron in your blood.

Lactate Dehydrogenase (LDH): LDH is an enzyme found in many of your body’s tissues. These include your heart, liver, kidneys, blood cells, and lungs. High LDH is seen in liver disease.

Lead: Lead is a metal found in the environment. High blood lead levels can be harmful and may cause brain and learning problems in children.

Low Density Lipoprotein (LDL): LDL cholesterol is known as the “bad” cholesterol because it can lead to cholesterol buildup in your body cells and can lead to fatty buildup in blood vessels.

Manganese: Manganese is a metal. Getting small amounts from food or water is good for health. Very high levels come from exposure to contaminated air or water and can cause damage to the brain.

Magnesium: Magnesium regulates diverse biochemical reactions in the body, such as muscle and nerve function, blood glucose control, and blood pressure regulation.

Mercury: The result shows the amount of mercury in your blood. Mercury is a metal found in the environment (food, water, or air), and dental fillings. Exposure to mercury may result from breathing air containing mercury vapor, from skin absorption when handling mercury liquid, by eating contaminated foods (especially fish) or by drinking contaminated liquids. Mercury can cause kidney, brain and gastrointestinal disease.

Phosphorus: A mineral found in your body’s cells (mostly in cells that make up bones and teeth). Phosphorus is needed for muscle and nerve action.

Potassium: A nutrient found in your body’s cells. Potassium helps control muscle and nerve actions.

Protein: The total amount of protein (both albumin and globulin) in the fluid part of your blood. Protein is an important part of all your body’s cells and tissues.

Sodium: One of the major electrolytes found in body fluids. Sodium plays an important role in the balance of body fluids and muscle and nerve actions.

Thyroid Peroxidase (TPO): An enzyme normally found in the thyroid gland that plays an important role in the production of thyroid hormones.

Thyroid Stimulating Hormone (TSH): SH is a hormone secreted from the pituitary gland in the brain that controls how much thyroid hormone is made by the thyroid gland.

Thyroxine (T4): A hormone made by the thyroid gland. Thyroid hormones regulate body temperature and the metabolism of protein, fat, and carbohydrates.

Triiodothyronine (T3): A hormone made by the thyroid gland. Thyroid hormones regulate body temperature and the metabolism of protein, fat, and carbohydrates.

Transferrin and Transferrin Saturation: Transferrin is a protein that helps carry iron in red blood cells. Transferrin saturation shows how much serum iron is attached to the transferrin protein.

Triglycerides: A fat in the blood. High triglyceride levels can lead to heart disease and stroke.

Uric Acid: A chemical breakdown product flushed out of your body by the kidneys. High blood levels are found in people with gout and kidney disease.

Vitamin A: Vitamin A is a fat-soluble micronutrient. It plays an important role in immune function and is important for good eye health.

Vitamin C: Vitamin C is also known as ascorbic acid, and is a powerful water-soluble antioxidant that helps to protect cells from damage and supports immune function.

Vitamin D: Vitamin D is a nutrient that is obtained from the diet and can be made in the skin after exposure to sunlight. It helps to form and maintain strong bones, maintain normal blood levels of calcium absorption; it also helps to maintain a healthy immune system and control cell growth.