

Chemistry Panel

ALT (alanine aminotransferase)

This test looks at levels of the liver enzyme ALT. When all's well with your liver, your score on this test should be within range.

Albumin

A protein made by the liver, albumin levels can be an indicator of liver or kidney problems.

A/G ratio (albumin/globulin ratio) or total protein test

There are two types of protein in your blood — albumin (see above) and globulin. The A/G ratio test compares levels of these proteins with one another.

Alkaline phosphatase

This enzyme is involved in both liver and bone, so elevations may indicate problems with the liver or bone-related disease.

Bilirubin

This provides information about liver and kidney functions, problems in bile ducts, and anemia.

BUN (blood urea nitrogen)

This is another measure of kidney and liver functions. High values may indicate a problem with kidney function. A number of medications and a diet high in protein can also raise BUN levels.

BUN/creatinine ratio

This test shows if kidneys are eliminating waste properly. High levels of creatinine, a by-product of muscle contractions, are excreted through the kidneys and suggest reduced kidney function.

Calcium

Too much calcium in the bloodstream could indicate kidney problems; overly active thyroid or parathyroid glands; certain types of cancer, including lymphoma; problems with the pancreas; or a deficiency of vitamin D.

Chloride

This mineral is often measured as part of an electrolyte panel. A high-salt diet and/or certain medications are often responsible for elevations in chloride. Excess chloride may indicate an overly acidic environment in the body. It also could be a red flag for dehydration, multiple myeloma, kidney disorders, or adrenal gland dysfunction.

Creatinine

The kidneys process this waste product, so elevations could indicate a problem with kidney function.

Glucose (blood sugar)

Blood sugar levels can be affected by food or beverages you have ingested recently, your current stress levels, medications you may be taking, and the time of day.

Phosphorus

Phosphorus plays an important role in bone health and is related to calcium levels. Too much phosphorus could indicate a problem with kidneys or the parathyroid gland.

Potassium

This mineral is essential for relaying nerve impulses, maintaining proper muscle functions, and regulating heartbeats. Diuretics, drugs that are often taken for high blood pressure, can cause low levels of potassium.

Sodium

Another member of the electrolyte family, the mineral sodium helps your body balance water levels and helps with nerve impulses and muscle contractions. Irregularities in sodium levels may indicate dehydration; disorders of the adrenal glands; excessive intake of salt, corticosteroids, or problems with the liver or kidneys

Complete Blood Count (CBC)

WBC (white blood cell) leukocyte count

White blood cells help fight infections, so a high white blood cell count could be helpful for identifying infections. It may also indicate leukemia, which can cause an increase in the number of white blood cells. On the other hand, too few white blood cells could be caused by certain medications or health disorders.

WBC (white blood cell) differential count

This test measures the numbers, shapes, and sizes of various types of white blood cells listed above. The WBC differential count also shows if the numbers of different cells are in proper proportion to each other. Irregularities in this test could signal an infection, inflammation, autoimmune disorders, anemia, or other health concerns.

RBC (red blood cell) erythrocyte count

We have millions of red blood cells in our bodies, and this test measures the number of RBCs in a specific amount of blood.

Hematocrit (Hct)

Useful for diagnosing anemia, this test determines how much of the total blood volume in the body consists of red blood cells.

Hemoglobin (Hgb)

Red blood cells contain hemoglobin, which makes blood bright red. More importantly, hemoglobin delivers oxygen from the lungs to the entire body; then it returns to the lungs with carbon dioxide, which we exhale. Healthy hemoglobin levels vary by gender. Low levels of hemoglobin may indicate anemia.

Mean corpuscular volume (MCV)

This test measures the average volume of red blood cells, or the average amount of space each red blood cell fills. Irregularities could indicate anemia.

Mean corpuscular hemoglobin (MCH)

This test measures the average amount of hemoglobin in the typical red blood cell. Results that are too high could signal anemia, while those too low may indicate a nutritional deficiency.

Mean corpuscular hemoglobin concentration (MCHC)

The MCHC test reports the average concentration of hemoglobin in a specific amount of red blood cells. Here again, we are looking for indications of anemia if the count is low, or possible nutritional deficiencies if it's high.

Red cell distribution width (RDW or RCDW)

With this test, we get an idea of the shape and size of red blood cells. In this case, "width" refers to a measurement of distribution, not the size of the cells. Liver disease, anemia, nutritional deficiencies, and a number of health conditions could cause high or low RDW results.

Platelet count

Platelets are small portions of cells involved in blood clotting. Too many or too few platelets can affect clotting in different ways. The number of platelets may also indicate a health condition.

Mean Platelet Volume (MPV)

This test measures and calculates the average size of platelets. Higher MPVs mean the platelets are larger, which could put an individual at risk for a heart attack or stroke. Lower MPVs indicate smaller platelets, meaning there is risk for a bleeding disorder.