

Understanding Your Blood Chemistry Report

Description

The blood chemistry panel examines a number of different body systems. Abnormalities do not necessarily mean illness, some people with disease may have normal tests. The panel, however, may give clues to be followed. Minor variations from average ranges can be seen in normal people and are not cause for alarm.

Blood Chemistry Components

Glucose

Level of blood sugar. Elevated levels seen in diabetes; may be altered by diet and medication.

BUN (Blood Urea Nitrogen)

A measure of kidney function and relative fluid status (how hydrated a person is).

Creatinine

Another measure of kidney function. Higher levels in those with greater muscle mass.

Sodium

A body salt (electrolyte). High levels may be seen in dehydration.

Potassium

Another body salt. "Water pills" (diuretics) will sometimes lower the value. Out-of-range potassium levels (high or low) can affect the heart's rhythm.

Chloride

Another electrolyte.

Carbon Dioxide

Acts as a buffer to help keep the body's pH (acid/base level) within the proper range.

Calcium

Measurement of calcium ion in the blood. Does not indicate sufficiency of dietary calcium or calcium stores. High levels sometimes seen with over functioning of parathyroid glands.

Total Protein

The combination of albumin and globulin. Abnormal values occur with changes in either of these.

Albumin

A major blood protein manufactured by the liver. Marked changes may be related to liver disease or poor nutrition.

Globulin

Antibodies which fight infection. May also go up during periods of increased inflammation within the body.

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LD (Lactic Dehydrogenase)

An enzyme from several sources including bone, heart muscle, liver and blood cells. Damage to these tissues can increase values.

Alkaline Phosphatase

A material in the blood related to several sources, including liver and bone. Young people may have elevated values due to bone growth.

Bilirubin

Level of a breakdown product of blood cells that is excreted by the liver. Increases can be associated with liver disease or increased breakdown of red blood cells. Slight increases sometimes seen from genetic variations.

Lipid Panel

Total Cholesterol

To screen for risk of developing heart disease. High cholesterol may be from inherited disease, or from a diet high in saturated and trans fats.

Triglycerides

To screen for risk of developing heart disease. Measures amount of triglyceride in blood. Can be elevated if your diet is high in refined carbohydrates or alcohol.

HDL Cholesterol (“good” cholesterol)

A type of lipoprotein that carries cholesterol in the blood. This lipoprotein helps to remove excess cholesterol and carries it to liver for disposal. High levels of HDL can decrease risk of developing plaque (hardening of the arteries). Smoking can decrease HDL levels, while exercise can help increase HDL levels.

LDL Cholesterol (“bad” cholesterol)

A type of lipoprotein that carries cholesterol in the blood. Can deposit excess cholesterol in walls of blood vessels and allow them to harden. High LDL can indicate a diet high in saturated fat, overweight/obesity, and limited physical activity.

AST/ALT

Enzymes found within liver and muscle cells. Damage to these may increase values.

Complete Blood Count (CBC)

Blood is made up of water, proteins, nutrients, and living cells. A CBC tells your doctor about the cells in your blood as it measures 3 basic types of blood cells:

- Red blood cells
- White blood cells
- Platelets

Red Blood Cells

Red blood cells carry oxygen to and carbon dioxide away from the cells in your body.

White Blood Cells

White blood cells fight infection and keep you from getting sick.

Platelets

Platelets help control bleeding by clotting an open wound. When your platelet levels are low, you may bruise or bleed easily.

For More Information:

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