

Understanding Your Lab Values

Serum Creatinine: Creatinine is a waste product in your blood that comes from muscles. It is normally removed from your blood by your kidneys but when kidney function slows down, the creatinine level rises. Your doctor should use the results of your serum creatinine test to calculate your GFR.

Glomerular Filtration Rate (GFR): Your GFR tells how much kidney function you have. It may be estimated from your blood level of creatinine. If your GFR falls below 30 you will need to see a kidney disease specialist (called a nephrologist). Your kidney doctor will speak to you about treatments for kidney failure like dialysis or kidney transplant. A GFR below 15 indicates that you may need to start one of these treatments.

Blood Urea Nitrogen (BUN): Urea nitrogen is a normal waste product in your blood that comes from the breakdown of protein in the foods you eat and from your body's metabolism. It is normally removed from your blood by your kidneys but when kidney function slows down the BUN level rises. BUN can also rise if you eat more protein and it can fall if you eat less protein.

Urine Protein: When your kidneys are damaged, protein leaks into your urine. A simple test can be done to detect protein in your urine. Persistent protein in the urine is an early sign of kidney disease.

Microalbuminuria: This is a sensitive test that can detect even a small amount of protein in your urine.

Urine Creatinine: This test estimates the concentration of your urine and helps to give accurate urine protein results. Protein-to-creatinine ratio is a number that estimates the amount of protein you excrete in your urine in a day and avoids the need to collect a 24-hour sample of your urine.

Serum Albumin: Albumin is a type of body protein that is made from the protein you eat each day. A low level of albumin in your blood may be caused by not getting enough protein or calories from your diet. A low level of albumin may lead to health problems such as difficulty fighting off infections. Ask your dietitian how to get the right amount of protein and calories from your diet.

Hemoglobin: Hemoglobin is the part of the red blood cells that carries oxygen from your lungs to all parts of your body. Your hemoglobin level tells your doctor if you have anemia, which makes you feel tired and have little energy. If you have anemia, you may need treatment with iron supplements and a hormone called erythropoietin (EPO).

Hematocrit: Your hematocrit is a measure of the red blood cells your body is making. A low hematocrit can mean you have anemia and need treatment with iron and EPO.

TSAT and Serum Ferritin: Your TSAT and serum ferritin are measures of iron in your body. Your TSAT should be above 20% and your serum ferritin should be above 100. This will help you build red blood cells.

Parathyroid Hormone (PTH): High levels of parathyroid hormone (PTH) may result from a poor balance of calcium and phosphorus in your body. This can cause bone disease. Ask your doctor if your PTH level is in the right range. Your doctor may order a special prescription form of vitamin D to help lower your PTH. Caution: do not take over-the-counter vitamin D unless ordered by your doctor.

Phosphorus: A high phosphorus level can lead to weak bones and heart disease. Ask your doctor what your phosphorus level should be. If your level is too high, your doctor may ask you to reduce your intake of foods that are high in phosphorus and take a type of medication called a phosphate binder with your meals and snacks.

Potassium: Potassium is a mineral in your blood that helps your heart and muscles work properly. A potassium level that is too high or too low may weaken muscles and change your heartbeat. Whether you need to change the amount of high-potassium foods in your diet depends on your stage of kidney disease. Your dietitian can help you plan your diet to get the right amount of potassium.