**Understanding Renal lab values**

People who develop chronic kidney disease may have some or all of the following tests and measurements. If you have kidney disease ask your doctor which tests you will have and how often they will be done. Speak to your doctor about your results. If your numbers are not in the normal range, ask how to improve them.

**Serum Creatinine:** Creatinine is a waste product in your blood that comes from muscle activity. 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 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 from the foods you eat and from your body 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 chronic kidney disease.

**Urine Creatinine:** This test estimates the concentration of your urine and helps to give an accurate protein result.

**Serum Albumin:** Albumin is a type of body protein 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 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). The goal of anemia treatment is to reach and maintain a hemoglobin level of at least 11 to 12.

**Calcium:** Calcium is a mineral that is important for strong bones.

**Phosphorus:** A high phosphorus level can lead to weak bones.

**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. Ask your doctor what your potassium level should be. Your dietitian can help you plan your diet to get the right amount of potassium.

**Sodium.** Sodium is a chemical found in salt and other foods. Sodium in the diet may raise a person's blood pressure, so people with CKD should limit foods that contain high levels of sodium. High-sodium foods include canned or processed foods ..

**Total Cholesterol:** Cholesterol is a fat-like substance found in your blood. A high cholesterol level may increase your chance of having heart and circulation problems. For many patients, a good level for total cholesterol is below 200.

**HDL Cholesterol:** HDL cholesterol is a type of "good" cholesterol that protects your heart. For many patients, the target level for HDL cholesterol is above 40.

**LDL Cholesterol:** LDL cholesterol is a type of "bad" cholesterol. A high LDL level may increase your chance of having heart and circulation problems. For many patients, the target level for LDL cholesterol is below 100.

**Triglyceride:** Triglyceride is a type of fat found in your blood. A high triglyceride level along with high levels of total and LDL cholesterol may increase your chance of heart and circulation problems.