

My Treatment: Knowing My Lab Numbers for Bone Health







At least once monthly, your dialysis team will draw blood for a series of lab tests. Your dietitian, doctor and other team members will compare the results to those of prior tests to check your progress and decide if any changes are needed for your dialysis treatment. Healthy kidneys remove excess minerals from the blood and produce a natural Vitamin D hormone that protects your bones. Certain lab numbers can help you understand how dialysis is affecting your bone health. These include phosphorus, calcium, and parathyroid hormone (PTH) levels in your blood. Tracking your bone labs will help you stay on track with your dialysis and keep your lab numbers within safe limits. This document reviews the standard goals for the lab values impacting your bone health, what to watch out for, causes, treatments and the more serious problems that can occur if they are not managed well. For more information on calcium, phosphorus and parathyroid hormone check out the [“My Treatment: Renal Bone Disease”](#) page.












P Phosphorous goal = 3.0 to 5.5 mg/dl

Ca Calcium goal = 8.4-10.2 mg/dl






Signs Phosphorus is Too High

-  Changes in lab values, including low calcium and high PTH levels
-  Bone pain and/or fractures
-  Itching that can't be relieved
-  Muscle weakness
-  Red eyes
-  Joint pain and stiffness
-  Skin bumps that are hard or sores

Signs Calcium Is Too High

-  Loss of Appetite
-  Nausea or Vomiting
-  Abdominal cramps
-  Muscle weakness
-  Heart palpitations
-  Constipation
-  Increased thirst
-  Tiredness
-  Confusion

Signs Calcium Is Too Low

-  Muscle weakness and fatigue
 - muscle twitches
 - muscles don't move easily
 - arms and legs feel heavy
 - trouble making a fist
-  Cramping
-  Hair loss
-  Seizures
-  Tingling around the mouth

Treatment With Phosphate Binders

Phosphate binders are medicines taken with food that help to lower phosphorus. The binders must be taken when eating. They work by forming a large phosphorus compound in your digestive tract that cannot be absorbed into the blood stream. The phosphorus goes through all your intestines and is passed out of the body in your stools.

Some examples of phosphate binders are:

- Calcium Carbonate (Tums)
- Calcium Acetate (Phos Lo)
- Ferric Citrate (Auryxia)
- Lanthanum (Fosrenol)
- Sevelamer (Renvela)
- Sucroferric Oxyhydroxide (Velphoro)
- Calcium

PTH PTH goal for dialysis patients = 150 to 600

Parathyroid Hormone (PTH) Levels

The **Parathyroid Hormone (PTH)**—controls the balance of calcium and phosphorus levels in the blood and bones. Healthy kidneys make Vitamin D hormone that works with PTH to keep your bones healthy. With kidney disease, Vitamin D production stops and PTH goes up. Too much PTH can make bones weak and cause hard mineral deposits in organs and the blood.

How Is High PTH Treated?

Your doctor may order phosphate binders, medicine to control parathyroid hormones, and/or Vitamin D treatment that can be given as pills or through IV during dialysis or other medications to help.

These may include:

- Vitamin D
- Calcitriol (Rocaltrol, Calcijex)
- Paricalcitol (Zemplar)
- Doxercalciferol (Hectorol)
- Cinacalcet (Sensipar)
- Etelcalcitide (Parsibiv, an IV medicine given during treatment)

What Can I Do to Keep My Labs Within the Goals?

- Work with your dietitian and follow a kidney friendly diet
- Limit high phosphorus foods
- Limit foods with phosphate additives like lunch meats, processed and fast food
- Take binders when eating your meals
- Come for every dialysis treatment and stay the entire time

My Questions: Ask Your Care Team

- What are my labs right now?
- How can I improve my labs?
- What are other labs I should know about?
- What if I don't like or can't afford my binders or other medicines?