

Focus On

Bone & Calcium/Phosphorus Control

Living Healthy.

Living Well.

Ask yourself these questions:

- Do I want to protect my bones from disease?
- Do I want to avoid itching and sores that won't heal?
- Do I want to prevent bone pain and fractures?
- Do I want to avoid strokes and heart attacks?

If you answered yes to one or more of the above questions,

READ ON!

Calcium and phosphorus are important minerals. They maintain good teeth and bones and keep muscles and nerves working properly. Healthy kidneys help control the amount of calcium and phosphorus in the blood. When the kidneys are not working properly, they cannot remove enough phosphorus from the blood. When the calcium and phosphorus are not balanced and within good levels, bone disease can develop.

High phosphorus levels cause blood calcium levels to drop. When phosphorus levels are high a message is sent to the bones (by a hormone) telling them to release calcium and "bind" the phosphorus, that is, remove the phosphorus from the blood. Bones become brittle due to the loss of the calcium.

If high phosphorus levels remain untreated over a period of time, the following things can occur:

- Itching (arms, legs, back and chest).
- Red eyes.
- Continuous bone pain: especially hips, knees, ankles and heels.
- Bones that break easily.
- Blood vessels become clogged with calcium that should be in our bones. This can cause sores that won't heal, strokes, and heart attacks.

How can You Prevent Bone Disease?

- **Restrict the phosphorus in your diet by choosing foods low in phosphorus.**

All foods contain phosphorus, but some have more than others.

Foods High in Phosphorus Include:

Yogurt	Milk	Sardines	Spinach	Cola drinks
Corn	Nuts	Bran	Biscuits	Cheese
Ice Cream	Oatmeal	Asparagus	Dried Beans	Sweet Potato

Protein foods are also high in phosphorus, but it is important for you to get the protein you need so the phosphorus in these foods are included in your daily allowance.

- **Take phosphate binders regularly with each meal to bind phosphorus from your food.**

Sometimes the doctor will prescribe a medication called a phosphate binder (Tums, Phoslo, Renvela). This medication will stop the phosphorus in your foods from going into your blood. The calcium in the medication, instead of the calcium in your bones, will bind with the phosphorus and keep it from being absorbed. The binder should be taken when you eat, so that it is in your stomach at the same time as your food.

- **Normal Phosphorus & Calcium Levels for People With Kidney Failure.**

Phosphorus level: 3.5 – 5.5 mg/dl

Calcium level: 8.5 – 10.5 mg/dl

Please take a moment to answer these True/False questions with your Primary Nurse.

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| 1. High phosphorus levels in your blood causes high calcium levels. | True | False |
| 2. When bones lose calcium they become brittle. | True | False |
| 3. A phosphorus level of 7.0 shows good phosphorus control. | True | False |
| 4. Phosphate binders should be taken when you eat. | True | False |
| 5. One of the first signs of high phosphorus is feeling itchy. | True | False |
| 6. 7-UP is better than Coca-Cola in phosphorus content. | True | False |