

Iron and Phosphorus with Kidney Disease



THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Kidney disease can cause problems with the growth of new red blood cells, which uses iron. Kidney disease can also cause phosphorus to build up in the body, causing other health problems. Many foods that are high in iron are also high in phosphorus. For people with kidney disease, it is important to get enough iron in your diet while not getting too much phosphorus.

Getting enough iron

Your doctor may suggest that you take a medicine called Epoetin Alpha or Darbepoetin Alpha. This medicine causes your body to make red blood cells. Eating iron-rich foods and taking iron supplements make this medicine work better.

Iron tablets may be taken 3 times a day, in between meals. Iron supplements can cause your stools to be black or tarry-looking. They may also cause constipation or nausea. Tell your doctor if you have these problems.



Here are some tips to help you better tolerate iron supplements:

- Avoid taking iron with a calcium-based phosphate binder, such as Calcium carbonate, Tums, Phos-Ex, Phos-Lo, Cal-Carb, or Calcium acetate.
- Calcium binds with iron and prevents it from being absorbed by the body. If a calcium binder is taken with meals, wait at least one hour after a meal before taking iron.
- Take the iron supplement with a snack, such as unsalted crackers or toast. Eat with foods high in Vitamin C to help increase the absorption of iron in your body. Examples include:
 - ½ cup vitamin C fortified cranberry or orange juice
 - ½ cup grapefruit juice or ½ grapefruit
 - ½ cup mandarin oranges
 - ½ cup strawberries
- Choose fruits or fluids within your meal plan and follow your fluid limits.
- Avoid taking iron with coffee or tea, milk, spinach, fiber containing foods, or eggs. Wait at least one hour before taking iron. These foods keep iron from absorbing in your body.
- Iron can cause constipation, so eat more raw fruits and vegetables within your meal plan. If you need to limit potassium and phosphorus.
- Avoid all-bran cereals, whole grain products, and bran muffins high in potassium and phosphorus.
- Ask your doctor for a laxative or stool softener to help prevent constipation.

Phosphorus limits

My phosphorus limit is: _____ milligrams a day.

How can I control my phosphorus levels?

You can control your phosphorus levels by limiting high phosphorus foods in your diet. You can also take medicine that binds with phosphorus to prevent it from being absorbed into the blood. Examples include calcium carbonate (Oscal, Tums), Alucaps, and Carafate. These medicines work best if taken with meals. Calcium supplements and medicines that bind with phosphorus can interfere with each other if taken at the same time.

How much phosphorus do I need?

As a general guideline, hemodialysis patients need to limit phosphorus to 800 milligrams (mg) a day. Continuous ambulatory peritoneal dialysis (CAPD) patients need to limit phosphorus to 1,200 mg a day.

What is the phosphorous content of different foods?

Phosphorus is found in most high protein foods. Common sources are milk, dairy products, cola beverages, meats, whole grains, chocolate, legumes, dried beans, nuts, and seeds. Although meat is high in phosphorus, it is also a good source of protein, iron, and other nutrients you need. Eat moderate portions of meat to help control the amount of phosphorus in your diet.

Keeping track

Keep a running total of how much phosphorus you are getting in your day. Keep a note pad and add them up after each time you eat.

Food choices

Good sources of iron that are lower in phosphorus (also high in potassium):

- Leafy green vegetables
- Iron fortified cereals and breads – avoid whole grains, which are high in phosphorus

Eat in moderation:

- Milk
- Chocolate
- Dairy products
- Legumes
- Nuts and seeds
- Meats
- Pizza
- Bran cereals
- Muffins

Avoid foods high in phosphorus, including:

- Liver
- Sunflower seeds
- Wheat germ
- Pumpkin seeds
- Whole grains

Talk to your doctor or health care team if you have any questions about your care.

For more health information, contact the Library for Health Information at **614-293-3707** or e-mail **health-info@osu.edu**.