



A TO Z HEALTH GUIDE

Phosphorus and Your CKD Diet

What is phosphorus?

Phosphorus is a mineral found in your bones. Along with calcium, phosphorus is needed to build strong healthy bones, as well as, keeping other parts of your body healthy.

Why is phosphorus important to you?

Normal working kidneys can remove extra phosphorus in your blood. When you have chronic kidney disease (CKD), your kidneys cannot remove phosphorus very well. High phosphorus levels can cause damage to your body. Extra phosphorus causes body changes that pull calcium out of your bones, making them weak. High phosphorus and calcium levels also lead to dangerous calcium deposits in blood vessels, lungs, eyes, and heart. Over time this can lead to increased risk of heart attack, stroke or death. Phosphorus and calcium control are very important for your overall health.

What is a safe blood level of phosphorus?

A normal phosphorus level is 2.5 to 4.5 mg/dL. Ask your kidney doctor or dietitian what your last phosphorus level was and write it down to help keep track of it.

Will dialysis help with phosphorus control?

Yes. Dialysis can remove some phosphorus from your blood. It is important for you to understand how to limit build-up of phosphorus between your dialysis treatments.

How can I control my phosphorus level?

You can keep your phosphorus level normal by understanding your diet and medications for phosphorus control. Phosphorus can be found in foods (organic phosphorus) and is naturally found in protein-rich foods such as meats, poultry, fish, nuts, beans and dairy products. Phosphorus found in animal foods is absorbed more easily than phosphorus found in plant foods.

Phosphorus that has been added to food in the form of an additive or preservative (inorganic phosphorus) is found in foods such as fast foods, ready to eat foods, canned and bottled drinks, enhanced meats, and most processed foods. Phosphorus from food additives is completely absorbed. Avoiding phosphorus additives can lower your intake

of phosphorus. Phosphorus additives are found on the list of ingredients on the nutrition facts label. Look for "PHOS" to find phosphorus additives in the food.

Phosphorus additives found in foods include:

- Dicalcium phosphate
- Disodium phosphate
- Monosodium phosphate
- Phosphoric acid
- Sodium hexameta-phosphate
- Trisodium phosphate
- Sodium tripolyphosphate
- Tetrasodium pyrophosphate

Your kidney dietitian and doctor will help you with this. Below is a list of foods high in phosphorous and lower phosphorus alternatives to enjoy:

HIGH PHOSPHORUS FOOD TO LIMIT OR AVOID

Beverages	beer/ale	chocolate drinks
	cocoa	dark colas
	drinks made with milk canned iced teas	pepper type soda (Dr Pepper)
	bottled beverages with phosphate additives Lower phosphorus alternatives to enjoy: water, coffee, tea, rice milk (unenriched), apple juice, cranberry juice, grape juice, lemonade, ginger ale, lemon lime soda, orange soda, root beer	
Dairy Products	cheese	
	custard	ice cream
	milk	pudding
	cream soups	yogurt (Greek type acceptable)
	Lower phosphorus alternatives to enjoy: rice milk, almond milk, cottage cheese, vegan cheese, sherbet, popsicles	

Protein	oysters	sardines
	beef liver	chicken liver
	fish roe	organ meats
	Lower phosphorus alternatives to enjoy: chicken, turkey, fish, beef, veal, eggs, lamb, pork	
Other foods	chocolate candy caramels oat bran muffin Lower phosphorus alternatives to enjoy: apples, berries, grapes, carrot sticks, cucumber, rice cakes, unsalted pretzels, unsalted popcorn, unsalted crackers, pound cake, sugar cookies	most processed/prepared foods/deli meats/hot dogs/bacon/sausage pizza brewer's yeast chocolate caramel candies

Looking for nutrition guidance? [Contact a CKD dietitian in your area.](#)

What medications are for phosphorus control?

Your kidney doctor may order a medicine called a phosphate binder for you to take with meals and snacks. This medicine will help control the amount of phosphorus your body absorbs from the foods you eat.

There are many different kinds of phosphate binders. Pills, chewable tablets, powders, and liquids are available. Some types also contain calcium, while others do not. You should only take the phosphate binder that is ordered by your doctor or dietitian.

Read more about [Phosphorus and Your CKD Diet.](#)

[Phosphorus Infographic](#)

Acknowledgment: Reviewed by the Council on Renal Nutrition (04/2019)

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