

Low Phosphorus Diet Patient Handout

Phosphorus is a mineral that works with calcium to keep your bones and teeth strong. However, some cancer treatments can cause high phosphorus levels in the blood (a condition called **hyperphosphatemia**). In some cases, high phosphorus levels may require your treatment dose to be adjusted or held.

Why Is High Phosphorus a Problem?

Too much phosphorus in your blood can lead to crystals forming with calcium in your skin, blood vessels, heart, lungs, brain, and eyes. This can lead to itchiness, joint pain, hardening of arteries, muscle, and organ damage. To help manage high phosphorus levels caused by your medication, your provider team may recommend a **low phosphorus diet**.

How Much Phosphorus Should I Limit My Diet to Each Day?

How much phosphorus you can eat every day depends on your treatment and your blood phosphorus levels. Your care team will support you during your treatment and help you know how much phosphorus to limit in your diet. It is important to get enough food to maintain your strength and weight during treatment. If limiting phosphorus in your diet is making this difficult, let your doctor know right away and ask for a referral to a dietitian.

How to Eat Less Phosphorus

1. **Read food labels and avoid** ingredients with “phos”
2. **Choose fresh, unprocessed foods** when possible
3. **Make your meals at home** most of the time

Hidden Sources of Phosphorus

Phosphorus additives are found in many processed foods. Unlike phosphorus found naturally in foods, phosphorus additives are **almost completely absorbed** by the body. Aim to **limit** foods naturally high in phosphorus and **avoid** foods with phosphorus additives. Look for ingredients with “phos” in the name, e.g., phosphoric acid, disodium phosphate, hexametaphosphate, tri-calcium phosphate.

Limit or Avoid These High-Phosphorus Foods:

- **Processed foods and drinks with phosphorus additives** (including fast food items, including pancake and waffle mixes, instant puddings and sauces)
- **Processed meats** (chicken nuggets, bologna, deli meats, ham, hot dogs)
- **Seasoned meats** (labeled “enhanced,” “fresh,” or “frozen” and injected with sodium phosphate)
- **Soda and soft drinks** (regular and diet colas, some root beers, iced teas)
- **Processed cheeses** (cheese slices, Velveeta, Cheese Whiz)
- **Evaporated or condensed milk, non-dairy creamers** (Coffee Rich™, International Delight™)
- **Chocolate** (bars, milk, hot chocolate, candies, syrup)
- **Organ meats** (liver, kidney, pancreas, thymus, brain)
- **Fish with edible bones** (sardines, canned salmon)
- **Nuts and seeds**, nut butters
- **High-fiber cereals** (All-Bran™, Red River™, granola), cold cereals, instant hot cereals)
- **Bran muffins, dark rye or pumpernickel breads**
- **Refrigerated biscuits, bread and cookie dough**

HIGH Phosphorus Food Choice	LOWER Phosphorus Food Choice	HIGH Phosphorus Food Choice	LOWER Phosphorus Food Choice
Processed meat 	Fresh meat 	Processed cheese 	Cream or hard cheese 
Canned salmon or sardines (with bones) 	Canned tuna 	Ice cream 	Popsicle 
Nuts and seeds 	Pretzels, air-popped popcorn 	Dairy products, non-dairy creamer 	Almond milk, Rice Dream Original™ 
Peanut/nut butter 	Jam, jelly, honey 	Cola, root beer, ice tea 	Clear soda, sparkling water, salt-free club soda 
Bran cereal 	Corn, rice, wheat cereal 	Hot chocolate 	Herbal tea 
Muffin 	Bagel, croissant or donut 	Chocolate bar 	Hard candy, gummy candy 
Dark rye, pumpernickel bread 	Whole wheat, light rye or white bread 	Pizza, alfredo pasta 	Pasta with garlic, basil and olive oil 

Foods to Keep Your Phosphorus Levels Low

Grain Foods	
Choose	
<ul style="list-style-type: none"> Barley Bread: white, French, Italian, cracked wheat, light rye, sourdough, or 60% whole wheat Cereals, cold: Corn Bran®, Cornflakes®, Puffed Rice®, Puffed Wheat®, Rice Krispies®, Special K® Crackers: soda crackers, Melba, Wheat Thins®, unsalted Cream of Wheat® (instant), corn grits Digestive & arrowroot biscuits, graham wafers 	<ul style="list-style-type: none"> Flour: white, rice, light rye Grains: bulger, cracked wheat, quinoa, buckwheat Muffins: homemade plain, fruit, or oatmeal Pasta: white or couscous Pita bread, wraps, chapati and roti, white, 60% whole wheat Unsalted popcorn, pretzels or tortilla chips Tortillas, corn Rice or rice noodles, white
Limit	
<ul style="list-style-type: none"> Breads, whole grain (100% whole wheat, multigrain, dark rye) Cereals, cold: whole grain cereals such as All Bran®, All Bran Budds®, Bran Flakes®, Fiber One®, Mini Wheats®, Total®, Oat Square®, Oatmeal Crisp®, Shreddies®, Shredded Wheat®, Total® Cereal, hot: oat bran 	<ul style="list-style-type: none"> Flour: whole wheat, dark rye, bran, wheat germ Homemade pancakes, waffles, biscuits Muffins, bran and oat bran Oats, rolled Pasta, whole wheat Pita bread, wraps, chapati, whole grain Rice, brown or wild Roti, chickpea or whole grain
Avoid	
<ul style="list-style-type: none"> Baking mixes (biscuits, pancakes, waffles, and muffins), and frozen baked products (pancakes and waffles) Cereals, cold: Alpha Bits®, Cheerios®, Crispix®, Life®, Vector Meal Replacement® 	<ul style="list-style-type: none"> Cereals, hot: Cream of Wheat®, Red River®, Sunny Boy® Granola and cereal made with nuts, seeds, or dried fruit Macaroni and cheese mixes
Protein Foods	
Choose	
<ul style="list-style-type: none"> Beef, veal, pork, chicken, turkey, duck, eggs Fish, some shellfish (blue crab, lobster, shrimp) 	<ul style="list-style-type: none"> Lamb or mutton Canned tuna and salmon (bones removed) Wild meat (moose, caribou, deer, elk)
Limit	
<ul style="list-style-type: none"> Beans or lentils Nuts/seeds or nut/seed butter 	<ul style="list-style-type: none"> Tofu
Avoid	
<ul style="list-style-type: none"> Fish, canned with bones Fresh meat that had phosphate additives or sodium added or injected (enhanced meats) Organ meats like liver, heart, and kidney Oysters, clams, sardines Seeds (pumpkin, sunflowers) 	<ul style="list-style-type: none"> Processed meats: bacon, sausage, ham, hot dogs, salami, pepperoni, bologna, corned beef, canned meat Restructured meat: chicken fingers, nuggets, burgers, turkey roll, vegetarian meat substitutes

Adapted from BC Renal "Phosphorus and Your Kidney Handout", AHS "Phosphorus and Your Kidney Diet Handout".
 Developed by Provincial Systemic Therapy Process Team with endorsement from BC Cancer Dietician Professional Practice

Milk, Dairy, and Soy Foods	
Choose (Limit to 2 servings a day)	
<ul style="list-style-type: none"> Cottage cheese, no added salt, ½ cup (125mL) Homemade custard or pudding, ½ cup (125mL) Ice cream, ½ cup (125mL) 	<ul style="list-style-type: none"> Milk or cream: skim, 1%, 2%, whole, prepared powdered milk, cream, ½ cup (125mL) Paneer, 1 oz (30g) Soy beverage, ½ cup (125mL) Yogurt, ½ cup (125mL)
Limit	
<ul style="list-style-type: none"> Hard cheese, 1oz (30 grams) 	
Avoid	
<ul style="list-style-type: none"> Cheese slices, processed Cheese spreads, processed Non-dairy coffee whiteners, liquid, or powder Chocolate flavored milk 	<ul style="list-style-type: none"> Condensed or evaporated milk Malted drinks: Ovaltine®, Bournvita®, Horlicks® Pudding, instant or store-bought
Other Foods	
Choose	
<ul style="list-style-type: none"> Artificial sweeteners Cream cheese Jam, jelly Rice beverage, not fortified Sherbet 	<ul style="list-style-type: none"> Soft drinks, non-cola: 7Up®, ginger ale, Sprite®, lemonade Sugar, white or brown, honey Sweets: hard candies, marshmallows, jelly beans
Limit	
<ul style="list-style-type: none"> Alcohol Caramels and chocolates 	<ul style="list-style-type: none"> Fruit, dried: figs, raisins, dates, and coconut Sour cream or whipping cream
Avoid	
<ul style="list-style-type: none"> Beer Cola and diet cola drinks Gelatin dessert powders (Jell-O) 	<ul style="list-style-type: none"> Hot chocolate mix, cocoa Pizza with processed meats Flavored water or drinks with flavoring crystals

Please note that the foods listed above are general guidelines only. You may need to modify them if you are experiencing other treatment side effects, such as gastrointestinal symptoms.

Additional Resources

- If you would like to look up the phosphorus content of a certain food, you may search for the food here: [Canadian Nutrition Files \(CNF\) – Search by Nutrient: Minerals, Phosphorus, P.](#)
- The following resource is intended for individuals with kidney concerns, and therefore, the website content may not be relevant to your situation. However, the [Meal Plan feature](#) may be a useful tool for estimating your overall daily phosphorus intake.