

Diet for Hemodialysis

BC Provincial Renal Agency

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When you start dialysis, the foods you eat may need changing. This will depend on your appetite, your usual foods, and your blood work. This hand out provides guidelines to help you make healthy food choices. Your dietitian will work with you to make the guidelines fit with your daily food intake.

Why do I need to follow a special diet?

1. Eating well makes you feel better and keeps you healthy.
2. Your blood is cleaned when you are on dialysis. Between dialysis treatments, waste and fluid builds up in your body. Too much waste and fluid is dangerous.

What will my diet look like?

Depending on your blood test results, you may need to limit the following:

- Phosphorus
- Potassium
- Sodium
- Fluid

Your dietitian will discuss this with you.

PHOSPHORUS

What is phosphorus?

Phosphorus is a mineral. It works with calcium to keep your bones and teeth strong.

Why do I need to limit phosphorus?

High phosphorus may cause:

- Itchy skin
- Weak and easily broken bones
- Bone pain or painful lumps in your joints
- Hardening of your blood vessels

How can I control my phosphorus?

- Diet
- Phosphorus binders
- Dialysis

What foods are high in phosphorus?

Most foods have phosphorus but some foods have more than others.

- 1) **Naturally occurring phosphorus:** Dairy products, dried beans, peanut butter, nuts and seeds and high fiber grains.
- 2) **Added sources of phosphorus:** cola beverages, crystal type drinks, baking mixes, non-dairy creamers, processed and marinated meats, and others.

Learn to read food labels. Phosphorus additives can be identified by the term “PHOSPH” as part of the word. Phosphorus additives are **not** listed in the NUTRITION FACTS table. They are only listed in the INGREDIENTS. Manufacturers can change the ingredients at any time, so it is important to check labels frequently.

How can I eat less phosphorus?

Limit to _____ serving(s) high phosphorus food per day.

Here is a guide for high phosphorus foods and serving sizes:

High Phosphorus Foods	Serving Size
Cow's milk	½ cup
Soy milk	¾ cup
Chocolate milk / hot chocolate	½ cup
Yogurt (plain or fruit)	½ cup
Cheese (cheddar, mozzarella)	1 ounce (1 inch cube)
Cottage cheese	1/3 cup
Ice cream	¾ cup
Pudding or custard	½ cup
Pizza (cheese or vegetarian)	½ of 1 medium slice
Dried beans (kidney, white, garbanzo)	½ cup
Nuts	3 tbsp
Peanut butter and other nut butters	2 tbsp
Sunflower seeds	2 tbsp
Pumpkin seeds	1 tbsp
Bran Flakes	2/3 cup
All Bran® cereal	¼ cup
Bran muffin	1 medium
Commercial waffles and pancakes	1
Sardines	2
Liver and organ meats	1 ounce

These high phosphorus foods contain between 100 and 140 mg of phosphorus per serving.

Tips To Lower The Phosphorus In Your Diet

<i>Instead of these</i> <u>High Phosphorus Foods:</u>	<i>Choose these</i> <u>Low Phosphorus Foods:</u>
Milk or soy milk	Rice milk such as Rice Dream™ (original or vanilla, non-enriched)
Yogurt or ice cream	Sherbet, sorbet or *Jello®, Rice Dream™ Non-Dairy Dessert
Instant pudding or custard	Homemade pudding or custard made with Rice Dream™ (original or vanilla, non-enriched)
Hard cheeses (cheddar, mozzarella) or processed cheese (Cheez Whiz™, Velveeta™) or light cream cheese	Soft cheeses: brie, camembert, goat (soft), ricotta, neufchatel, regular cream cheese
Processed and marinated meats (hot dogs, sandwich meat, frozen chicken breast)	Fresh chicken breasts, egg, canned fish, freshly cooked meat and poultry
Macaroni and cheese	Noodles with margarine, garlic and basil
Peanut butter or nut butters	Honey, jelly or jam
Nuts and seeds	Unsalted popcorn, unsalted pretzels
Multigrain, dark rye, pumpernickel breads	White, Italian, French, 60-100% whole wheat, or light rye breads
Bran cereal	Corn Flakes®, Corn Bran®, Rice Krispies® Special K®, puffed wheat or rice, Rice Chex®
Chocolate, chocolate bars, caramels	Jelly beans, gum drops, *marshmallows or clear hard candies
Coke™, Pepsi™ and other drinks containing phosphorus additives	Ginger ale, lemon-lime, grape, or orange sodas, *root beer

- *Check food labels for ingredients containing PHOSPH, as some brands may contain phosphorus additives.
- If you have diabetes, choose “diet” alternatives (example, diet jam, diet soda).

What are phosphorus binders?

Phosphorus binders are medications that help lower phosphorus in your body. The phosphorus binder works in the stomach by attaching to the phosphorus from food, so it does not get absorbed into the blood.

Types of Phosphorus binders:

- calcium carbonate (TUMS®/Apo-Cal®)
- calcium acetate
- sevelamer hydrochloride (Renagel®)
- lanthanum carbonate (Fosrenol®)

Phosphorus binders should be taken just before your first bite of food.

Carry your phosphorus binders with you and remember to take them when you eat out.



People with kidney disease must not eat Starfruit.

Starfruit contains a toxin that causes confusion, seizures, hiccups, insomnia and even death.

POTASSIUM

What is potassium?

Potassium is a mineral found in most foods. In your body, it helps your nerves, muscles and heart to work properly.

Why do I need to limit potassium?

High potassium may cause:

- Numbness or tingling in hands and feet
- Weak muscles
- Irregular heartbeat
- Your heart to stop

Some people have no symptoms when their potassium is high.

Most people on dialysis need to limit high potassium foods to keep their level in a safe range.

What foods are high in potassium?

Most foods contain potassium but some foods have more than others.

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Limit these high potassium foods:

Fruits	Vegetables	Others
Bananas	Potatoes	Dried beans and legumes (Split peas, baked beans, lentils, kidney beans, chick peas, etc.)
Oranges or orange juice	Sweet potatoes / yams	Nuts, peanut butter or seeds
Cantaloupe or honeydew	Dark leafy greens: spinach, Swiss chard, beet greens	Dairy products: milk, yogurt, milk pudding and ice cream, cottage cheese
Kiwi fruit	Tomato sauce / paste	Molasses
Pomegranate	Tomato juice / V-8®	Bran
Avocado	Tomato, fresh (more than ½ medium)	Potato chips
Dried fruit: dates, prunes, raisins		French fries
		Chocolate
		Coffee (more than 2 cups/day)

Watch your serving sizes. A large portion of a low potassium food can turn into a high potassium food. For a more detailed potassium list, please ask your Dietitian.

SODIUM

What is sodium?

Sodium is a mineral found in most foods and in all types of salt. Sodium is important for water balance in the body.

Why Do I Need to Limit Sodium?

With kidney disease your body may not balance sodium and water very well. If you eat too much sodium you may have:

- High blood pressure
- Thirst
- Puffy hands, face and feet
- Fluid in the lungs, making it hard to breathe
- Extra work for your heart
- Cramping during dialysis

How Can I Eat Less Sodium?

- Do not add salt to your food.
- Do not add salt in your cooking.
- Use fresh or frozen (without salt) meats, poultry, fish, seafood, eggs, vegetables and fruits. These are naturally low in sodium.
- Try making your meals with fresh ingredients.
- Avoid using high sodium packaged or processed foods such as:
 - Ham, bacon, salami, and other deli meats
 - Pickles, olives, relish
 - Teriyaki, fish or soya sauces
 - Canned or packaged soups
 - Seasoned packaged or instant rice/noodles
 - Boullion cubes (OXO®, Bovril®), Marmite®, Veg-mite®
 - Salted snack foods (chips, pretzels, nuts, crackers)

- Read food labels. Avoid foods with sodium or salt listed as one of the first five ingredients.
- Cook with herbs and spices instead of salt.
- Cook at home more often. Restaurant meals are higher in sodium than home cooked meals.

Can I use Salt Substitutes?

No. Salt substitutes such as Co-salt™, Nu-salt™, No-salt® or Half-Salt™ are very high in potassium and can be dangerous for people with kidney disease.

Be aware that many foods that are labeled “low sodium” may contain one of these salt substitutes. Check labels for these ingredients, such as potassium chloride, if buying low sodium products.

How Do I Make My Foods Tasty Without Adding Salt?

Giving up salt does not mean giving up flavour. Learn to season your food with:

- Herbs and spices
- Garlic and onions
- Unsalted seasoning mixes such as Mrs. Dash® and McCormick® salt-free
- Dried mustard
- Vinegar
- Lemon and lime juice

There are many recipes and cookbooks for low sodium foods. Ask your dietitian.

FLUID

Why do I need to limit my fluid intake?

If you make very little or no urine, the fluid you drink stays in your body.

Too much fluid can cause:

- Quick weight gain (this is fluid weight, not muscle or fat).
- High blood pressure
- Fluid in the lungs, making it hard to breathe
- Puffy hands, face and feet
- Extra work for your heart which can lead to heart failure
- Cramping on dialysis

Limiting how much fluid you drink is an important part of your dialysis plan.

How much fluid can I drink?

Up to a total of _____ cups of fluid each day.

(1 cup = 8 fluid ounces = 250 mL)

The amount you can drink will depend on how much urine you make.

What counts as fluid?

If the food can melt or turn to liquid at room temperature, you need to count it as part of your daily fluid intake.

Fluids to Count:

- Water
- Ice
- Tea/coffee
- Milk
- Juice

Fluids to Count, Continued:

- Soups
- Soda pop
- Alcoholic beverages
- Ice-cream/sherbet/sorbet
- Jell-O®
- Popsicle /frozen drinks
- Nutritional supplements such as Ensure®, Glucerna® and Nepro®

How much fluid weight gain is safe?

You should gain less than _____kg between dialysis treatments.

Helpful Tips for Fluid Control

- Choose lower-sodium foods to reduce thirst
- Maintain good blood sugar control as high blood sugars will cause thirst.
- Choose smaller cups. Your usual cup may hold more than you think.
- Choose cold fluids as they are more thirst quenching.
- Sip fluids slowly so you do not drink as much.
- Drink only when you are thirsty, not out of habit or to be sociable.
- Instead of water, take your pills with your meals or with soft food like applesauce.
- Suck on ice chips. One cup of ice is the same as 2/3 cup of water.
- Suck on lemon or lime slices or hard, sour candy.
- Freeze allowed juices / beverages in an ice cube tray. Since frozen beverages last longer, you may drink less.
- Suck on allowed frozen fruit choices such as strawberries, blueberries or grapes.
- Brush your teeth often.
- Rinse your mouth with ice-cold water but do not swallow.
- Avoid mouthwash because it may make your mouth drier because of the alcohol content.
- Check with your pharmacist about mouth moisturizing gels/gums/sprays
- Keep a spray bottle of plain or flavoured water to mist your dry mouth from time to time.
- Keep busy. It may keep your mind off your desire to drink.

PROTEIN

Do I need more protein?

During dialysis you lose some protein. You may need to replace this by eating more protein. Your dietitian will discuss your needs with you.

What foods are high in protein?

Fish, chicken, turkey, beef, pork and eggs are good sources of protein. Some higher phosphorus foods such as milk, yogurt, cheese, dried beans, legumes and nuts are also high in protein. These foods can usually be eaten in limited amounts (see phosphorus information).

If you are vegetarian, your Dietitian will advise you on good protein sources and portion sizes.

How much protein should I eat?

You need _____ ounces of protein foods each day.

Here is a guide for protein foods sizes:

Protein foods	Ounces of protein
Whole egg	1
2 egg whites	1
¼ cup liquid egg substitute	1
4 medium cooked shrimp	1
¼ cup canned salmon or tuna	1
1 cooked pork chop	3-5
1 cooked hamburger patty	3-5
1 cooked chicken leg (drum + thigh)	3-5
1 chicken breast	3-5
¾ cup tofu (firm)	3

*3 oz. of cooked protein or meat is the size of a deck of cards.
Protein shrinks when cooked. 4 oz. raw equals 3 oz. cooked.

PUTTING IT ALL TOGETHER

For each meal include something from these food groups:

1. **Protein foods** such as fish, poultry, meat and egg or egg substitute
2. **Starchy foods** such as bread, cereal, rice, noodles
3. **Fruits or vegetables**

Limit sodium, fluids, high-potassium and high-phosphorus foods as advised by your dietitian.

Each hemodialysis patient's diet will be different depending on his or her blood test results. Your dietitian will review your results and make suggestions if needed. Your diet may change over time.

OTHER COMMONLY ASKED QUESTIONS:

Should I take a vitamin supplement?

Renavite is a vitamin B complex with vitamin C which will be provided for you. Over the counter vitamin and mineral supplements are not recommended unless advised by your doctor or dietitian. Herbal remedies can also be harmful, so please check with your dietitian or renal pharmacist prior to taking any herbal products.

Why am I not hungry?

There are many reasons why you may not be hungry. If you are losing weight, talk to your dietitian about ways to increase your calories.

Nutritional supplements may be appropriate for some people.

You may find that you tolerate small frequent meals and snacks better than a few larger meals.

Can I drink alcohol?

You will need to check with your doctor first.

If you drink alcohol, keep in mind that it counts as part of your total fluid for the day. Wine is high in potassium and beer is high in phosphorus. If you use mixes for hard alcohol, avoid those high in potassium and phosphorus.

Why am I constipated?

Constipation is a common problem due to phosphorus binders, fluid restrictions, and less fibre in your diet. Take your stool softeners as prescribed. Talk to your dietitian about the best way to increase fibre in your diet.

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Tips from your dietitian:

Contact your dietitian if you have any questions.

Dietitian: _____

Phone: _____