

# Diet for Hemodialysis

- ▶ **When you start dialysis, you may need to change the foods you eat. This handout provides guidelines to help you make healthy food choices.**

## Why do I need a special diet?

Your blood is cleaned when you are on dialysis. Between dialysis treatments, waste and fluid build up in your body and can make you feel unwell. Adjusting your diet may help you feel better.

## What will my diet look like?

Depending on your blood test results, you may need to learn more about:

- ▶ [Protein](#)
- ▶ [Phosphorus](#)
- ▶ [Sodium](#)
- ▶ [Fluid](#)
- ▶ [Potassium](#)



**Ask your dietitian to help you understand what changes you need to make.**

# Protein

## Do I need more protein?

During dialysis you lose some protein. If you don't eat enough protein, you may lose muscle, feel weak, and recover slowly from illness.



Eat protein-rich foods such as eggs, fresh chicken/beef/pork/game, fresh or canned fish, shrimp, tofu, beans, and lentils. Avoid processed meats such as deli meats, sausages, bacon, canned meat, hot dogs,

fish sticks, chicken nuggets, and smoked or dried meat or fish.

If you are vegetarian, ask your dietitian about good protein sources.

## How much protein should I eat?

You need \_\_\_\_\_ portions or ounces of protein foods each day.

### Examples of one portion or ounce of high-quality protein include:



1 oz / 30 g  
cooked fish



1/4 cup  
canned fish



1 egg



1/4 cup  
egg white



1 oz / 30 g  
cooked chicken



1/4 cup firm tofu  
1/2 cup soft tofu



1 oz / 30 g  
cooked beef



1 oz / 30 g  
cooked lamb



1 oz / 30 g  
cooked pork



1 oz / 30 g cooked  
game meat



1 oz / 30 g / 2 cooked  
jumbo shrimps



1/2 cup cooked  
beans/lentils

*\* 1 ounce of cooked meat is about the same size as three dice or a thumb*

**The following foods are vegetarian protein sources that may be higher in phosphorus and potassium. Ask your dietitian about how to include these foods in your diet.**



2 tbsp  
nut butter



1/4 cup  
unsalted nuts



1 cup milk /  
soy milk



1 cup yogurt /  
1/3 cup Greek yogurt



1/4 cup  
cottage cheese



1 oz / 1"  
cube cheese

If you are unable to eat enough protein, your dietitian may recommend nutrition supplement drinks or protein powder.

**Your daily protein portions could be divided like this:**

\_\_\_\_\_ portion(s) at breakfast (eg. \_\_\_\_\_)

\_\_\_\_\_ portion(s) at lunch (eg. \_\_\_\_\_)

\_\_\_\_\_ portion(s) at dinner (eg. \_\_\_\_\_)

\_\_\_\_\_ portion(s) at snack(s) (eg. \_\_\_\_\_)

# Phosphorus

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## What is phosphorus?



Phosphorus is a mineral. It works with calcium to keep your bones and teeth strong. Dialysis removes some phosphorus from your blood.

High phosphorus levels in your blood may cause:

- Hardening of your blood vessels
- Weak and easily broken bones
- Bone, joint, and muscle pain
- Itch

## How can I control my phosphorus level?

1. **Dialysis** – Complete all your dialysis treatments.
2. **Diet** – Eat a diet lower in phosphorus.
3. **Phosphorus binders** – If prescribed, take with meals.

## What foods are high in phosphorus?

Some foods naturally contain phosphorus and some foods have phosphorus added to them. The phosphorus from additives is easier for our body to absorb so it is best to avoid foods that contain them.

**Phosphorus is added to some foods and beverages during processing.** Be sure to read food ingredient labels.

Eg. Deli ham

**Ingredients:** Pork, water, vinegar, salt, corn syrup solids, **sodium phosphate**, sugar, sodium erythorbate, sodium nitrite, spice extract, smoke.

Phosphorus additives are not listed in the nutrition facts table. They are only listed in the ingredients list. Manufacturers can change the ingredients at any time, so it is important to check labels frequently.

## Examples of foods with phosphorus

**additives include:** cola beverages, deli meats, foods made with baking powders, powdered drink mix, non-dairy creamers, fast foods, ready-to-eat foods, canned foods, frozen seafood, frozen seasoned chicken breast, processed and marinated meats and cheeses, and vegetarian meat substitutes.

## Cooking from fresh is the best way to avoid unwanted phosphorus additives.



**There is naturally occurring phosphorus in all protein foods.**

Dairy products such as milk, cheese, yogurt, ice cream, and pudding are especially high phosphorus foods and may need to be limited.

**If you have high blood phosphorus levels, your dietitian can help you choose lower phosphorus foods, while meeting your protein needs.**

### **What are phosphorus binders?**

Phosphorus-binding medications help manage phosphorus levels in your body. Types of Phosphorus binders:

- Calcium carbonate (TUMS® or Apo Cal)
- Calcium acetate
- Sevelamer carbonate (Renvela®)
- Lanthanum carbonate (Fosrenol®)

**Phosphorus binders should be taken with your first bites of food.** If you forget, take them within 30 minutes of eating.

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

# Sodium

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## What is sodium?



Sodium is a mineral found in most foods. Sodium is important for water balance in the body.

Too much sodium may cause:

- High blood pressure
- Thirst
- Puffy hands, face and feet
- Fluid in the lungs, making it hard to breathe

## How can I eat less sodium?

### 1. Cook at home more often.

Use unprocessed, fresh, or frozen (without salt) meats, poultry, fish, seafood, eggs, vegetables, and fruits. Use “no salt added” canned beans and lentils. Restaurant and fast food meals are higher in sodium than home cooked meals.

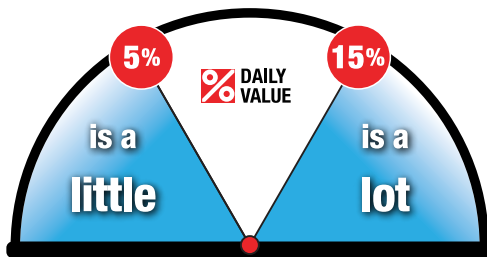
### 2. Avoid high sodium packaged, convenience or processed foods such as:

- Ham, bacon, salami, hot dogs, sausages, deli meats, smoked meat, and smoked fish
- Processed cheese and cheese spreads
- Dried fish and dried seafood
- Pickles, olives, and capers
- Ketchup, teriyaki sauce, fish sauce, BBQ sauces, soy sauce, and packaged sauce mixes
- Canned or packaged soups, bouillon cubes, and salted broths
- Baked beans
- Packaged, seasoned rice and noodle mixes
- Salted snack foods (chips, pretzels, nuts, crackers, cheese puffs)



### 3. Read food labels.

- Avoid ingredients such as monosodium glutamate, sodium bicarbonate, baking soda, soy sauce, and sodium phosphate
- In the nutrition facts table, foods less than 5% daily value of sodium per serving is a little, and more than 15% is a lot



### 4. Do not add salt at the table or when cooking.

#### Can I use salt substitutes?

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

Foods that are labeled “low sodium” may contain salt substitutes such as “potassium chloride”. Check labels for these ingredients.

### How do I add flavour without adding salt?



#### Season your food with:

- Dried or fresh herbs such as basil, oregano, thyme, rosemary, and mint
- Spices such as curry powder, cumin, garlic powder, onion powder, and paprika
- Garlic, ginger, or onions
- Unsalted seasoning mixes such as Mrs. Dash™, Clubhouse Signature™, or McCormick® salt-free
- Dried mustard
- Balsamic vinegar, rice vinegar, or red wine vinegar
- Sesame oil or olive oil
- Tabasco or hot sauce
- Lemon or lime juice
- “No-Salt-Added” broths

**Ask your dietitian if you need more detailed information about sodium in foods.**

# 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:

- 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
- Large weight gains between dialysis runs
- Aim for less than \_\_\_\_ kg fluid weight gain between dialysis runs

## How much fluid can I drink?

**No more than \_\_\_\_ cups of fluid each day.** (1 cup = 8 fluid ounces = 250 mL)

The amount you can drink depends on how much urine you make.

## What counts as fluid?

If the food can melt or is liquid at room temperature, it is part of your daily fluid intake.

### Fluids include:



Water



Ice (1 cup of ice = 2/3 cup water)



Tea and coffee



Milk



Juice



Soups



Soda pop



Alcoholic beverages



Ice cream, sherbet, and sorbet



Jell-O®



Popsicle® and frozen drinks



Nutritional supplements such as Ensure®, Glucerna®, and Nepro®



## Tips to reduce fluid intake:



- Choose lower-sodium foods to reduce thirst



- Maintain good blood sugar control as high blood sugars will cause thirst



- Measure and record your fluids for a few days to see how much you are drinking



- Choose smaller cups. Your usual cup may hold more than you think



- Sip fluids slowly. Try using a straw



- Use small amounts of water or soft foods to take pills



- Suck on ice chips, lemon slices, lime slices, or frozen fruit such as strawberries, blueberries or grapes



- Chew sugar free gum or sugar free sour candy



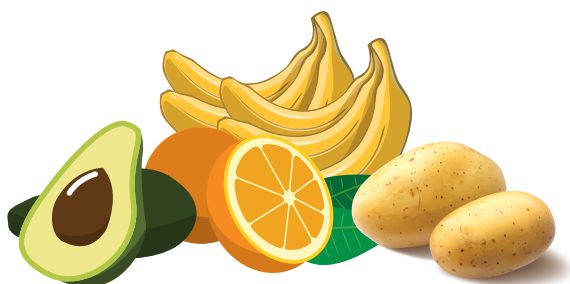
- Brush your teeth often



- Rinse your mouth with water or alcohol-free mouthwash

# 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. People on hemodialysis need to keep their level in a safe range.

High potassium may cause:

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

## How can I control my potassium?

1. **Dialysis:** Complete your dialysis runs.
2. **Bowel habits:** Avoid constipation.
3. **Exercise:** Plan to be active every day.
4. **If you have diabetes:** Keep your blood sugars within target.

## 5. Diet:

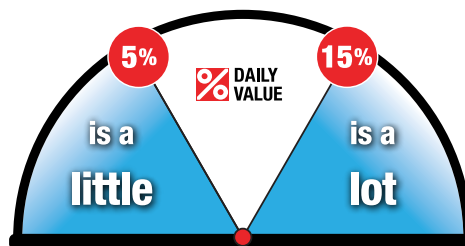
- **Read food labels. Avoid foods with potassium additives.**

Potassium additives are identified by the word “potassium” in the ingredient list.

**Potassium** chloride, **potassium** phosphate, **potassium** lactate, **potassium** citrate

Examples of foods containing potassium additives include: deli meats, processed meats and cheeses, electrolyte beverages (Gatorade®, Powerade®, etc.), Half-salt™, sauces and powdered seasonings, instant or powdered beverages (3-in-1 coffee or tea mixes), canned soups and broths, and vegetarian meat substitutes.

In the nutrition facts table, foods less than 5% daily value of potassium per serving is a little, and more than 15% is a lot.



- **Choose foods with fibre throughout the day.**

Whole grain breads and cereals and low to moderate potassium fruits and vegetables (fresh or frozen) like berries, apples, grapes, cauliflower, green beans, carrots, etc. are good sources of fibre.

- **Serving sizes are important.**

A large portion of a low potassium food can become a high source of potassium.

- **How you prepare and cook your food can help to reduce potassium.**

- Boiling root vegetables (peeled and cut up) and meat moves some of the potassium from the food into the cooking water. Discard cooking

water before eating or adding boiled vegetables and meats to soups or stews.

- Rinse and drain canned legumes such as chickpeas and lentils.

- **Some high potassium foods may need to be limited.**

Coconut water, coconut milk, tomato juice, vegetable juice, tomato sauce, hot chocolate, cow's milk, yogurt, fruit juice, dried fruit, potato chips, French fries, baked potato, bananas, avocados, kiwi, cantaloupe, and honeydew melon are high sources of potassium and may need to be limited.

**Ask your dietitian if you need more detailed information about potassium in foods.**



**People with kidney disease must not eat starfruit.** Starfruit contains a toxin that causes confusion, seizures, hiccups, insomnia and even death.

**Grapefruit and grapefruit juice affect the way some medications work.** Ask your dietitian or pharmacist if grapefruit is safe for you.

## PUTTING IT ALL TOGETHER

For each meal include something from these food groups:

1. **Protein foods** such as fish, poultry, meat, eggs, tofu, beans and lentils, dairy.
2. **Starchy foods** such as bread, cereal, rice, noodles.
3. **Fruits and vegetables** – have a variety.

Each person's diet may 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.

Ask your dietitian for tasty recipes!



Canada's Food Guide:  
<https://food-guide.canada.ca/en/>

## FREQUENTLY ASKED QUESTIONS

### Should I take a vitamin supplement?

Renavite/Replavite is a multivitamin for people on dialysis and will be provided for you. Other vitamin and mineral supplements are not recommended unless advised by your doctor or dietitian.

### What if my appetite is poor?

Dialysis removes waste products from your blood which will help improve your appetite. Small, frequent meals and snacks may help you eat better. Ask your dietitian if nutrition supplement drinks or protein powder are needed.

### Can I drink alcohol?

Check with your doctor first.

Keep in mind that alcohol is a fluid. Wine is high in potassium and beer is high in phosphorus. If you make mixed drinks with

spirits (rum, vodka, whiskey, gin), avoid high potassium and phosphorus mixes.

### Why am I constipated?

Constipation is a common problem for people on dialysis. Take laxatives if prescribed. Talk to your dietitian about ways to improve bowel movements.

### Where can I find more diet information?

<http://www.bcrenal.ca/health-info/managing-my-care/diet>

<https://www.myspiceitup.ca/>

<https://www.kidneycommunitykitchen.ca/>

**Contact your dietitian if you have questions.**

**Dietitian:** \_\_\_\_\_

**Phone:** \_\_\_\_\_