

Nutrition Guidelines for CAPD

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Nutrition Guidelines for CAPD

Continuous Ambulatory Peritoneal Dialysis (CAPD) is a type of dialysis done each day. CAPD helps to clean out many of the waste products that build up in your blood when your kidneys are not working properly.

While you are on CAPD, it is important to pay attention to what you eat and drink. The things you need to watch for are:

- › **Protein**
- › **Phosphorus**
- › **Sodium (salt)**
- › **Potassium**

Sugar

While you are on CAPD, you should limit sugar, sweets, and high fat foods. This is because the dialysate (dialysis fluid) used to do an exchange has a type of sugar in it called dextrose. Each time you do an exchange, your body absorbs some of the sugar from the dialysate. Over time, this extra sugar could cause you to gain weight.

It is also important to avoid sugar and sweets if you have diabetes. The sugar from the dialysate can make it harder to keep good blood sugar levels.

Protein

Protein is used to build our body's cells. It is needed for growth, building new tissue, and repairing injured or broken-down tissues.

Why do I need more protein?

Each time you do an exchange, some protein is drained from your blood into the dialysate solution. You must eat more protein to replace what was lost.

If your blood urea nitrogen (BUN) and/or blood albumin level is dropping, this can be a sign that you are not eating as much protein as you need.

High protein foods

Meat, fish, poultry, eggs, cheese, tofu

If you cannot eat enough high protein foods, you may have to take a **high protein product**, like:

- › Resource[®] Diabetic
- › Glucerna[®]
- › Nepro[®]
- › Novasource[®] Renal
- › Beneprotein[®]

Your dietitian will help you decide which of these products is best for you.

Common portions of high protein foods

Each of these has about the same amount of protein as 1 oz (28 g) of cooked meat:

- › 1/4 cup (2 oz/60 ml) tuna, salmon, or chicken
- › 1 egg
- › *1 oz (28 g) cheddar cheese (1 square inch)
- › *1/4 cup (60 ml) low sodium cottage cheese
- › 1/3 cup (80 ml) raw tofu
- › *2 tbsp (30 ml) peanut butter

*These foods are high in phosphorus. You should only have them with your phosphate binder (see page 4), 2 to 3 times a week. Talk about this with your dietitian.

A 3 oz (84 g) portion of meat is similar to:

- › 1 small boneless chicken breast (cooked)
- › 1 medium-sized hamburger patty (cooked)
- › 1 pork chop (cooked)
- › 1 boneless steak the size of a deck of cards (cooked)
- › 1/2 cup (125 ml) raw, firm tofu

You need _____ of protein foods each day.

Sample meal plan

Breakfast:

- › _____ egg(s)
- › 2 slices white bread (toasted)
- › 2 tsp (10 ml) margarine
- › 1 orange
- › 1/2 cup (125 ml) low phosphorus drink (tea, coffee)

Lunch:

- › _____ cup(s) tuna
- › 2 slices white bread
- › 1 to 2 tsp (5 to 10 ml) mayonnaise
- › 1 small banana
- › 1/2 cup low phosphorus drink

Supper:

- › _____ oz chicken breast (cooked)
- › 1 small potato (boiled)
- › 1/2 cup (125 ml) carrots (raw, cooked)
- › 1/2 cup (125 ml) green beans
- › 2 tsp (10 ml) margarine or 1 tbsp (15 ml) sour cream
- › 1/2 cup (125 ml) strawberries
- › 1/2 cup (125 ml) low phosphorus drink

Snacks:

- › 1 oz (28 g) cheddar cheese
- › 6 unsalted crackers
- › 1/2 cup (125 ml) drink of choice

Phosphorus

- Phosphorus and calcium are minerals found in your body. When your kidneys work normally, these minerals are usually well-balanced.
- When your kidneys do not work well, you may have more phosphorus in your blood and less calcium.
- To fix this, your body takes calcium from your bones. This can cause your bones to become weak and sore. They may break easily.
- If phosphorus in your blood stays high, the calcium in your blood can go into your skin, joints, blood vessels, and other body parts. This can cause itching, stiff joints, and problems with other parts of your body, like your heart.
- To manage your phosphorus and calcium levels, you can avoid certain foods and take **phosphate binders**. Some examples of phosphate binders are:
 - › Calcium carbonate (Tums®)
 - › Sevelamer (Renagel®)
 - › Milk of magnesia
 - › Lanthanum carbonate tablets (Fosrenol®)
- Take phosphate binders with food, as told by your health care provider.

How can I keep my phosphorus and calcium balanced?

- Avoid high phosphorus foods (see page 5).
- Take your phosphorus binders as prescribed with meals and snacks.
- **Do not skip a dialysis exchange.**
- Read food labels:
 - › Check for “**phos**” on the ingredient lists of packaged foods (for example, **phosphoric acid** or dicalcium **phosphate**).
 - › Choose grain products with less than 6% daily value (DV) of phosphorus.
 - › If phosphorus is not on the label, choose products with no more than 3 grams of fibre or 12% DV of fibre.

High phosphorus foods to limit

Your body absorbs about **half** of the phosphorus that is found **naturally** in foods.

Ask your dietitian if you can safely have these foods:

- › Dairy products (like milk, yogurt, and cheese)
- › Lentils and beans
- › Nuts, nut butters, seeds
- › Whole grains (like bran cereal, brown rice, and whole wheat bread)

High phosphorus food to avoid

Your body absorbs almost **all** of the phosphorus that is **added** to foods. Avoid these processed and packaged foods:

- › Baking powder: Use this baking powder substitute if your potassium levels are good:
 - › Replace each teaspoon of baking powder with 1/4 tsp baking soda and 1/2 tsp cream of tartar (contains: 307 mg sodium, 247 mg potassium, 0.1 mg phosphorus). Check with your dietitian if this is OK for you.
- › Processed cheese slices and Cheez Whiz®
- › Chocolate, cocoa, carob, and caramel
- › Corn tortillas and cornbread
- › Fast food and takeout items
- › Fish bones (like in canned sardines or canned salmon)
- › Organ meats (like liver or kidney)
- › Packaged meals (like Kraft Dinner®, instant noodles, and microwave dinners)
- › Pancakes, waffles, muffins, and biscuits (mixes and frozen products)
- › Pizza
- › Pre-cooked and seasoned meats
- › Processed meats (like bacon, chicken nuggets, deli meats, hot dogs, and sausages)
- › Puddings, custards, and ice cream

High phosphorus drinks to avoid

- Beer
- Hot chocolate and chocolate milk
- Any drink that has “**phos**” on the ingredient list, such as:
 - › Colas (like Coca-Cola[®], Dr Pepper[®], and Pepsi[®])
 - › Some other pops (like Fanta[®] Orange)
 - › Bottled iced teas and iced coffees
 - › Energy and sports drinks (like Powerade[®])
 - › Flavoured and vitamin waters
 - › Nondairy creamers (like International Delight[®] and Rich’s[®] Coffee Rich[®])
 - › Some juices (like Hawaiian Punch[®] and SunnyD[®])

It can be hard to make changes to your eating habits. If you have questions, please ask to talk with a dietitian.

We are here to help you.

If your blood phosphorus level is **always normal**, you may be able to eat foods that have phosphorus **sometimes**. Talk about this with your dietitian.

Sodium

Sodium is a mineral that controls fluid balance in your body. The main sources of sodium are table salt, and salt added to foods during processing. All plant and animal foods also contain some sodium.

Why is it important to control my sodium intake?

Your kidneys can handle only a certain amount of sodium. If you take in too much, you will get thirsty, fluid will build up in your body, and your blood pressure will go up. **Most people on CAPD should follow a low sodium diet.**

How to control sodium intake on CAPD

- **Do not add salt to your food at the table.**
- Do not use recipes that contain more than 1 tsp of baking soda per 8 servings.
- When preparing food, do not add salt, or use no more than 1/4 tsp per day.
- Avoid high sodium foods.
- Read food labels. Choose foods with 5% or less DV of sodium.
- **Do not eat foods with more than 15% DV of sodium.**
- Try different spices to add flavour to your food.

High sodium foods to avoid

- Salted crackers
- Salted party snacks (like chips, peanuts, and pretzels)
- Processed cheese (like Cheez Whiz® and cheese slices)
- Blue, feta, Romano, or Parmesan cheese
- Convenience foods:
 - › TV dinners
 - › Frozen meat pies
 - › Frozen entrees
 - › Battered, frozen fish and chicken
 - › Packaged pasta dinners (like Kraft Dinner®)
 - › Instant and scalloped potato mixes
 - › Pre-seasoned pasta and rice (like Hamburger Helper™, Kraft Dinner®, Knorr® Sidekicks®, Rice-A-Roni®, Uncle Ben's® Fast & Fancy®)
 - › Dried soup or noodle mixes and bouillon (like Oxo®)
 - › Canned or bottled pasta and pizza sauces
 - › Canned beans, stews, and soups
 - › Canned meats (like KAM®, SPAM®, and flakes of turkey, ham, and chicken), devilled ham, and potted meats
 - › Canned vegetables and vegetable juices

Note: You can use canned vegetables, juices, and soups with no salt added.

- Salted, smoked or cured meats:
 - › Bacon
 - › Bologna
 - › Corned beef
 - › Deli meats
 - › Kosher meat
 - › Sausages and wieners
 - › Salted or dried cod
 - › Salted or smoked herring

Note: You can use canned tuna and salmon, if it is rinsed.

- Condiments:
 - › Meat tenderizers
 - › M.S.G. (monosodium glutamate) and Ac'cent® Flavor Enhancer
 - › Pickled foods (like olives, pickles, relish, and sauerkraut)
 - › Salad dressings
 - › Salsa
 - › Salt, any kind (like sea salt and Himalayan salt)
 - › Sauces (like BBQ, chili, fish, hoisin, hot, soy, steak, teriyaki)
 - › Seasonings made with salt (like celery, garlic, and onion salt, steak spice, seasoned pepper)

**High sodium condiments that can be used in small amounts each day
(1 serving [5 ml or 1 tsp])**

- › Mustard
- › Horseradish
- › Worcestershire sauce
- › Ketchup

Fluid

Why is it so important to control my fluid intake?

Extra fluid builds up in your body when your kidneys are not working properly. Too much fluid may cause your tissues to swell and your blood pressure to go up. This is why you should limit the amount you drink.

The amount of fluid you should drink depends on your urine output (how much you pee).

To help control your thirst:

- **Do not eat high sodium foods.**
- Suck on hard, sugar-free candies.
- Use frozen or ice-cold drinks (like ice chips and popsicles) in place of other drinks.
 - › 1 regular ice cube = about 1 oz (30 ml) of fluid
 - › 1 popsicle = about 2½ oz (75 ml) of fluid

Recommended fluid intake: 4 cups (1000 ml) plus an amount equal to how much you usually pee in 24 hours (1 day), unless your primary health care provider tells you otherwise.

Remember:

- The more salt (sodium) and sugar you eat, the more thirsty you will get.
- Anything that is liquid at room temperature is a fluid (like ice cream, soup, popsicles, Jell-O®, tea, coffee, etc.).
- Measure fluids so you know how much you are drinking.

Potassium

Potassium is a mineral found in your body.

Most people on CAPD do not have a problem with high blood potassium. Potassium is usually cleared by dialysis.

If your blood potassium level is normal, you **should** be able to eat some high potassium foods in small amounts. Talk about this with your dietitian.

Why is it so important to control my potassium intake?

Too much or too little potassium in your blood can change how your muscles work, including your heart muscle.

If your blood potassium level is **too high**, do not eat high potassium foods.

If your potassium level is **too low**, it may be a sign that you are not eating well. Try eating more high potassium and high protein foods.

High potassium foods

Fruits:

- › Apple juice
- › Avocados
- › Bananas
- › Cantaloupe
- › Currants
- › Coconuts, coconut milk, coconut water
- › Dried fruits (including figs, dates, raisins, and prunes)
- › Grapefruit juice
- › Guavas
- › Honeydew melons
- › Kiwis
- › Mangoes
- › Nectarines
- › Oranges, orange juice
- › Papayas
- › Persimmons
- › Pomegranates, pomegranate juice
- › Prune juice
- › Rhubarb
- › Tangelos

Starfruit: People with kidney disease should not eat starfruit. It can cause serious illness, including nausea (upset stomach), vomiting (throwing up), seizures, coma, and death.

Vegetables:

- › Artichokes
- › Bamboo shoots, fresh
- › Beets, beet greens
- › Broccoli
- › Brussels sprouts
- › Chinese cabbage, cooked
- › Corn, fresh (1 ear)
- › Dandelion greens
- › Kohlrabi
- › Lima beans
- › Mustard greens
- › Parsnips
- › Potatoes, *unless double boiled
- › Pumpkin
- › Rutabaga (yellow turnip)
- › Seaweed (dried)
- › Spinach
- › Squash (acorn, buttercup, butternut, Hubbard)
- › Sweet potatoes
- › Swiss chard
- › Tomatoes (including paste and sauce)
- › Vegetable juices (like tomato, Clamato[®], and V8[®]), including low sodium
- › Yams
- › Zucchini, cooked

*It is OK to have one (1) serving of double boiled potatoes a day. Double boiling removes at least half of the potassium. **Double boiled potatoes are still high in potassium.**

To double boil potatoes:

1. Peel and dice potatoes.
2. Place potatoes in clean water. Use 4 cups of water for every cup of potatoes.
3. Bring water to a boil. Drain.
4. Add clean water and cook until done.
5. Drain and serve.

Other foods high in potassium:

Many of these foods are high in sodium and/or phosphorus. If your potassium is low, talk with your dietitian before eating these foods.

- › Cereals made with bran, dried fruit, nuts, seeds, or granola
- › Chocolate (1 ½ oz or about 42 grams)
- › Coconut milk, coconut water
- › Dried peas, beans, and lentils
- › French fries
- › Low sodium baking powder
- › Cream of tartar
- › Molasses, blackstrap
- › Molasses, fancy
- › Nuts and seeds
- › Potato chips
- › Protein drinks and meal replacement drinks (talk with your dietitian about what drinks are best for you)
- › “Salt-free” foods (check the label for potassium additives like potassium chloride or potassium sorbate)
- › Salt substitutes (like NoSalt[®], Nu-Salt[®], Half Salt[™], Herbamare[®] Sodium Free)
- › Specialty coffee drinks (like a mocha or latte)

It can be hard to make changes to your eating habits. If you have questions, please ask to talk with a dietitian.

We are here to help you.

Dietitian: _____

Phone: _____

Notes:

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