



PULMONARY HYPERTENSION  
ASSOCIATION OF CANADA

L'ASSOCIATION D'HYPERTENSION  
PULMONAIRE DU CANADA

## Nutrition and PH

### How do sodium and fluid affect pulmonary hypertension?

The body needs a small amount of sodium to balance fluids and for normal muscle and nerve function. Eating too much salt can lead to the body holding on to too much fluid, leading to swelling or high blood pressure. For people with pulmonary hypertension, when water builds up in the blood and tissues, pressure is put on the heart to pump the extra fluid around the body.

### Tips for Maintaining a Low-Sodium Diet

**Avoid processed foods.** Much of our daily salt comes from pre-prepared, processed, and packaged foods. Even foods that don't taste salty can still be high in sodium. Processed and cured meats, restaurant or fast food, and convenience foods like soups and frozen dinners are usually high in sodium.

**Eat homemade meals to control the amount of salt in your food.** Fresh produce, fresh cuts of meat, and freshwater fish are typically salt-free or extremely low in sodium. But if you don't have access to fresh vegetables, sodium-free or low-sodium canned or frozen vegetables are good alternatives. When making a recipe, either reduce the amount of salt, use low-to-no-sodium products, or leave out the salt altogether.

Preparing food can be tiring, especially for those with chronic conditions. Don't be afraid to ask for help if needed. Take advantage of the days you feel well enough to cook and freeze leftovers that can be heated up for a day when you don't have as much energy.

**Limit the amount of salt added to your foods.** Table salt, kosher salt, sea salt, Himalayan salt, celery salt, garlic salt, and onion salt all contain the same amount of sodium. One teaspoon of salt contains about 2300 mg of sodium. This can add up quickly when adding salt to your foods at the table or in recipes. Using spices and herbs can flavour your foods instead of salt. The salt habit can be hard to break. If you gradually reduce your salt, your taste buds will adjust over time.

Use PHA Canada's [Low Sodium Recipe Book](#) to help get you started. This book is filled with a variety of low-sodium, healthy meals for you and your family.



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**Read labels.** It is hard to completely avoid prepared foods. Many foods, such as breads, baked goods, and sweets, may not be expected to be high in sodium, so it is important to check labels.

*Nutrition Fact Table:*

1. Check the serving size. If you plan on eating an amount different from the serving size, you may have to do some math to calculate the amount of sodium in the portion of food that you will eat.
2. Check %Daily Value (%DV) or milligrams (mg) listed for sodium.
  1. Less than 5% DV or less than 140 mg is considered a little; choose these more often.
  2. More than 15% DV or more than 400 mg is considered a lot; choose these less often.

At the grocery store, compare the sodium content between products and choose the lowest sodium option.

*Ingredient List:* You can also look for sources of sodium in the ingredient list. Ingredients are listed from the most to least amounts in the food. If salt or sodium is listed in the first few ingredients, that food probably has a high amount of sodium. Sources of sodium don't always use the words 'sodium' or 'salt'. Also, look for ingredients such as baking powder, brine, MSG (monosodium glutamate) or soy sauce.

*Front of the package:* Many foods now have low-sodium versions, which may be written on the front. The following claims are for low-sodium products:

<b>Free Zero Without No</b>	<b>less than 5 mg</b>
<b>Low Little</b>	140mg or less (<6 %DV)



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Be careful with these claims because they don't guarantee that the product is a low-sodium option. For example, "light" soy sauce can still have more than 500 mg of sodium per tablespoon! *Check the Nutrition Facts Table or the ingredient list to confirm the product is a low-sodium option.*

<b>Reduced Less Lower Lower in</b>	<b>25% less sodium AS COMPARED TO their original product</b>
<b>Lightly salted</b>	at least 50% less ADDED salt AS COMPARED TO their original product
<b>No added without added</b>	contains no added salt or any other added ingredients that contain salt

Restaurants and fast food may not list sodium content on their menus, but many restaurants have websites with nutritional information that list it online. You can also ask your server if the amount of added salt can be reduced in your meal.

**Remember to check the sodium content of your seasonings, condiments, and beverages.** Many products, such as bullion, bacon bits, parmesan or romano cheese, condiments, and assorted 'seasonings,' can be high in salt. Use lower-sodium versions or limit the amount you use. Sodium hides in drinks, too! For example, fast food milkshakes and sports drinks are especially high in sodium.

**Remember that there is no such thing as perfection.** If you find yourself in a situation where eating high-sodium foods is unavoidable, try using these tips. Eat smaller portions of high-sodium items, ask for seasonings or dressings on the side, brush off excess salt from items such as pretzels, crackers, etc., or water down high-sodium foods like soups or high-sodium beverages. You can also make a habit of carrying low-sodium snacks with you so you can still satisfy your hunger.



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### **Common high-sodium foods:**

- Bacon
- Bread
- Canned beans, vegetables and soup
- Cereal
- Cheese
- Cottage cheese
- Frozen meals, such as pizza, burritos, hash browns
- Instant noodles
- Ketchup
- Prepackaged mixes for cake, pancakes, pasta, rice
- Smoked, cured (cold cuts/sausage), salted or canned meat, poultry and fish
- Salsa
- Soy sauce
- Tomato sauce/paste/juice

### **Low-sodium alternatives:**

- Cream cheese
- Dried fruit
- Eggs
- Fresh or frozen fruit and vegetables with no additives
- Fresh or frozen meat, poultry and fish
- Mayonnaise
- Milk
- Mozzarella
- Ricotta
- Unsalted butter
- Yogurt

### **Tips for Managing Fluid Intake**

Limiting fluids can help avoid or decrease swelling and fluid retention. You may be able to see the effect of your body holding onto extra fluids in your legs, feet or ankles, but you can't always 'see' fluid retention. Fluid building up in your lungs or other body parts can cause shortness of breath and high blood pressure. It may be recommended for some people to limit their fluid intake to 1.2 – 2 litres (5 – 8 cups) per day, but every person is different, so check with your PH specialist. Keep these tips in mind if you need to limit your fluids:



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**Get to know how much fluid you typically drink.** For a few weeks, measure the amount of fluid you are drinking every day. Fluids are liquid at room temperature, for example, soups, ice cream, popsicles, Jello-O, ice cubes, water, coffee, tea, juice, etc.

**Space out your liquids throughout the day.** You might get thirsty if you drink all your fluids early in the day. Drinking small amounts of fluids throughout the day can help you avoid getting too thirsty. Use these other tips to satisfy your thirst: snack on frozen fruit, chew on gum or suck on hard candies. Sour food can help stimulate saliva production and prevent a dry mouth. Brush your teeth and rinse your mouth often to keep your mouth feeling refreshed.

**Weight gain is often one of the first signs that you are retaining fluid.** Weigh yourself daily. Call your healthcare provider if you gain 2-3 pounds in a day or 5 pounds in a week.

**Try keeping a food journal,** including how much fluid and sodium you consume daily. Writing it down can help you stay on track. If you use a mobile device, look for an app to help you track your eating and drinking habits.

### **Overall Good Nutrition**

Limited research shows that one food is better for pulmonary hypertension than another. Eating a variety of foods can help with overall good health.

Foods high in antioxidants can help manage chronic inflammation in the body.

Antioxidants help protect cells in your body from being damaged by inflammation. The wonderful thing about antioxidants is that they can be found in many whole foods. For example, food sources of vitamin E include nuts, green leafy vegetables, and olive oil. Food sources of vitamin C include citrus fruits, kiwis, berries, tomatoes, bell peppers and broccoli. Food sources of selenium, carotenoids and polyphenols include fruits, vegetables, nuts and fish. Food sources of omega-3 fatty acids include olive oil, chia seeds, walnuts, ground flaxseed, salmon, mackerel and fish oil.

Talk to your doctor before considering an antioxidant supplement, as large doses found in supplements may interfere with other treatments or medications you are receiving. Focusing on a balanced diet, including colourful fruits and vegetables, whole grains, legumes, fish, low-fat dairy, and lean meats, will help you achieve a healthy diet full of essential nutrients!



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*Resources for healthy eating*

PHA Canada's Low Sodium Recipe Book

<https://phacanada.ca/getattachment/7f09c21f-c6ec-49e0-b358-2267c885e06c/Low-Sodium-Recipe-Book.aspx>

Improving Quality of Life Through Nutrition Webinar, Apr 2023

[https://www.youtube.com/watch?v=WgQQ1X\\_M9bw&t=4s](https://www.youtube.com/watch?v=WgQQ1X_M9bw&t=4s)

Let's Talk PH & Nutrition Webinar, November 2020

<https://www.youtube.com/watch?v=Joa6pRLOaM>

Exercise & Nutrition Webinar, May 2022

<https://www.youtube.com/watch?v=7dIIQRqR-4Q&t=536s>

Maintaining a Healthy Diet with PH – Pulmonary Hypertension Association

<https://www.youtube.com/watch?v=fcQ5VgzT85Q&t=382s>