MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

Cirrhosis Nutrition Therapy

What is nutrition therapy for cirrhosis?

Nutrition therapy for cirrhosis consists of a low sodium, high protein diet. The following information will explain why this type of diet is important along with tips to help you follow it to the best of your ability.

Low sodium diet

Why do I need to follow a low sodium diet?

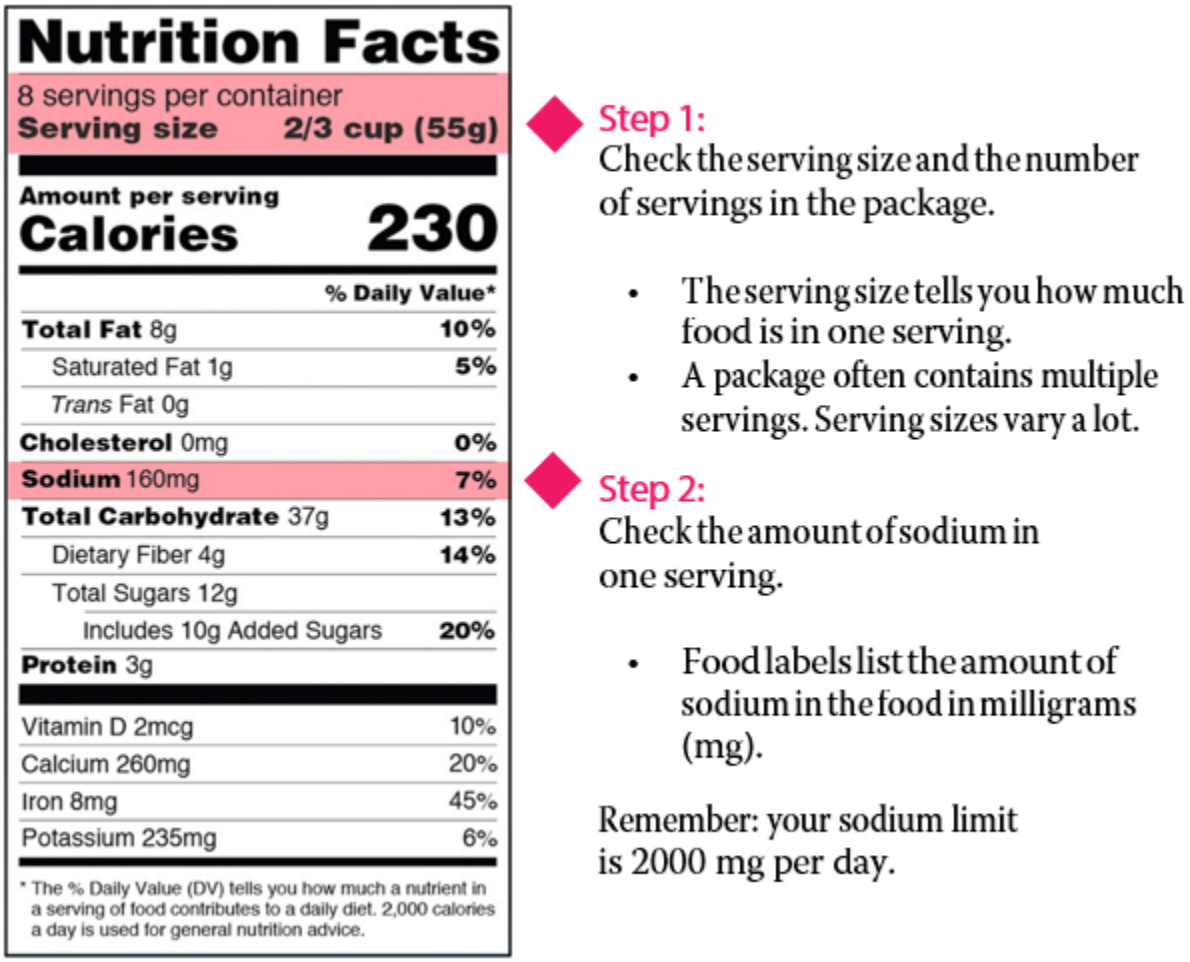
Fluid buildup (often called ascites or edema) is a common complication with liver cirrhosis. Too much sodium in the diet can lead to more fluid buildup. **Sodium** is a mineral that attracts water and plays a role in fluid balance in our bodies.

How do I follow a low sodium diet?

- Limit your sodium intake **to no more than 2,000 mg (milligrams) per day.**
- **Sodium** is a naturally occurring mineral found in almost all foods. Read Nutrition Facts labels to determine how much sodium you are eating (see Figure 1 below):
    - Always look at the serving size, first. Then, look at the sodium contents.
    - The example in Figure 1 shows 160mg of sodium in 2/3 cup.
- Consider keeping a notebook and write down everything you eat throughout the day along with how much sodium is in it, using Nutrition Facts labels, like in Figure 1.
    - You can also use food tracking websites or apps such as MyFitnessPal.com or Cronometer.com to track your sodium intake. These are especially helpful when you come across a food without a Nutrition Facts label.

- Use restaurant and fast-food establishment websites to look up nutrition facts and information ahead of time to check the menu's sodium content to make a healthier choice.
- Consider using www.healthyheartmarket.com for an online grocery store of just low sodium foods.

Figure 1

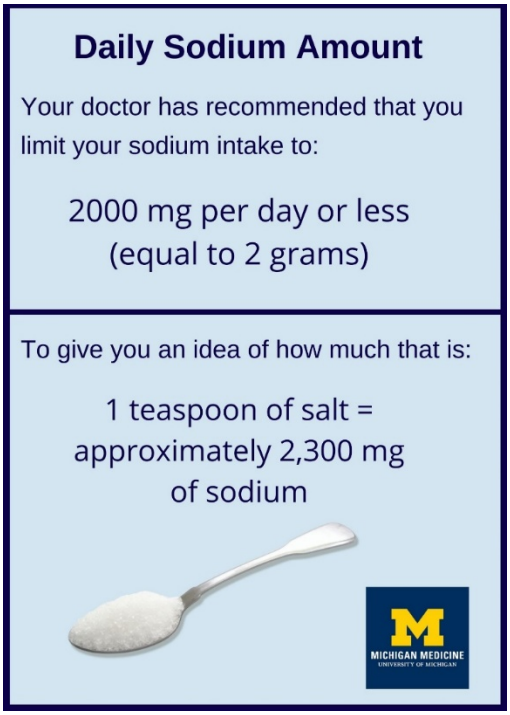


What should I monitor when following a low sodium diet?

Salt

Salt is a major source of sodium. It is made up of two minerals: sodium and chloride. All forms of salt (such as sea salt and pink Himalayan salt) have just

as much sodium as regular salt. **1 teaspoon of salt contains 2,300mg of sodium**. Salt is often added to foods, especially processed foods, which increases their sodium content. Please avoid salt substitutes such as No-Salt, Nu-Salt, Also Salt. These are very high in potassium and may cause an imbalance in electrolytes, especially if taking certain diuretic medications.



What seasonings can I use instead of salt?

- Spices (try *Mrs. Dash* salt-free brand)
- Herbs
- Lemon juice
- Vinegars
- Visit www.saltfreerubs.com for more zero sodium seasonings

Water softeners

If you have well water, water softeners can add additional sodium since they are often made of sodium chloride. **Try using potassium chloride softeners instead or drink bottled water**.

What if I am told my sodium level is too low?

This is usually from having too much fluid buildup in the body. **This does not mean you want to eat more sodium.** Remember, eating too much sodium will make the fluid buildup worse. If you are told this, continue following your low sodium diet unless otherwise directed by your doctor.

Low-salt food choices

Good choices	Limit or avoid
Meat, eggs: • Fresh beef, pork, lamb, poultry, fish, wild game • Fresh eggs	Fast food and restaurant food **Meat, eggs:** • Processed meats (bacon, sausage, pepperoni, hot dogs, luncheon/deli meats, corned beef, anchovies, sardines) • Vegetarian "meats"/ vegetarian entrees • Smoked meats or fish, jerky • Microwaveable/frozen meals • Egg beaters
Milk, yogurt, cheeses: • Milk or yogurt • Frozen yogurt, ice cream • Natural Swiss cheese • Low-sodium cheeses • Low-sodium cottage cheeses	**Milk, yogurt, cheeses:** • Buttermilk, malted milk • Processed cocoa • Processed cheese • Bleu, feta, and other salty cheeses • Regular cottage cheese • Dairy-free alternatives may be higher in sodium
Grains, starches: • Low sodium bread, rolls, breadsticks, bagels • Plain taco shells, tortillas • Pasta, barley, rice cooked without salt • Unsalted cooked cereal • Dried beans, lentils, peas	**Grains, starches:** • Bread, rolls, breadsticks made with salt or cheese • Stuffing mixes • Pasta or rice with seasoning packets • Instant hot cereals, ready-to-eat cereals • Salted crackers • Baking mixes such as cakes, pancakes, waffle, or muffins

• Unsalted popcorn, pretzels, crackers, chips	• Salty chips, pretzels, crackers, etc.
Nuts and Seeds: • Unsalted nuts and seeds • Unsalted peanut butter or other nut butters	**Nuts and Seeds:** • Salted nuts and seeds • Salted peanut butter
Vegetables: • Fresh/frozen vegetables without salt added • Homemade tomato sauce or salsa	**Vegetables:** • Canned vegetables/soups, vegetable juices • Pre-made spaghetti/tomato sauces/salsa • Instant mashed potatoes, boxed • Sauerkraut, olives, pickled vegetables
Fruits: • Any kind of fruit or fruit juice, fresh, frozen, or canned	**Fruits:** • Adding salt to fruits (such as melon) • Glazed or crystallized fruit
Beverages: • Water, fruit juices • Milk • Coffee, decaf coffee, teas • Cocoa made with milk • Soda with no sodium	**Beverages:** • Gatorade or other sports drinks • Vegetable juices (V-8) • Instant cocoa mixes • Instant cappuccino mixes
Desserts: • Gelatin desserts • Homemade tapioca or rice pudding • Custard made with milk • Hard candy	**Desserts:** • Instant pudding or other pre-packaged dessert mix • Frozen pies • Store bought cookies, muffins, cakes, etc.

• Homemade cake, cookies, pie, sherbet, ice cream (limit to 1 serving or less per day)	
Fats and oils (use sparingly): • Olive and avocado oil • Unsalted butter	**Fats and oils (use sparingly):** • Salted butter • Margarine
Seasoning and condiments: • Herbs and spices without salt (such as Mrs. Dash) • Lemon juice • Vinegars • Fresh garlic, onion • Fresh horseradish • Low-sodium ketchup, low-sodium hot sauce	**Seasoning and condiments:** • Table salt, onion salt, garlic salt • Avoid "salt substitute" as this contains high levels of potassium (No-Salt, Nu-Salt) • Soy sauce, tartar sauce, teriyaki sauce. Low sodium soy sauce is often still very high in sodium. • Salad dressings • Salsa, Worcestershire sauce, bouillon • Sweet & sour sauces, steak and BBQ sauce • Ketchup, relish, seasoning/coating mix, meat tenderizers, flavored vinegar • Monosodium glutamate (MSG)

High protein diet

Why do I need to follow a high protein diet?

Cirrhosis is a **catabolic disease**, meaning that you are burning a lot of energy. For this reason, your calorie and protein needs are higher than before. Some people experience muscle loss due to their body's increased energy needs. A high protein diet will help prevent this muscle loss and lower your risk of malnutrition.

How do I follow a high protein diet?

- Aim for a minimum of 1 gram of protein per kilogram of body weight. A dietitian can help you with a specific protein goal as part of your nutrition therapy.
- Consume good sources of protein such as meat, fish, eggs, dairy products, beans, nuts, and seeds.
- Try to include a protein source at every meal and snack that you eat. For example: instead of just an apple for a snack, pair it with some peanut butter, yogurt, low sodium cheese, or unsalted nuts.
- Consume a bedtime snack that includes a carbohydrate plus a protein. Studies show that people with cirrhosis who eat a bedtime snack preserve their muscle mass better. Examples of bedtime snacks:
    - Apple slices with peanut butter
    - Hummus and pita bread
    - Yogurt with berries
    - Chicken salad with whole grain crackers
    - Unsalted trail mix
- Consider drinking nutritional supplements such as Boost, Ensure, Premier Protein, or Carnation Instant Breakfast. Try them as snacks in between meals to help reach your protein needs, or in place of a meal especially when you don't have an appetite.
- Remember your low sodium diet while making high protein choices. For example, cottage cheese is a good protein source, but it is high in sodium.

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