

Nutrition for Health and Fitness: Sodium in Your Diet¹

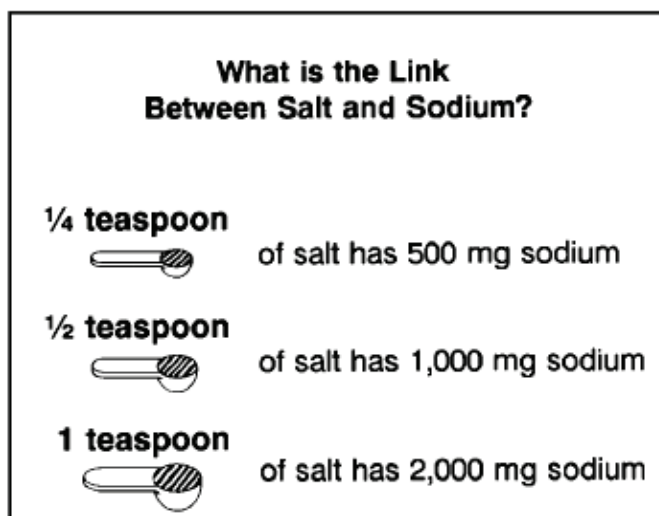
Linda B. Bobroff²

Getting the Facts

What is sodium?

Sodium is a mineral the body needs in small amounts. It is found in foods mostly as **sodium chloride**, another name for table salt. One teaspoon of **salt** weighs about 5,000 milligrams (mg) and contains about 2,000 milligrams of **sodium** (Figure 1).

Figure 1. Salt-Sodium Link

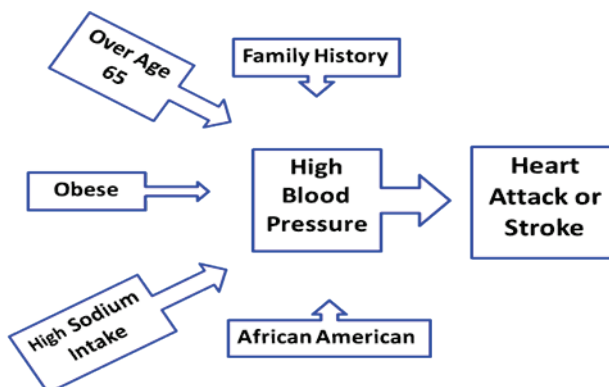


Sodium and High Blood Pressure

Many Americans are trying to cut down on sodium in their diets. Decreasing sodium intake can help to lower blood pressure and decrease risk for hypertension (high blood pressure). About one in three American adults has blood pressure that is too high. This increases their risk of having a heart attack or stroke. We don't know who will develop high blood pressure, but we do know that many Americans eat more sodium than they need.

In addition to high sodium intake, there are other risk factors for high blood pressure. You are more likely to have high blood pressure if other people in your family have high blood pressure, if you are over 65 years of age, African American, or obese (Figure 2).

Figure 2. Risk Factors for Hypertension



1. La versión en español de este documento es *Nutrición para la Salud: El sodio en su dieta* (FCS8129). This document is FCS8129, one of a series of the Department of Family, Youth and Community Sciences, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. First published: April 1990. Revised: October 2002, October 2010.
2. Linda B. Bobroff, Ph.D., RD, LD/N, professor and Extension nutrition specialist, Department of Family, Youth and Community Sciences, Cooperative Extension Service, Institute of Food and Agricultural Sciences; University of Florida; Gainesville, FL 32611.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A&M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Millie Ferrer-Chancy, Interim Dean.

Estimating the Sodium in Your Diet

The foods you eat and the way you prepare and serve them affect the amount of sodium in your diet. This check list will help you evaluate your sodium intake. (Put a check in only one box for each questions.)



How often do you:

1. Eat cured or processed meats such as ham, bacon, sausage, hot dogs, and other lunch meats?
2. Choose canned vegetables or frozen vegetables **with sauce?** (Do not count low sodium foods.)
3. Use commercially prepared meals (frozen meals, package mixes), main dishes, or canned or dried soups? (Do not count low sodium foods.)
4. Eat cheese or foods with lots of cheese, like pizza or macaroni and cheese?
5. Eat **salted** nuts, popcorn, pretzels, potato chips, or other salty snacks?
6. Add salt to cooking water for vegetables, rice, pasta, or other foods cooked in water?
7. Add salt, seasoning mixes, salad dressings, or condiments such as soy sauce, steak sauce, catsup, and mustard to foods during preparation or at the table?
8. Salt your food before tasting it?

Less than once a week	One or two times a week	Three to five times a week	Almost daily
-----------------------	-------------------------	----------------------------	--------------

The more checks you have in the last two columns, the higher the amount of sodium in your diet.

To cut back on sodium, choose foods low in sodium more often. When you eat a high sodium food, balance it during the day with foods that are low in sodium. Also, use the salt shaker less often at the table. Read on for more tips on keeping sodium at a healthy level in your diet.

How much sodium do I need?

Your body needs only a small amount of sodium. Federal dietary guidelines recommend a daily sodium intake of less than 2,300 mg for children and young adults.



Persons who are middle age or older and those at high risk for high blood pressure should aim for an intake of less than 1,500 mg of sodium per day; this is the amount of sodium in $\frac{3}{4}$ of a teaspoon of salt. Most Americans consume much more sodium than this.

Where is sodium found in my diet?

Sodium occurs naturally in many foods in small amounts. However, the majority of the sodium in our diets comes from processed foods. Most sodium added to foods comes from salt. Other ingredients and food additives contain sodium as well.

FACT: About $\frac{3}{4}$ of the **sodium** in our diets is from processed foods.

Foods high in sodium include:

- Salty snacks and crackers
- Processed cheeses
- Salted, smoked, or cured meats
- Pickled or canned fish
- Canned soups and meats
- Pickles, sauerkraut, and relishes
- Condiments—check nutrition labels
- Prepared entrees, dinners, and vegetables with sauces.

To cut down the sodium in your diet use these foods **less** often, or choose low-sodium varieties when available.

Using Food Labels

Food labels can help you keep your daily sodium intake below your target level. Most packaged foods **must** have nutrition and ingredient information listed on the label. Nutrition information is given in the familiar **Nutrition Facts** label (Figure 3).

The amount of sodium in a food also can be found on the nutrition label. In the Nutrition Facts label, sodium is given in milligrams per serving and as a percent of the Daily Value. In the Nutrition Facts label on this page, one serving of the food contains 470 mg (20% of the Daily Value) of sodium.

Note that the Daily Value for sodium is 2,400 mg. This is higher than the recommended level of 1,500 mg per day for middle-aged or older adults and for persons at high risk for hypertension. The food label has not been changed since lower sodium recommendations were announced. In the Nutrition Facts panel shown, 470 mg is 31% of the DV for individuals with a target level of 1,500 mg/day (the target sodium level for many Americans). The nutrition label lets you compare the amount of sodium (in milligrams) in different brands of the same food. This is because **serving sizes** of a certain type of food, such as soups or crackers, are the same on all food labels.

Figure 3. Nutrition Facts Label

Nutrition Facts			
Serving Size 1 cup (228g)			
Servings Per Container 2			
Amount Per Serving			
Calories 250	Calories from fat 110		
% Daily Value*			
Total Fat 12g	18%		
Saturated Fat 3g	18%		
<i>Trans</i> Fat 3g			
Cholesterol 30mg	10%		
Sodium 470mg	20%		
Total Carbohydrate 31g	10%		
Dietary Fiber 0g	0%		
Sugars 5g			
Protein 5g			
Vitamin A	4%		
Vitamin C	2%		
Calcium	20%		
Iron	4%		
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:			
	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

What about food label claims?

What if a food label says a food is “sodium free” or “low sodium?” What do these claims mean? Table 1 shows nutrient content claims that are allowed on food labels:

Table 1. Nutrient Content Claims

If a label says:	It means that one serving of the food has:
Sodium free	Less than 5 mg of sodium
Salt free	Product meets requirements for “sodium free”
Very low sodium	35 mg of sodium or less
Low sodium	140 mg of sodium or less
Reduced sodium, less sodium	At least 25 percent less sodium than the original product
Light in sodium	50 percent less sodium than the regular food

Cooking with Less Sodium

- ✓ Try low-sodium recipes.
- ✓ Cut down on the salt in your favorite recipes; use less and less salt each time you make the recipe. Some recipes, like yeast breads, require salt, while some recipes don’t need any salt at all!
- ✓ Use spices and herbs, as well as lemon or lime juice, instead of salt (see Table 2, Low-Sodium Seasonings).
- ✓ Cut back on salt used in cooking pasta, rice, noodles, and vegetables. Cut the salt in half at first; then see if you can prepare these foods without any salt.
- ✓ Use more fresh foods and fewer canned foods. Try some packaged foods labeled “low sodium,” “very low sodium,” “reduced sodium,” or “less sodium.”

FACT: Processed foods tend to be higher in sodium than fresh foods.

Table 2. Low-Sodium Seasonings

For these foods:	Use one or a combination:
Pot roast meatloaf	Allspice, garlic, marjoram, thyme
Fish	Chives, dill, tarragon
Poultry	Marjoram, rosemary, tarragon, garlic, paprika
Soups	Curry powder, ginger, garlic, basil
Pastas	Poppy seeds, savory, basil
Tomatoes or tomato sauces	Basil, oregano, chili powder
Rice bulgur	Basil, curry powder, onion powder (<u>not</u> onion salt)
Cooked cabbage, broccoli, Brussels sprouts, or cauliflower	Caraway seeds, curry powder, marjoram
Cooked carrots or beets	Caraway seeds, cloves, cinnamon
Cooked green beans, lima beans or peas	Dill, rosemary, garlic

Even if you are a salt lover, you will soon lose the desire for salty foods.

Be sure to **cut down on added salt *slowly*** and **cook with herbs and spices** (see Tables 2 and 3) to keep your foods tasty.



Table 3. Herb and Spice Combinations for Cooking

Start with equal amounts of each herb or spice (except hot pepper); adjust to suit your taste.

Barbecue blend: Cumin, garlic, hot pepper, oregano

Italian blend: Basil, marjoram, oregano, rosemary, sage, savory, thyme

Egg herbs: Basil, dill weed (leaves), garlic, parsley, finés herbs

Salad herbs: basil, parsley, tarragon

For Additional Information

For more information about sodium or other nutrition and health issues, contact the Family and Consumer Sciences agent at your local county Extension office. In Florida, find your Extension office in the blue pages of your telephone book, or online at <http://solutionsforyourlife.ufl.edu/map/>.

You can also find reliable information at the following websites:



<http://www.nal.usda.gov/fnic/>

<http://www.nutrition.gov>

<http://www.nhlbi.nih.gov>

<http://americanheart.org>

<http://mypyramid.gov>

Low- or Reduced-Sodium Recipes

Vegetable-Beef Soup

2 quarts water
1 pound of lean beef (round)
1 large onion, chopped
2 large garlic cloves, crushed
Juice of one small lemon
2 large russet potatoes, diced
1 cup fresh (or frozen without salt) green beans, cut into 1-inch pieces
1 cup green cabbage, chopped

Simmer meat, garlic, and onion in water, covered, for 1 hour. Add lemon juice and vegetables and simmer, covered, until done. Makes 6 servings.

Approx. per serving: 250 calories;
4 grams fat; 50 mg sodium



Microwave Baked Beans

Sweet bits of apple flavor these tasty baked beans.

¼ cup dried onion flakes
1 apple, cored and diced
1 can pinto beans, rinsed and drained
1 tablespoon molasses
1 tablespoon red wine vinegar
¼ cup water

Combine ingredients in a small microwave-safe casserole dish. Cover and microwave on high until apples are tender, about 8-10 minutes. Serve hot. Makes 4 servings.

Approx. per serving: (¾ cup);
150 calories; less than 1 g fat; 135 mg sodium.

Source: <http://www.foodandhealth.com>

Used with permission.

Accessed August 11, 2008

Salad Dressing

1/3 cup olive oil

1/4 teaspoon black pepper

1 teaspoon lemon or lime juice

1 teaspoon sugar

1/3 cup red wine vinegar

1/2 teaspoon paprika

1/4 teaspoon dry mustard

1 teaspoon finely chopped onion



Shake together before serving on tossed salad. Makes 8 servings.

Approx. per serving: 85 calories; 9 grams fat; less than 5 mg sodium.

Chicken Fried Rice

This recipe contains less sodium than fried rice made with regular soy sauce.

1 tablespoon canola, soybean, or corn oil

1/2 cup grated carrots

1 cup **cooked**, chopped chicken breast, skin and bones removed

1 egg and 1 egg white,* lightly beaten

1/2 teaspoon pepper

3 cups cooked and cooled brown rice

3 tablespoons lite soy sauce

2/3 cup scallions, sliced



In a wok or skillet, heat oil over medium heat. Add carrots and chicken. Stir-fry 1 minute. Add eggs and pepper and stir-fry 1 minute. Add rice and soy sauce. Stir-fry 5 minutes. Garnish with scallions. Serve immediately. Makes 6 servings.

**To reduce fat and cholesterol, use an egg substitute with less than 2 grams per fat serving. Fat and calorie content may vary among brands.*

Approx. per serving: 200 calories; 5 grams fat; 350 mg sodium

Homemade Chicken Broth

1 two-pound stewing chicken (or chicken pieces), skin removed

3 quarts water

2 carrots, peeled and quartered

2 stalks celery, cut into large pieces

1 onion, quartered

2 sprigs of fresh parsley

1/8 tsp pepper

1 bay leaf



Combine all ingredients in a large stockpot. Bring to boil over medium-high heat, skimming off foam as necessary. Reduce heat when no more foam rises to the top.

Simmer, uncovered, for about 2 hours. Remove chicken. Strain broth. Refrigerate until any fat rises to the top and congeals. Remove and discard fat. Use broth as a base for soups, or to cook rice or vegetables, etc. Makes eight 1 1/2 cup servings. Use chicken in salad or other recipes.

Approx per serving: 180 calories; 5 gram fat; 120 mg sodium

Homemade Chicken Broth and Chicken Fried Rice reprinted with permission from *The Good Book of Nutrition*, 1987, American Cancer Society, Florida Division, Inc.