

# Nutrition for Health and Fitness: Sodium in Your Diet <sup>1</sup>

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## Getting the Facts

### What is sodium?

**Sodium** is a mineral the body needs in small amounts for several important functions. This mineral allows nerves and muscles to function properly and keeps fluids in the body in proper balance. We find sodium in foods mostly as **sodium chloride**, another name for table **salt**.

### What is the link between salt and sodium?

Table salt is about 40% sodium. One teaspoon of salt contains about 2,300 milligrams of sodium, ½ teaspoon has about 1,150 milligrams, and ¼ teaspoon contains about 575 milligrams.

## Sodium and High Blood Pressure

Currently, one in three American adults has hypertension (high blood pressure), which increases their risk of having a heart attack or stroke. In most cases, we do not know exactly what causes high blood pressure, but we do know that for many people sodium intake plays a role. Americans tend to eat far more sodium than they need. Decreasing sodium in the diet can help to lower blood pressure and decrease risk for developing high blood pressure.



Figure 1. Most canned soups and soups from restaurants are very high in **sodium**. It is better to make soups at home from scratch to control the amount of salt you add.

Credits: kikir123/gettyimages.com

## Risk Factors for Hypertension

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,
- you are 65 years of age or older,
- you do not exercise regularly,
- you are African American,
- you are overweight or obese.

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# 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 checklist will help you evaluate your sodium intake. (Put a check in only one box for each question.)

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 other foods that are low in sodium. Use the salt shaker less often at the table.

## 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 those with existing hypertension or pre-hypertension (mildly elevated blood pressure, which often precedes development of hypertension), the recommendation is lowered to less than 1,500 mg of sodium per day; this is the amount of sodium in ¾ of a teaspoon of salt.

## Where is sodium found in my diet?

Small amounts of sodium occur naturally in many foods. The majority of the sodium in our diets—over 75% of it, in fact—comes from processed and restaurant foods. Most sodium added to foods comes from salt (sodium chloride). Other ingredients and food additives contain sodium as well.

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 entrées, dinners, and vegetables with sauces.

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



Figure 2. This pizza is likely very high in **sodium** due to the toppings of olives, pepperoni, and cheese. The tomato sauce and bread may be contributing substantial sodium as well, depending on the recipe. Credits: Yingko/gettyimages.com

Table 1. Estimating the Sodium in Your Diet

How often do you:	Less than once a week	One or two times a week	Three to five times a week	Daily or almost daily
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, packaged 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, ketchup, and mustard to foods during preparation or at the table?				
8. Salt your food before tasting it?				



Figure 3. Chips are an energy dense food, contributing many calories but few nutrients. They also often contain high amounts of **sodium**. Credits: Pavlo\_K/gettyimages.com

### Using Food Labels

Food labels can help you maintain your daily sodium intake at your target level. Most packaged foods must have nutrition and ingredient information, including the sodium content, listed on the label. Nutrition information is provided on the Nutrition Facts label, which the Food and Drug Administration (FDA) updated and approved in May of 2016. The new format will be mandatory for food packages of large food companies by January 2020. Smaller companies will have an additional year to comply with the new label.

On the Nutrition Facts label, sodium is shown in milligrams (mg) per serving and as a percent of the Daily Value. The Daily Value for sodium is **2,300 mg/day**, which is the **most** that people should eat in a day. Note that packages often contain more than one serving of a food item. If you plan to eat two servings of a food, you will get twice the sodium listed on the label. In the Nutrition Facts label in Figure 4, one serving of the food contains 160 mg (7% of the Daily Value) of sodium.

The current Daily Value for sodium is higher than what the *Dietary Guidelines for Americans 2015–2020* recommends for adults with pre-hypertension or with hypertension, which is 1500 mg/day. In the Nutrition Facts panel shown, 160 mg of sodium is 11% of the DV for individuals with a target level of 1,500 mg/day. The nutrition label allows consumers to compare the amount of sodium 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.

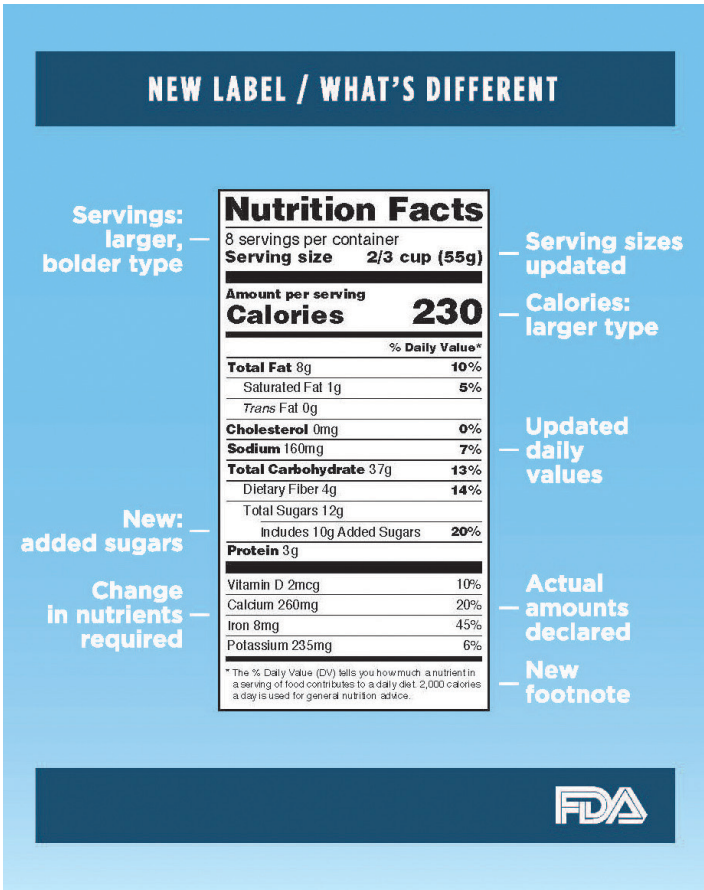


Figure 4. Updated Nutrition Facts Label approved by FDA in 2016. Sodium is shown in milligrams (mg) per serving and as a percent of the Daily Value, which is 2,300 mg. Credits: <https://www.fda.gov/food/ingredientpackaginglabeling/labelingnutrition/ucm114155.htm>

### What about food label claims?

What if a food label says a food is “sodium free” or “low sodium?” What do these claims mean? The table below shows nutrient content claims that FDA allows on food labels:

Table 2. FDA-approved nutrient content claims for sodium.

If a label says:	It means that one serving of the food has:
Salt/Sodium-Free	Less than 5 mg of sodium
Very Low Sodium	35 mg of sodium or less
Low sodium	140 mg of sodium or less
Reduced sodium	At least 25% less sodium than the original product
Light in Sodium or Lightly Salted	50% less sodium than the regular food
No-Salt-Added or Unsalted	No salt is added during processing—but these products may not be salt/sodium-free unless stated



## 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, and some recipes do not need any salt at all!

Use spices and herbs, as well as lemon or lime juice, instead of salt.

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.”

Cut down on added salt slowly, and cook with herbs and spices to keep your foods tasty. In time, even if you are a salt lover, your desire for salty foods will likely diminish as your palate adapts.

Table 3. Cooking with herbs and spices.

For these foods:	Use one or a combination:
Pot roast or 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 or bulgur	Basil, curry powder, onion powder (not 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

Table 4. Herb and spice blends.

Start with equal amounts of each herb or spice (except hot pepper); adjust to suit your taste.
<b>Barbecue blend:</b> Cumin, garlic, hot pepper, oregano
<b>Italian blend:</b> Basil, marjoram, oregano, rosemary, sage, savory, thyme
<b>Egg herbs:</b> Basil, dill weed (leaves), garlic, parsley, fines herbes
<b>Salad herbs:</b> basil, parsley, tarragon

## Low- or Reduced-Sodium Recipes

### Marinara Sauce

- ½ cup finely chopped onion
- 2 garlic cloves, minced
- 1 Tbsp olive oil
- 1 29-oz can no-salt-added crushed tomatoes
- 1 6-oz can tomato paste
- ½ cup red wine (optional)
- 1 tsp sugar
- 1 Tbsp dried crushed basil
- 1 Tbsp fresh chopped parsley (or 1 tsp dried)
- ½ tsp salt (optional)

Sauté the onion in a saucepan with the olive oil over low heat until translucent (do not brown). Add garlic and sauté 30 seconds. Stir in the remaining ingredients. Bring to a boil, lower heat, and simmer on low at least 30 minutes and up to an hour. Serve over your favorite whole wheat pasta. Makes 8 servings.

**Approximate nutrients per serving** (sauce only, not including optional ingredients):

80 calories  
3 grams dietary fiber  
10 grams carbohydrates  
20 milligrams sodium  
2 grams fat  
313 milligrams potassium  
2.5 grams protein

### Garlic Herb Chicken

- 4 skinless, boneless chicken breasts
- 1 Tbsp olive oil
- 1 tsp lemon juice
- ½ tsp garlic powder
- ¼ tsp pepper
- ½ tsp dried tarragon

Preheat oven to 400 degrees. Place the chicken breasts into a casserole dish. Mix the olive oil, lemon juice, and herbs/spices together. Brush or rub the mixture on both sides of each chicken breast. Bake 20–25 minutes; baking time will vary depending on thickness of the chicken. Internal temperature should reach 165°F. Makes 4 servings.

**Approximate nutrients per serving**

175 calories  
0.25 gram dietary fiber  
1 gram carbohydrate  
65 milligrams sodium

6.5 grams fat  
230 milligrams potassium  
27 grams protein

## **Pasta Primavera**

- 8 oz whole wheat pasta, dry
- 2 Tbsp olive oil, divided
- ½ large sweet onion, chopped
- 2 tsp minced garlic
- 1 cup broccoli florets
- 1 cup cauliflower florets
- ½ cup sliced carrots
- 2 bell peppers (any color), cut into bite-sized pieces
- ½ cup frozen peas
- 2 Tbsp fresh lemon juice + ½ teaspoon zest
- ½ cup reduced-fat grated parmesan cheese
- 2 tablespoons fresh parsley, chopped

Cook pasta according to package instructions; do not add salt. Drain and toss with 1 tablespoon of the olive oil. Set aside. Heat a large skillet over medium heat. Add the remaining olive oil and the onions. Cook until the onions are translucent (soft and clear; do not brown). Add the garlic and cook 30 seconds. Add the broccoli, cauliflower, carrots, and red pepper to the skillet and sauté over medium high heat 5 minutes; then lower the heat, cover and cook an additional 5 minutes, or until the vegetables are cooked to your liking. Check skillet and add small amount of water if needed. Add the peas, lemon juice, and zest, and simmer about 5 minutes. Reduce heat to low and gently stir in the cooked pasta, cheese, and parsley. Toss gently and serve. Makes 4 servings.

### **Approximate nutrients per serving:**

350 calories  
9 grams dietary fiber  
55 grams carbohydrates  
195 milligrams sodium  
10 grams fat  
615 milligrams potassium