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Sodium in the diet

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Quick Facts

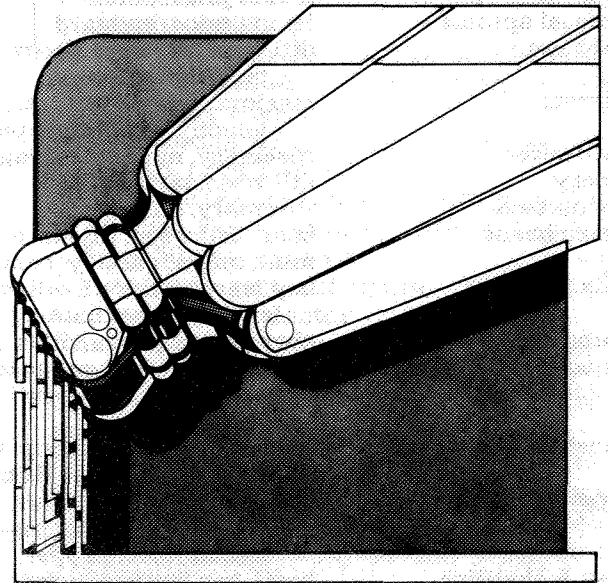
Sodium is one of the factors involved in the development of high blood pressure.

Sodium is a component of salt; table salt is 40 percent sodium and 60 percent chloride.

Most foods contain some sodium because it is naturally present.

Several food industries are trying to find methods to decrease sodium in the food while ensuring its safety.

Some authorities are recommending 2,000 milligrams of sodium per day as a reasonable intake, with 1,100 to 3,300 mg as the suggested range.



Sodium is a part of everyone's diet, but how much is too much? Under ideal conditions, the minimum sodium requirement is about 400 milligrams (mg) of sodium each day. This is equal to about 1/5 teaspoon of table salt. Some authorities are recommending 2000 mg per day as a reasonable intake, with 1,100-3,300 mg as the suggested range.

Sodium intake is but one of the factors involved in the development of high blood pressure, otherwise known as hypertension. Other important considerations are the amount of potassium and calcium in the diet. Exercise and the amount of polyunsaturated fatty acids eaten also are of possible concern. In addition, maintaining ideal weight is important. Eating more foods rich in calcium and potassium have both been strongly suggested as protective measures against hypertension.

The following information describes the need for sodium in the diet, compares the sodium content of some common foods, and suggests ways to reduce the amount of sodium in the diet.

Why Is Sodium Needed?

Sodium has an important role in maintaining the water balance within cells and in the function of both nerve impulses and muscles. Any extra sodium is excreted by the kidneys. Excess sodium in the body may lead to edema or water retention.

Some athletes and heavy laborers are concerned about not getting enough sodium to replace what is lost through perspiration. At the present time, salt tablets are not recommended and may increase dehydration and actually lower performance. The sodium losses will easily be replenished when the next meal is eaten.

Where Is Sodium Found?

Many people think of salt and sodium as being the same thing, but actually they are not. Table salt is 40 percent sodium and 60 percent chloride. It is the sodium portion of salt that is important to people concerned about high blood pressure. Most

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foods contain some sodium because it is naturally present.

Most of the sodium in processed foods is added to preserve and/or flavor them. Salt is the major source of sodium added to these foods. It is added to most canned and some frozen vegetables, smoked and cured meats, pickles, and sauerkraut. Salt is used in most cheeses, sauces, soups, salad dressings, and in many breakfast cereals. Sodium is also found in many other ingredients used in food processing. Several food industries are trying to find methods to decrease sodium in the food while ensuring its safety.

Watch out for commercially prepared condiments, sauces, and seasonings when preparing and serving foods for you and your family. Many, like those below, are high in sodium.

Onion salt	Soy sauce
Celery salt	Steak sauce
Garlic salt	Barbeque sauce
Seasoned salt	Catsup
Meat tenderizer	Mustard
Bouillon	Worcestershire sauce
Baking powder	Salad dressings
Baking soda	Pickles
Monosodium	Chili sauce
glutamate (msg)	Relish

Salt-Sodium Conversions

The link between salt and sodium may be a little hard to understand at first. If you remember that one teaspoon of salt provides 2,000 milligrams of sodium, however, you can estimate the amount of sodium that you add to foods during cooking and preparation, or even at the table.

- 1/4 tsp. salt = 500 mg sodium
- 1/2 tsp. salt = 1,000 mg sodium
- 3/4 tsp. salt = 1,500 mg sodium
- 1 tsp. salt = 2,000 mg sodium



Table 1: Sodium comparisons.

Little	Low	More	High
Apple, 1—2 mg	Applesauce, 1 cup—6 mg	Apple pie, 1/8, frozen—208 mg	Apple pie, 1, fast food—400 mg
Low sodium bread, 1 slice—7 mg	Bread, 1 slice, white—114 mg	Pound cake, 1 slice—171 mg	English muffin, 1 whole—293 mg
Vegetable oil, 1 tbsp.—0 mg	Butter, 1 tbsp., unsalted—2 mg	Butter, 1 tbsp., salted—116 mg	Margarine, 1 tbsp.—140 mg
Chicken, 1/2 breast—69 mg	Chicken pie, 1, frozen—907 mg	Chicken noodle soup, 1 cup—1,107 mg	Chicken dinner, fast food—2,243 mg
Fresh corn, 1 ear—1 mg	Frozen corn, 1 cup—7 mg	Corn flakes, 1 cup—256 mg	Canned corn, 1 cup—384 mg
Cucumber, 7 slices—2 mg	Sweet pickle, 1—128 mg	Cucumber w/salad dressing—234 mg	Dill pickle, 1—928 mg
Pork, 3 oz.—59 mg	Bacon, 4 slices—548 mg	Frankfurter, 1—639 mg	Ham, 3 oz.—1,114 mg
Lemon, 1—1 mg	Catsup, 1 tbsp.—156 mg	Soy sauce, 1 tbsp.—1,029 mg	Salt, 1 tsp.—1,938 mg
Potato, 1—5 mg	Potato chips, 10—200 mg	Mashed potatoes, instant, 1 cup—485 mg	Potato salad, 1/2 cup—625 mg
Plain yogurt, 1 cup—105 mg	Milk, 1 cup—122 mg	Buttermilk, 1 cup—257 mg	Chocolate pudding, 1/2 cup, instant—470 mg
Steak, 3 oz.—55 mg	Corned beef, 3 oz.—802 mg	Jumbo burger, fast food—990 mg	Meat loaf, frozen dinner—1,304 mg
Tomato, 1—14 mg	Tomato juice, 1 cup—878 mg	Tomato soup, 1 cup—932 mg	Tomato sauce, 1 cup—1,498 mg
Tuna, fresh, 3 oz.—50 mg	Tuna, canned, 3 oz.—384 mg	Tuna pot pie, 1, frozen—715 mg	Fish sandwich, 1, fast food—882 mg
Peanuts, unsalted, 1 cup—8 mg	Peanut butter, 1 tbsp.—81 mg	Peanut brittle, 1 oz.—145 mg	Dry roasted peanuts, salted, 1 cup—986 mg
Low sodium cheddar, 1 oz.—6 mg	Cheddar cheese, 1 oz.—176 mg	Cottage cheese, 1/2 cup—257 mg	American cheese, 1 oz.—406 mg
Water, 8 oz., tap—12 mg	Club soda, 8 oz.—39 mg	Antacid in water—564 mg	Beef bouillon, 8 oz.—1,152 mg

Sodium Labeling

Nutrition and ingredient labels on foods can show you the major sources of sodium in your diet and help you get an idea of your sodium intake.

Sodium on *nutrition labels* is given in milligrams (mg) per serving. The amount includes sodium naturally present in the ingredients as well as sodium added during processing. Here is part of a nutrition label like those you might see on foods. This label for an oat cereal tells you this food provides 330 milligrams of sodium in a 1-ounce serving.

Nutrition Information Per Serving	
SERVING SIZE	1 oz
SERVINGS PER CONTAINER	12
CALORIES	110
PROTEIN	4 g
CARBOHYDRATE	20 g
FAT	2 g
SODIUM	330 mg
	(1.155 mg per 100 g)

Ingredient labels are found on nearly all food products. They list the ingredients in the food by weight, from greatest to least. Salt is the major—but not the only—source of sodium in food products. Any ingredient that has sodium, salt, or soda as part of its name (monosodium glutamate, baking soda, seasoned salt) contains sodium. Soy sauce and other condiments used as ingredients also contribute sodium.

INGREDIENTS: Potatoes, vegetable oil, whey, salt, dried milk solids, sour cream, onion salt, monosodium glutamate, dried parsley, lactic acid, sodium citrate, artificial flavors.

This food contains four different sodium ingredients. Notice that salt is the fourth ingredient in the product by weight. Therefore, this product is probably high in sodium. If there is a nutrition label, check to see the amount of sodium in a serving. If you want more specific information, write to the manufacturer.

Steps to Reduce Sodium

One of the Dietary Guidelines for Americans is to avoid too much sodium. The following suggestions are starting points for reducing the sodium in the diet.

- Cover up some of the holes on the salt shaker or take it off the table. Learn to enjoy the natural taste of food.
- Use more fruit, fresh vegetables and fresh meat. The more processed the food is, the more sodium it contains. (See Table 1.)
- Use vegetable oil instead of butter or margarine in cooking.
- Check food labels for the words salt or sodium. Salt often is used as a preservative or flavoring agent. (See Table 2.)
- Season foods with herbs and spices rather than salt. (See Table 3.)
- Determine the sodium level of "low sodium" products. For example, "lite salt" still is almost 50 percent salt.
- Do not use salt substitutes without first talking to your doctor.
- Check with your doctor or pharmacist for the sodium content of medications, especially antacids, cough medicines, laxatives and pain relievers.
- Try the low- or reduced-sodium products that are now available. Shop carefully though. These products can be more expensive. Make sure the reduction in sodium justifies the added cost.
- Plan meals that contain less sodium. Try new recipes that use less salt and sodium-containing ingredients. Adjust your own recipes by reducing such ingredients a little at a time. Don't be fooled by recipes that have little or not salt added, but call for ingredients like soups, bouillon cubes, or condiments that do.
- Make your own condiments, dressings and sauces and keep sodium-containing ingredients at a minimum.
- Cut back on salt used in cooking pasta, rice, noodles and hot cereals.
- Taste your food before you salt it. If, after tasting your food, you must salt it, try one shake instead of two.

Table 2: Examples of sodium-containing ingredients and their uses in foods.

Baking powder—leavening agent	Sodium sulphate—preservative
Baking soda—leavening agent	Sodium bisulfite—preservative
Monosodium glutamate—flavor enhancer	Sodium ascorbate—curing agent, nutrient, antioxidant, color stabilizer
Sodium benzoate—preservative	Sodium aluminum phosphate—leavening acid, firming agent
Sodium caseinate—thickener, binder, flavoring	Sodium dioxide—anticaking agent
Sodium citrate—buffer, used to control acidity in soft drinks and fruit drinks	Sodium erythorbate—antioxidant, color enhancer, curing agent
Sodium nitrite—curing agent in meat, provides color, prevents botulism (a food poisoning)	Sodium tripolyphosphate (sodium pyrophosphate)—sequestrant, holds water in meats
Sodium phosphate—emulsifier, stabilizer, buffer	
Sodium propionate—mold inhibitor	
Sodium saccharin—artificial sweetener	
Sodium alginate—stabilizer, thickener, emulsifier, gelling agent	

Table 3: Seasoning Without Your Salt Shaker with Herbs and Spices.

For Appetizers	
Hors d'oeuvres	chervil, oregano, paprika, parsley
Cheese dips & spreads	basil, chervil, dill weed, marjoram, oregano, sage, parsley, summer savory, tarragon
Deviled or stuffed eggs	curry powder, dill weed, summer savory, tarragon
Dips	curry powder, oregano, chervil, parsley
Mushrooms	oregano, marjoram
Seafood cocktails & spreads	basil, dill weed, thyme, bay leaves, tarragon
For Vegetables	
Asparagus	lemon peel, thyme
Broccoli	lemon juice, onion
Brussel sprouts	lemon juice, mustard
Cabbage	dill weed, caraway seeds, oregano, lemon juice, vinegar, onion, mustard, marjoram
Carrots	marjoram, ginger, mint, mace, parsley, nutmeg, sage, unsalted butter, lemon peel, orange peel, thyme, cinnamon
Califlower	rosemary, nutmeg, tarragon, mace
Celery	dill weed, tarragon
Cucumbers	rosemary, onion
Green beans	basil, dill weed, thyme, curry powder, lemon juice, vinegar
Peas	mint, onion, parsley, basil, chervil, marjoram, sage, rosemary
Potatoes	bay leaves, chervil, dill weed, mint, parsley, rosemary, paprika, tarragon, mace, nutmeg, unsalted butter, chives
Spinach	chervil, marjoram, mint, rosemary, mace, nutmeg, lemon, tarragon
Squash	basil, saffron, ginger, mace, nutmeg, orange peel
Tomatoes	basil, bay leaves, chervil, tarragon, curry powder, oregano, parsley, sage, cloves
Zucchini	marjoram, mint, saffron, thyme
For Entrees	
Eggs & cheese	curry powder, marjoram, mace, parsley flakes, tumeric, basil, oregano, rosemary, garlic, mustard, mace, ginger, curry powder, allspice, lemon juice, pepper
Fish & shellfish	basil, bay leaves, chervil, marjoram, oregano, parsley, rosemary, sage, tarragon, thyme, lemon peel, celery seed, cumin, saffron, savory, dry mustard
Poultry	basil, saffron, bay leaves, sage, dill weed, savory, marjoram, tarragon, oregano, thyme, rosemary, paprika, curry powder, orange peel, cranberries, mushrooms
Pork	cloves, garlic, ginger, mustard, nutmeg, paprika, sage, rosemary, savory, thyme, curry powder, oregano, apples
For Fruits and Desserts	
Apples	allspice, cardamon, ginger, cinnamon, cloves, nutmeg
Bananas	allspice, ginger, cinnamon, nutmeg
Oranges	allspice, cinnamon, anise, nutmeg, cloves, ginger, mace, rosemary
Pears	allspice, cinnamon, nutmeg, anise, mint
Fruit compotes	basil, rosemary, saffron, thyme
Puddings	arrowroot, cinnamon, cloves, lemon peel, vanilla bean, ginger, mace, nutmeg, orange peel
For Beverages	
Cranberry cocktail	cinnamon, mint
Fruit juices & punches	marjoram, mint, saffron, cloves, lemon peel, orange peel
Iced tea	cinnamon
Milk drinks	cinnamon, nutmeg, vanilla bean
Spiced cider	ginger
Tea	sage, mint
Tomato juice cocktail	allspice, basil, tarragon, cloves, oregano, lemon peel, summer savory



BAY LEAVES



SAGE



SAVORY



GINGER



NUTMEG

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