

Sodium: q&a

The Centers for Disease Control and Prevention (CDC) is working at the national, state, and local levels to support sodium reduction in the United States. CDC's approach to sodium reduction includes supporting and evaluating ongoing initiatives to reduce sodium; providing technical assistance to the public health community; expanding the scientific literature related to sodium reduction; collaborating with stakeholders; and educating the public. Responding to congressional language encouraging CDC to work with manufacturers and chain restaurants to reduce sodium levels in their products, the agency's work also includes meeting with and garnering feedback from the food and beverage industry. This document provides general background information for CDC-funded programs and partners on reducing sodium.

Is it salt or sodium?

Sodium chloride is the chemical name for dietary salt.¹ The words "salt" and "sodium" are not exactly the same, but consumers often use them interchangeably. The use of both terms may be seen on food packaging; for example, the Nutrition Facts label uses "sodium," whereas the front of the package may say "salt free."² Ninety percent of the sodium we consume is in the form of salt.¹

Why is reducing sodium intake important?

High sodium intake raises blood pressure, and high blood pressure is a major cause of heart disease and stroke.¹ Even if a person does not have high blood pressure, reducing sodium intake is important because the lower one's blood pressure in general, the lower the risk for heart disease and stroke.³ The average daily sodium intake for Americans aged 2 years and older is more than 3,400 milligrams (mg).⁴ For American adults, the recommendation is to consume less than 2,300 mg of sodium each day.⁵ Reducing average population sodium consumption by 400 mg has been projected to prevent up to 28,000 deaths from any cause and save \$7 billion in health care expenditures annually.⁶

What are the dietary guidelines for sodium?

The *2015–2020 Dietary Guidelines for Americans* recommend Americans consume less than 2,300 mg of sodium each day as part of a healthy eating pattern.⁷

Where does most of the sodium in our diet come from?

Most of the sodium we eat comes from processed foods and foods prepared in restaurants. When sodium is added to processed foods, it cannot be removed. More than 40% of sodium intake comes from the following 10 types of foods:⁸

1. Breads and rolls
2. Cold cuts and cured meats such as deli or packaged ham or turkey
3. Pizza
4. Fresh and processed poultry
5. Soups
6. Sandwiches such as cheeseburgers
7. Cheese
8. Pasta dishes (not including macaroni and cheese)
9. Meat-mixed dishes such as meat loaf with tomato sauce
10. Snacks such as chips, pretzels, and popcorn

Can't individuals reduce their sodium intake on their own?

Although some foods are high in sodium, excess sodium intake also is from frequent consumption of foods with only moderate amounts of sodium, such as breads and poultry.⁹ Additionally, different brands of the same foods may have different sodium levels. For example, sodium in chicken noodle soup can vary by as much as 840 mg per serving.⁸ Americans also eat outside the home frequently, and many restaurant foods do not have nutrition labels,

so consumers often underestimate the amount of sodium, calories, and fat in restaurant meals.¹⁰ For all of these reasons, lowering personal sodium intake can be difficult. Gradually lowering the sodium content of the entire food supply will create greater choice for consumers who want or need to reduce sodium intake.

What does “salt sensitive” mean? Who is “salt sensitive”?

Although nearly everyone can benefit from sodium reduction, some people are more salt sensitive than others¹—that is, they experience greater changes in blood pressure in relation to changes in sodium consumption. These individuals often include those who are older, black, have high blood pressure, have diabetes, or have chronic kidney disease.¹ Currently, no screening test exists for salt sensitive people.

Table salt provides iodine. Will reducing salt intake lead to iodine deficiency?

The majority of the sodium Americans consume comes from processed and restaurant foods.⁸ In the United States, salt used in food processing is not iodized.¹¹ Reducing sodium in these foods would have minimal impact on iodine status in the population.¹²

How will reducing sodium affect the taste of foods?

Research has found that sodium reductions of up to 20% are not noticeable to consumers, depending on the food product.¹ Consuming less sodium may decrease a person's preference for salt or sodium and lead to reduced consumption.

Are other countries working on sodium reduction?

In a 2003 report, the World Health Organization recommended a daily intake of less than 2 grams (2,000 mg) of sodium for populations.¹³ Australia, Canada, Finland, France, Ireland, Japan, the Netherlands, Sweden, and the United Kingdom have had or currently have national activities on sodium reduction.¹⁴ The work in Finland and the United Kingdom in particular offers examples of progress that can be made in sodium reduction. Finland has used media campaigns, worked with the food industry, and created labeling legislation. Starting in 2003–2004, the United Kingdom used sodium reduction targets, a public health campaign, and front-of-pack labeling systems to counter increasing sodium intake. By 2011, U.K. data showed a decrease from an average intake of 9.5 grams of salt per day to 8.1 grams per day.¹⁵

Are states or localities in the United States working on sodium reduction?

Yes. Many states and localities have developed plans or are taking action on sodium reduction. For example, to increase the availability and accessibility of lower sodium foods for consumers, CDC launched the Sodium Reduction in Communities Program (SRCP) in 2010.¹⁶ This demonstration program was designed to

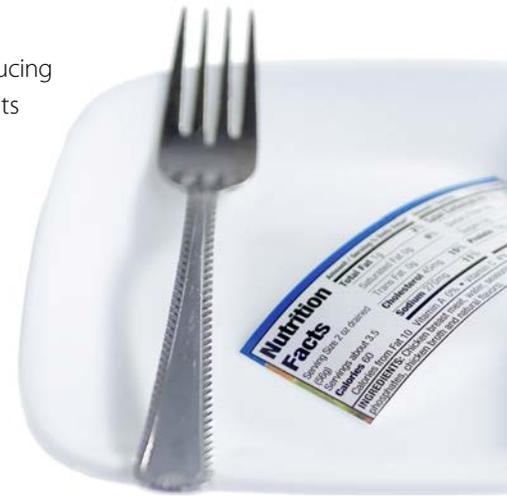
explore the feasibility of reducing sodium consumption to limits recommended by the U.S. 2010 *Dietary Guidelines for Americans*. The program supported local-level strategies to increase the availability and accessibility of lower sodium foods and decrease sodium intake. In 2013, CDC awarded funds to support a second round of communities. Two state-coordinated programs and five communities are receiving funding. The program aims to increase access to and accessibility of lower sodium food options, to reduce sodium intake, and to continue to build practice-based evidence around effective population-based strategies to reduce sodium consumption at the community level. While focused on sodium reduction, awardees are implementing interventions as part of sustainable comprehensive strategies aimed at improving the food environment in at least two targeted venues per community.

If this is a national effort, why should states or localities be involved?

There are opportunities for sodium reduction at the national, state, and local levels. Building awareness and demand at local levels can add support for voluntary sodium reduction initiatives. Examples of sodium reduction activities for states and localities include developing position statements or issue briefs, educating stakeholders, making information available to consumers at the point of purchase, and adopting healthful food service guidelines. Many states and localities also are participating in the National Salt Reduction Initiative led by the New York City Department of Health and Mental Hygiene (see <http://www1.nyc.gov/site/doh/health/health-topics/national-salt-reduction-initiative.page>).

What can individuals do to lower sodium consumption?

- Choose to purchase healthy options and talk with your grocer or favorite restaurant about stocking lower sodium food choices.
- Read the Nutrition Facts label while shopping to find the lowest sodium options of your favorite foods. Foods considered low in sodium have less than 5% of the daily value of sodium.¹⁷
- Eat a diet rich in fresh fruits and vegetables, frozen fruits and vegetables without sauce, and no salt added canned vegetables.
- Limit processed foods high in sodium.
- When eating out, request lower sodium options.
- Support initiatives that reduce sodium in foods in cafeterias and vending machines.



Other countries or organizations report dietary sodium guidelines in grams or millimoles (mmol).

What is the conversion?

Sodium chloride, commonly known as salt, consists of 40 percent sodium and 60 percent chloride. One level teaspoon of salt contains approximately 2,300 mg of sodium.

- To convert mg of sodium to mg of salt, multiply the mg of sodium by 2.5.¹

- To convert mmol of sodium to mg of sodium, multiply mmol of sodium by 23.¹
- To convert mmol of sodium to mg of sodium chloride, multiply mmol of sodium by 58.5.¹

For more information, visit www.cdc.gov/salt.

References

- ¹ Institute of Medicine. Dietary reference intakes for water, potassium, sodium chloride, and sulfate. Washington, DC: National Academies Press; 2004.
- ² Office of the Federal Register. Food Labeling; mandatory status of nutrition labeling and nutrient content revision. Final rule. 58 CFR 2079 (1993).
- ³ Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, et al. The seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension*. 2003;42:1206–52.
- ⁴ U.S. Department of Health and Human Services and U.S. Department of Agriculture. What We Eat in America. NHANES 2011–2012. Available at http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/1112/tables_1-40_2011-2012.pdf.
- ⁵ U.S. Department of Health and Human Services and U.S. Department of Agriculture. *2015–2020 Dietary Guidelines for Americans*. 8th Edition. December 2015. Available at <http://health.gov/dietaryguidelines/2015/guidelines>.
- ⁶ Bibbins-Domingo K, Chertow GM, Coxson PG, Moran A, Lightwood JM, Pletcher MJ, et al. Projected effect of dietary salt reductions on future cardiovascular disease. *N Engl J Med*. 2010;362:590–9.
- ⁷ Centers for Disease Control and Prevention. Usual sodium intakes compared with current dietary guidelines—United States, 2005–2008. *MMWR*. 2011;60(41):1413–7.
- ⁸ Centers for Disease Control and Prevention. Vital signs: food categories contributing the most to sodium consumption—United States, 2007–2008. *MMWR*. 2012;61(5):92–8.
- ⁹ Dietary Guidelines Advisory Committee. Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010. Washington, DC: U.S. Department of Agriculture, Agricultural Research Service; 2010. Available from www.cnpp.usda.gov/DGAs2010-DGACReport.htm.
- ¹⁰ Burton S, Creyer E, Kees J, Huggins K. Attacking the obesity epidemic: The potential health benefits of providing nutrition information in restaurants. *Am J Public Health*. 2006;96:1669–75.
- ¹¹ Salt Institute. Iodized salt. 2011. Available from www.saltinstitute.org/Uses-benefits/Salt-in-Food/Essential-nutrient/Iodized-salt.
- ¹² Institute of Medicine. Strategies to reduce sodium intake in the United States. Washington, DC: National Academies Press; 2010.
- ¹³ World Health Organization. Diet, nutrition, and the prevention of chronic diseases. Report of a joint WHO/FAO Expert Consultation. WHO Technical Report Series, No. 916. Geneva: World Health Organization; 2003.
- ¹⁴ He FJ, MacGregor GA. A comprehensive review on salt and health and current experience of worldwide salt reduction programmes. *J Hum Hypertens*. 2009;23:363–84.
- ¹⁵ Sadler K, Nicholson S, Steer T, Gill V, Bates B, Tipping S, et al. National Diet and Nutrition Survey—assessment of dietary sodium in adults (aged 19 to 64 years) in England, 2011. United Kingdom Department of Health; 2012. Available from https://www.wp.dh.gov.uk/transparency/files/2012/06/Sodium-Survey-England-2011_Text_to-DH_FINAL1.pdf.
- ¹⁶ Centers for Disease Control and Prevention. Sodium Reduction in Communities Program. 2012. Available from www.cdc.gov/dhdsp/programs/sodium_reduction.htm.
- ¹⁷ U.S. Food and Drug Administration. Lowering salt in your diet. 2012. Available from www.fda.gov/ForConsumers/ConsumerUpdates/ucm181577.htm.

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