

Nutrition Guideline

Sodium

For Professional Reference Only

Applicable to: Nurses, Physicians, and Other Health Professionals

Recommendations

- A daily intake of less than 2300 mg sodium is recommended for most adults. The closer to 1500 mg per day, the better.
- Salt is made up of about 40% sodium and 60% chloride.
- Choose and prepare foods with little or no salt. This often means choosing more fresh and homemade foods.
- Use less processed, packaged and pre-prepared foods.
 - Read the Nutrition Facts table on food packages
 - less than 5% Daily Value (DV) sodium is low in sodium; choose more of these foods
 - more than 15% DV is high in sodium; choose less of these foods
- Eat less often in restaurants and fast food places.

Health Benefits

Following the recommendations in this guideline may help:

- Prevent hypertension in non-hypertensive individuals.^{1,2,3,4}
- Lower blood pressure in those who have hypertension.^{1,2,4}
- Reduce risk for heart attack, heart failure, and stroke and kidney disease through prevention or management of hypertension.¹
- Reduce symptoms of fluid retention seen in heart failure.⁵
- Possibly reduce severity and frequency of asthma, osteoporosis, stomach cancer, and kidney stones.⁴

The effect of sodium reduction on blood pressure tends to be greater in middle-aged and older persons, people of African descent, and individuals with hypertension, diabetes or chronic kidney disease.^{2,3} One estimate states that reducing dietary sodium may decrease hypertension prevalence by 30 percent.⁶

Key Questions

What is sodium?

Sodium is the main cation in the body's extracellular fluid. It is responsible for maintaining normal fluid and electrolyte balance, nerve impulse transmissions, and muscle contractions.⁴ Sodium or salt is found naturally in all foods; and salt is used as a preservative and flavouring in many processed foods.

What is the link between sodium intake and blood pressure?

There is strong evidence that the higher the sodium intake, the higher the blood pressure, and the higher the risk for hypertension and cardiovascular diseases.^{2,6,7} High blood pressure is thought to be the world's leading risk factor for death.⁴ Canadian research shows that excess dietary sodium causes hypertension in at least one million Canadians, which results in \$430 million a year in direct health-care costs.⁶

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How are salt and sodium related?

Salt is made up of 40% sodium and 60% chloride. One level teaspoon of salt contains just over 6 grams of salt and 2300 mg of sodium. 2300 mg sodium is equivalent to 100 mmol sodium.

How much sodium do individuals typically eat in a day?

Results from the 2004 Canadian Community Health Survey indicate the average Canadian diet contains about 3500 mg sodium/day.⁸ About 85% of men and 60% of women aged 19 to 70 exceed the upper level of sodium intake for adults (2300 mg sodium) daily.

What is the maximum amount of sodium an individual should consume?

The Dietary Reference Intakes for sodium include an Adequate Intake (AI) and Tolerable Upper Intake Level (UL). The AI is a recommended intake level, thought to meet or exceed the requirements of all individuals in an age group. The UL is defined as the highest average daily level of intake likely to pose no risk of adverse health effects, and reflects an intake level that should not be exceeded.⁹

Dietary Reference Intakes for sodium:⁹

	Age (years)	Adequate Intake (mg per day)	Tolerable Upper Intake Level (mg per day)
Children	2-3	1000	1500
	4-8	1200	1900
	9-13	1500	2200
	14-18	1500	2300
Adults	19 -50	1500	2300
	51-70	1300	2300
	70 and over	1200	2300

Adults should aim to eat less than 2300 milligrams (mg) of sodium per day. The closer an individual can get to a daily intake of 1500 mg, the better.^{1,2,9,10}

Due to Canada's high-sodium food supply and high levels of sodium intake, a reduction to 1500 mg per day is not easily achievable at present.⁴ An achievable recommendation is less than 2300 mg per day.^{1,2,3}

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

Dietary sodium is found in North American diets as follows:¹¹

- 77% of the sodium consumed comes from processed and packaged foods or restaurant foods
- 12% occurs naturally in foods
- 6% is added during meal preparations
- 5% is usually added at the table

It's easy for sodium in diets to add up:

- A typical fast food burger contains approximately 1000 mg sodium.
- 1 cup of canned soup contains approximately 700 to 1100 mg sodium depending on the brand.

What are ways to reduce salt or sodium in the diet?

Dietary sodium can be reduced by:

- Cutting down on or eliminating salt added at the table and in cooking.
- Eating more fresh or frozen, unprocessed, and homemade food. Read the list of ingredients to see if salt or sodium has been added.
- Reducing the use of high sodium condiments (i.e. garlic salt, seasoning salt, soy sauce, ketchup, mustard, gravies, pickles, sauerkraut).
- Limiting intake of processed and packaged foods (i.e. canned or packaged soups, luncheon meats,)
- Reading the Nutrition Facts table on food labels. Foods with a % Daily Value higher than 15% are high in sodium. Choose these foods less often.
- Comparing brands of food and choosing those with the lower % Daily Value and smaller amounts of sodium listed on the Nutrition Facts table.
- Avoiding salty snacks foods such as potato chips and pretzels.
- Limiting restaurant meals and fast foods.
- Shopping for and using low sodium products.
- Eating smaller portion sizes of food that contain salt.

How can an individual adjust to eating a low salt diet?

An individual's taste for salt changes as their diet changes.¹² After consuming foods lower in salt for a period of time, taste and desire for salt tends to decrease.

Thus, individuals should make changes to decrease salt in the diet slowly instead of all at once. It takes time (usually 8 to 12 weeks) to get used to eating with less salt.¹²

How can food be made more flavourful without salt?

Giving up salt does not mean giving up flavour.

- Use low sodium flavourings such as herbs, spices, garlic and garlic powder, onion and onion powder, lemon juice, and vinegar to increase flavour.
- Experiment with new herbs and spices to discover which ones are preferable.
- Read cookbooks with lower sodium recipes for more ideas to increase flavour in food preparation.
- Try prepared herb shakers: Mrs Dash®; McCormick's® No Salt variety; Club House La Grille® No Salt added seasonings.

Do different types of salt contain different amounts of sodium?¹³

All types of salts contain about 2300 mg of sodium per teaspoon.

Sea salt, fleur de sel, gourmet salts, Kosher salt, and pickling salt are not healthier choices than table salt.

Can salt substitutes be used?

The most widely used salt substitutes contain potassium-chloride (KCl) such as No-Salt® and Half-Salt®. For some individuals with heart or kidney disease or on certain medications that spare potassium, extra potassium from a salt substitute may cause blood potassium to be increased to abnormal levels. Anyone considering using salt substitutes should talk to their health care provider before starting to use them.

How can label reading reduce intake of salt and sodium?

Check the Nutrition Facts table on food labels.

- A % Daily Value (% DV) of less than 5% is considered low in sodium. Choose these foods more often.¹⁴
- A % Daily Value (% DV) of more than 15% is considered high in sodium. Choose these foods less often.¹⁴
- Compare the sodium content of similar products (e.g. different brands of canned tomatoes). Choose foods with lower % Daily Value and smaller amounts of sodium.
- Check the ingredient list. Ingredients are listed from most to least. If the word "sodium", "salt" or "soda" is listed near the beginning of the list, the product may be high in salt. Choose foods that have sodium listed near the end of the list.

Refer to Guideline: Label Reading

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What do the low sodium claims on food packages mean?¹⁵

In addition to the Nutrition Facts table and list of ingredients, low sodium claims on food packages can guide consumers to lower sodium foods:

Claim	What it means
Sodium Free	5 mg or less of sodium per serving
Low Sodium	140 mg or less of sodium per 100 gram serving
Reduced or Less sodium	At least 25% less sodium than regular version (The food may not be low in sodium)
Lightly salted	At least 50% less sodium than the regular version (The food may not be low in sodium)

How can sodium intake be reduced when eating out?

An individual can reduce his/her sodium intake when eating out by:

- Choosing restaurants that offer fresh food choices.
- Asking for food prepared with no added salt, sauce, or dressings.
- Not using the salt shaker.
- Using lemon juice or pepper instead of salt.
- Eating smaller portions of the food served.
- Eating regularly throughout the day to avoid being over hungry when at the restaurant.

Refer to Guideline: Eating Out

Are there any handouts on sodium I can use with my clients?

Refer to approved provincial Alberta Health Services nutrition handouts to support patient education. For more information, contact Nutrition.Resources@albertahealthservices.ca

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