



# Salt and Sodium

## How They Impact Outcomes

NUTRITION CONNECTION



IMPLEMENTING SODIUM GUIDELINES MAY  
IMPROVE CLIENT OUTCOMES

When reading almost any healthcare industry professional journal, magazine or newsletter, you'll find articles on achieving a reduction in hospital readmissions. This focus on reducing hospital readmissions continues because of the potential for negative physical, emotional, and psychological impacts on individuals in acute and skilled nursing care, and also the overall costs to the Medicare program. Billions of Medicare dollars are spent on readmission costs, making this a top priority for the Centers for Medicare & Medicaid Services (CMS) and managed care programs.

Healthcare providers know that preventing hospital readmission whenever possible is beneficial to patients and

offers an opportunity to reduce overall healthcare system costs by improving quality.

### SALT AND SODIUM AND READMISSIONS

For years we've heard that most Americans eat too much sodium, and excessive sodium can raise blood pressure—which can have serious health consequences if not treated. According to the National Health and Nutrition Examination Survey (NHANES) in 2013-14 the average sodium intake for US adults was 3,529 mg sodium per day. Ninety-seven percent of men and 81 percent of women exceed 2,300 mg sodium intake per day.



**Brenda Richardson, MA, RDN, LD, CD, FAND** is a lecturer, author, and owner/president of Brenda Richardson, LLC.

While the body needs a small amount of sodium to function, most Americans consume too much. High sodium consumption is associated with high blood pressure, a major risk factor for heart disease and stroke. In the United States heart disease and stroke are the nation's first and fifth leading causes of death.

Is it salt or is it sodium? The words "salt" and "sodium" are often used interchangeably, but they do not mean the same thing. Salt (also known by its chemical name, sodium chloride) is a crystal-like compound that is abundant in nature and is used to flavor and preserve food. Sodium is a mineral, and one of the chemical elements found in salt.

As a food ingredient, sodium has multiple uses such as curing meat, baking, thickening, retaining moisture, enhancing flavor (including the flavor of other ingredients), and as a preservative. Some common food additives—like monosodium glutamate (MSG), sodium bicarbonate (baking soda), sodium nitrite, and sodium benzoate—also contain sodium and contribute (in lesser amounts) to the total amount of "sodium" listed on the Nutrition Facts label. These words are often used interchangeably on the product packaging. For

example, the Nutrition Facts panel uses "sodium," while the front of the package may say "no salt added" or "unsalted."

Surprisingly, some foods that do not have a salty taste can still be high in sodium, so using taste alone is not an accurate way to judge the sodium content. For example, while some foods that are high in sodium (like pickles and soy sauce) taste salty, there are also many foods (like cereals and pastries) that contain sodium but do not taste salty. Foods that you may eat several times a day (such as breads) can also add up to a lot of sodium over the course of a day, even though an individual serving may not be high in sodium.

Dietary sodium is difficult to accurately assess, since so much of it comes from processed foods in amounts that vary significantly between brands. Ninety percent of the sodium we consume is in the form of salt.

### TO REDUCE OR NOT: SOME RECOMMENDATIONS

While some researchers and health professionals focus on reducing sodium levels, others raise concern about extreme sodium reduction. Some controversial data suggests that there becomes a point where aggressive reduction in sodium intake

is associated with increased health risk. Other concerns relate to promoting dietary sodium at a level currently consumed by less than 5 percent of US adults, rather than a more reachable and realistic target.

As healthcare providers we need to be aware of the various sodium recommendations and then work with our patients and residents to offer individualized support for successful outcomes.

Some recommendations and guidelines include:

- Clinical practice guidelines on high blood pressure from the American College of Cardiology (ACC), the American Heart Association (AHA), and nine other organizations state that more people than ever before are categorized as having hypertension or elevated blood pressure, and they are advised to limit dietary sodium, ideally to no more than 1,500 mg per day.
- Current recommendations from the 2015–2020 Dietary Guidelines for Americans (DGA) and Institute of Medicine (IOM) call for all adults to limit sodium consumption to no more than 2,300 mg per day. The DGA and the new ACC/AHA

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guideline recommend a limit of 1,500 mg per day as even more effective for decreasing blood pressure and especially for people with hypertension or elevated blood pressure (referred to as prehypertension in the DGA).

- The IOM reported in 2013 that reducing sodium consumption from current US intake to 2,300 mg per day substantially decreases risk of heart disease and stroke, with no evidence of harm. However, the report concluded that evidence was insufficient and inconsistent on benefits or hazards in disease endpoints of reducing intake below 2,300 mg per day. Available studies did not have enough subjects and long enough follow-up to identify statistically significant differences in health outcomes related to sodium intake of 1,500 mg per day or less, according to the report. Since its publication, follow-up of more than 20 years from the Trials of Hypertension Prevention shows no increase in all-cause mortality with low dietary sodium.
- According to the Academy of Nutrition and Dietetics Evidence Analysis Library® systematic review, both excessive sodium intake (above

2,800 to 3,000 mg per day) and very low sodium intake (1,800 to 1,900 mg per day or less) pose a hazard that may lead to poor outcomes in heart failure patients.

- The Dietary Sodium Content, Mortality, and Risk for Cardiovascular Events in Older Adults: Health, Aging, and Body Composition (Health ABC) Study concluded that in older adults assessed sodium intake was not associated with 10-year mortality, incident CVD, or incident HF, and consuming greater than 2300 mg/d of sodium was associated with nonsignificantly higher mortality in adjusted models.
- The Academy of Nutrition and Dietetics Position Paper: Individualized Nutrition Approaches for Older Adults: Long-Term Care, Post-Acute Care, and Other Settings (published in April 2018) states that the leading cause of hospitalization among older adults in the United States is heart failure. Heart failure treatment includes medications, reduced sodium diet, and daily physical activity. Healthcare providers typically prescribe a diet of 2,000 mg sodium and 2,000 mL fluid restriction per day; however a more recent project supports

an intake of 2,000 to 3,000 mg sodium/day to decrease hospital readmissions and mortality in patients with compensated congestive heart failure.

## INDIVIDUALIZED DIET AND CHOICE

We should work with residents and patients to support them in reaching their goal of reducing sodium. Some steps that may help in the facility or when they return home include:

- Check the Nutrition Facts label to see how much sodium is in foods and beverages. Check the label to compare sodium in different brands of foods and beverages, and then choose those lower in sodium.
- Limit packaged sauces, mixes, and “instant” products (including flavored rice, instant noodles, and ready-made pasta) in overall food preparation.
- Add flavor without adding sodium. Offer no-salt seasoning blends and herbs and spices instead of salt to add flavor to food.
- Choose fresh meat, poultry, and seafood, rather than processed varieties. Also, check the package on fresh meat and poultry to see if salt water or saline has been added.
- Buy fresh or frozen vegetables (no sauce or seasoning), or low sodium or no-salt-added canned vegetables.
- Choose low sodium or no-salt-added nuts, seeds, and snack products (such as chips and pretzels) – or have carrot or celery sticks instead.



**AS A FOOD INGREDIENT,** sodium has multiple uses such as curing meat, baking, thickening, retaining moisture, enhancing flavor (including the flavor of other ingredients), and as a preservative.

- Sodium in condiments can add up. Choose light or reduced sodium condiments, add oil and vinegar to salads rather than bottled dressings, and use only a small amount of seasoning from flavoring packets instead of the entire packet.
- Make lower-sodium choices at restaurants. Ask for the meal to be prepared without salt and request that sauces and salad dressings be served “on the side,” and use less of them. If a restaurant item or meal includes a claim about its nutrient content, such as “low sodium” or “low fat,” then nutrition information to support that claim is required to be available. Ask to see nutrition information (available in many chain restaurants) and then select options that are lower in sodium.

## IN SUMMARY

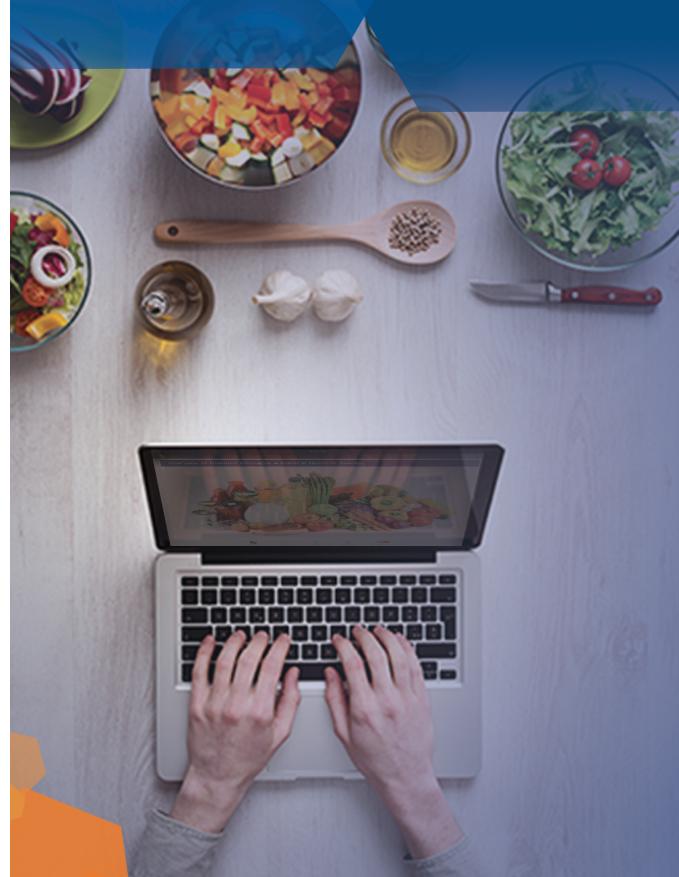
As healthcare providers we know that preventing hospital readmission whenever possible is beneficial and offers the opportunity to reduce overall healthcare system costs by improving quality. We also know that sodium plays a role in prevention and management of chronic disease. It is imperative to remember that as stated in the Academy of Nutrition and Dietetics Position Paper: Individualized Nutrition Approaches for Older Adults: Long-Term Care, Post-Acute Care, and Other Settings, many older individuals are at risk for malnutrition and may have different therapeutic targets than younger clients, thus liberalizing the diet allowing for resident choice is the most often preferred option. Individualizing diets and incorporating choice in food selection and other aspects of dining can maximize food intake, enhance nutritional status, and improve quality of life. **E**

## SOURCES

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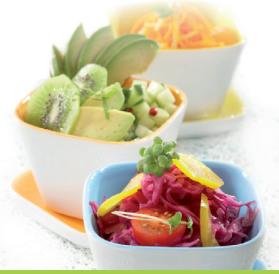
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## SALT & SODIUM

# Check the Package for Nutrient Claims

You can check for nutrient claims on food and beverage packages to quickly identify those that may contain less sodium. Here's a guide to common claims and what they mean:

### WHAT IT SAYS

Salt/Sodium-Free

Very Low Sodium

Low Sodium

Reduced Sodium

Light in Sodium or Lightly Salted

No-Salt-Added or Unsalted

### WHAT IT MEANS

Less than 5 mg of sodium per serving

35 mg of sodium or less per serving

140 mg of sodium or less per serving

At least 25% less sodium than the regular product

At least 50% less sodium than the regular product

No salt is added during processing—but these products may not be salt/sodium-free unless stated

# 10 Easy Tips for Reducing Sodium Consumption

Learning about sodium in foods and exploring new ways to prepare foods can help you achieve your sodium goal. And, if you follow these tips to reduce the amount of sodium you consume, your “taste” for sodium will gradually decrease over time—so eventually, you may not even miss it!

1. Read the Nutrition Facts label
2. Prepare your own food when you can
3. Add flavor without adding sodium
4. Buy fresh
5. Watch your veggies
6. Give sodium the “rinse”
7. “Unsalt” your snacks
8. Consider your condiments
9. Reduce your portion size
10. Make lower-sodium choices at restaurants



Source: U.S. Food and Drug Administration, <http://www.fda.gov/educationresourcelibrary>



This Level II article assumes that the reader has a foundation of basic concepts of the topic. The desired outcome is to enhance knowledge and facilitate application of knowledge to practice.

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1. According to the NHANES 2013-14, the average sodium intake for adults in the US was \_\_\_\_\_ mg per day.
  - A. 3,529
  - B. 4,529
  - C. 5,529
2. Salt is known by the chemical name \_\_\_\_\_.
  - A. Sodium extract
  - B. Sodium chloride
  - C. Sodium bicarbonate
3. Sodium is a \_\_\_\_\_ and one of the chemicals found in salt.
  - A. Catalyst
  - B. Mineral
  - C. Chemical
4. Dietary sodium is \_\_\_\_\_ to adequately assess since so much of it comes from processed foods that vary between brands.
  - A. Difficult
  - B. Easy
  - C. Impossible
5. Current guidelines from the 2015-2020 Dietary Guidelines for Americans (DGA) recommend limiting sodium consumption to no more than \_\_\_\_\_ mg per day.
  - A. 1,300
  - B. 1,400
  - C. 2,300
6. The Academy of Nutrition and Dietetics Evidence Analysis Library states that \_\_\_\_\_ and \_\_\_\_\_ pose a hazard that may lead to poor outcomes in heart failure patients.
  - A. Excessive, very low sodium intake
  - B. Chemical, biological sodium sources
  - C. Dietary, non-dietary sodium sources
7. The 2018 Academy of Nutrition and Dietetics: Individualized Nutrition Approaches for Older Adults: Long-Term Care, Post-Acute Care, and Other Settings Position Paper states that many older adults are at risk for \_\_\_\_\_ and diet individualization, and incorporating choice can maximize food intake.
  - A. Inflammation
  - B. Obesity
  - C. Malnutrition

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