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How to be Sodium Savvy

by David Hagedorn

(CNN) "Enough salt already," sighed Theo Hodge on a recent evening as I added more salt to a *plat de resistance* I was preparing for us. Considering that he was my doctor, the scolding came as no surprise. But as a chef and food writer, I know sodium chloride salt is an important ingredient in many recipes. Both professional and home cooks equate salt with flavor.



However, the more we use, the more our palates desire. Hodge's insistence was a matter of health, so I would have to come up with other ways to enhance future dishes.

The year before, my failure to heed his warning about soaring cholesterol levels landed me in the ER with a heart attack. Once the doctors cleared the arterial problem, it was up to me to keep it that way, but I was so busy cutting saturated fat from my diet that I did not pay attention to sodium intake, which was also important to my heart health. I made a common error, figuring that since my blood pressure was routinely normal, I could continue to salt my food without worry.

"Sodium has benefits, like helping to maintain the body's right balance of fluids," says my cardiologist Richard Katz, MD, director of the cardiology division of George Washington University. "But ingesting too much salt is a prime cause of increased blood pressure. Higher blood pressure is a major cause of heart attacks and strokes, both of which can be reduced by minimizing salt intake." Even among healthy adults there is usually room for improvement in the blood pressure department. "If blood pressure is 125/70, it's better at 120/70," Katz says. (The American Heart Association [AHA] notes that low blood pressure is relative for each person and is a concern when it drops suddenly. Your doctor can help you reach a blood pressure goal that best enhances your health.)

Various organizations, including the USDA, AHA, and Cooking Light magazine, recommend less than 2,300 milligrams sodium daily (the amount in one teaspoon of table salt) for healthy people. Most Americans consume closer to 4,000 milligrams a day.

"Only a quarter of sodium intake actually comes from salting our food," says AHA President Dan Jones, MD. "More than 75 percent of sodium in our diets comes from processed foods." Salt is a natural preservative and it enhances flavor, so it's no surprise that salt and other forms of sodium are included in packaged foods.

Because salt is so pervasive in our food supply, "One has to be sodium-conscious at every step: at purchase, at preparation, and at consumption," says Jones. The most effective overall strategy to control sodium intake is to cook food at home as often as possible using fresh fruits and vegetables, grains, low-fat dairy products, fresh meat, poultry, and fish.

Editor's Tip: Homemade broths and sauces often contain less sodium than store-bought versions.

The first step to keep sodium under control is to make smart choices at the grocery store. Choose sodium-free, low-sodium, or no-salt-added convenience foods. Sometimes organic versions of packaged foods are lower in sodium than regular and reduced-sodium versions, but not always. Check the label. Reading the

Nutrition Facts Panel is an easy way to gauge the amount of sodium present in a food. If an item contains more than 20 percent Daily Value (DV) of a nutrient, a serving of that food is considered to contain a high amount of that nutrient, according to the FDA; five percent DV of a nutrient is deemed low. For sodium, 20 percent DV equals 460 milligrams; five percent DV sodium is just 115 milligrams.

Lower-fat or fat-free products can be higher in sodium than their full-fat counterparts: An ounce of full-fat sharp cheddar cheese has less sodium than one ounce of fat-free cheddar. When fat, a major vehicle for flavor, is removed, other ingredients like sodium may be added to compensate. Still, if you're trying to limit saturated fat in your diet by enjoying low- and fat-free foods, the trade-off may be worth it if you limit sodium in other areas.

Ingredients processed with sodium still have a place in the cupboard, provided you use them judiciously. Low-sodium soy sauce, tamari, and fish sauce add meaty, round notes in addition to a salty flavor. Canned tomato products can stand in for fresh in soup or chili when good fresh ones aren't in season. A range of cheeses and bacon also offer a salty boost along with their own distinct flavors in egg and cheese breakfast tacos with homemade salsa or the cheddar-bacon drop biscuits.

Cook sensibly

You also can control sodium when cooking. Rinse and drain canned foods to wash away some of the salty components in the packing juices, even if you can't eliminate additives the food may have already absorbed. For example, rinsing and draining capers or olives would barely make a dent in the sodium content because they are preserved with a salty brine solution and absorb the sodium. But for an item like canned beans, draining the juices cuts some sodium, while rinsing and draining shaves even more.

When cooking starches or grains, don't salt the cooking water, so the noodles or rice don't absorb additional sodium dissolved in the liquid.

Marinating is a smart way to infuse meats and fish with flavor. Mixing your own marinades takes just a few minutes and allows you to control sodium. Traditionally a marinade is an acidic liquid -- citrus juice or vinegar, for instance -- that boosts flavor after an ingredient soaks in the mixture. And since marinades rely on acid, spices, herbs, and aromatics for flavor, a sprinkle of salt before or after cooking intensifies the mixture's qualities. Even when marinades include higher-sodium components, like fish sauce or soy sauce, ingredients absorb minimal amounts of the marinade. In a pinch, choose low sodium bottled marinades. (In general, you should skip the salty preseasoned or marinated options offered at many meat and fish counters.)

Mouthwatering marinades that boost flavor without adding a lot of fat.

During my career as a professional chef, I often used ingredients along with salt to impart flavor; now I've learned to balance flavors with less of the mineral. Salty is one of the senses of taste, and salt -- whether kosher, sea, or table variety -- supplies that sense of taste to foods that lack it. Instead of adding salt at every step in a recipe, I now often use salt at the very end, such as sprinkling steamed vegetables with a pinch of a crunchy finishing salt like fleur de sel, which puts the salt granules on the surface of food, heightening that sense of flavor. Any salt added at the end of cooking will also bolster the food's aromas (another important factor for sensing tastes). For a final flourish, I find that aromatic grated lemon or lime rind brings clean, citrusy flavor while the fruit's juice adds a pleasing acidity that brightens other seasonings in soups, kebabs, or relishes and chutneys. I rely on a rainbow of peppercorns -- zesty white ones to pair with potatoes; green ones to add a fresh, clean note to beef tenderloin; and black to proffer pungency to almost everything -- fresh and dried herbs, and spices for sodium-free flavor.

Eat well

As it turns out, the less salt you consume, the less your palate craves, according to a study published in 2007 in the *Journal of the American Dietetic Association*. After two weeks on a control diet with 3,500 milligrams of sodium a day, 354 participants were assigned to either continue the control diet or follow the DASH diet (a

diet emphasizing low saturated fats, plenty of fruits and vegetables, whole grains, and low-fat dairy products).

Over the next three months, the diets' sodium contents were adjusted every 30 days: low (on par with average sodium intakes in non-Western countries), intermediate (the current recommendation for 2,300 milligrams of sodium a day), and high sodium (just under the average American's daily sodium consumption). At the end of the study, researchers discovered that participants had high levels of compliance at each of the three sodium levels, but volunteers rated the intermediate sodium level to be most acceptable. "I'm convinced that salt taste is learned and conditioned," says study author and researcher Frank Sacks, MD, Professor of Cardiovascular Disease Prevention at the Harvard School of Public Health.

I've found that to be the case. Cutting back on sodium hasn't been as hard as I thought it would be. I've incorporated lower-sodium convenience options into my cooking. I've shifted to using high-quality, salty ingredients as accents or garnishes instead of a main ingredient in sauces or pizza toppings. Then simple techniques, like infusing broth with Parmigiano-Reggiano rind to enrich the flavor of a soup, or serving dishes piping hot (when appropriate, because heat heightens the palate's sense of taste), are easy to do. And I'm also encouraged to know that as time goes on, my palate will adjust to a lower-sodium diet, and my heart will be happier and healthier for it.

Ubiquitous mineral

Sodium partners with other compounds (besides the well-known sodium chloride) as a food additive. Cake mixes, flavored milks, luncheon meats, jarred condiments, and snack foods may include ingredients that add sodium. The mineral may also seem hidden since many of these foods may not taste salty. Here are just a few of the many forms sodium can take:

- Disodium guanylate (flavor enhancer)
- Disodium inosinate (flavor enhancer)
- Sodium alginate (thickener)
- Sodium benzoate (preservative)
- Sodium bicarbonate (texture enhancer)
- Sodium citrate (pH influencer)
- Sodium hydroxide (pH influencer)

Bean counters

Here's a look at the sodium content of various canned black beans on the market, and how label reading, and rinsing and draining, contribute to sodium savings. Always check labels as different brands may vary slightly.

- 1 (15.5-ounce) can black beans, drained = 859 milligrams
- 1 (15.5-ounce) can black beans, rinsed and drained = 815 milligrams
- 1 (15.5-ounce) can 50%-less-salt black beans, rinsed and drained = 780 milligrams
- 1 (15-ounce) can organic black beans, rinsed and drained = 420 milligrams
- 1 (15-ounce) can unsalted black beans, rinsed and drained = 90 milligrams