

UC San Diego Health

## Spice it Up to Reduce Sodium Intake

By Christina Johnson | November 02, 2015

**A**pproximately 90 percent of Americans will develop high blood pressure at some time in their lives, putting them at significantly elevated risk for heart disease and stroke – the country's [first and fourth leading causes of death](#).

With the odds seemingly so stacked against us, what is a health conscious person to do?

First, check off all the obvious to-do things: Don't smoke. Stay active. Maintain a healthy weight. Cook nutritious meals. Get enough sleep. Drink in moderation (if at all). Nurture social connections and emotional intimacy.



One more thing you can do: Minimize your intake of commercially processed and restaurant foods and eat more fresh food products flavored with herbs and spices instead of salt.

Despite decades of dietary [advice to lower our sodium intake](#), the average American consumes too much sodium chloride – 3,478 milligrams a day, mostly through consumption of commercially processed and restaurant foods.

Less than 10 percent of the population meets dietary recommendations of less than 2,300 mg of dietary sodium per day. Less than two percent of at-risk groups (those with pre-hypertension, hypertension, diabetes or kidney disease) meet the recommended 1,500 mg-per-day limit.


One consequence is that roughly one-third of adults and growing numbers of children in America have [high blood pressure](#), in large part because of obesity, which is linked to overconsumption of both calories and salt.

“People seem to more typically worry about fat or sugar, but not as much about their salt consumption,” said Cheryl Anderson, PhD, associate professor in the Department of Family Medicine and Public Health at UC San Diego School of Medicine. “Yet, the data show that excessive sodium intake is strongly linked to higher blood pressure, particularly among those who already have hypertension.”

To help address the nation's salt problems, Anderson and colleagues at Johns Hopkins University developed a 20-week intervention – called the “SPICE Study” – that taught adults how to use herbs and spices instead of salt in recipes. The program also addressed cultural influences on spice choices and how to monitor diet at home and when eating out.

In recently published work, the researchers showed that this relatively simple yet comprehensive behavioral modification program helped participants reduce their sodium intake by 966 mg per day, on average, compared with those who tried to monitor sodium intake on their own without the program.

The participants were encouraged to experiment with different kinds of spices and share their favorite recipes with others in the group. Anderson and colleagues also led cooking demonstrations. Among some of the popular sodium-reduction strategies were meat rubs made with smoked paprika, Chinese five-spice and anise. Another favorite was a grilled cheese sandwich made with no-salt bread, flavored with olive oil and Herbes de Provence. More generally, garlic, lime juice, pepper and onion powder were go-to flavor enhancers, though new flavors such as coffee extract, cherry extract, smokehouse pepper and Moroccan seasoning were introduced and well-received.

“The message is two-fold,” said Anderson, who was a member of the [2015 U.S. Dietary Guidelines](#)  Advisory Committee, which provides scientific input to the federal agencies in charge of developing federal nutrition guidelines and national food policies. “One is that individuals in our program did significantly better than those who were not. The other is that everyone struggled to meet daily dietary sodium intake goals whether they were in the program or not. Those in the program had to lower the amount of time they ate commercially processed and restaurant foods. By cooking your own food and focusing on seasoning foods with spices and herbs, you can substantially reduce sodium intake.”

In terms of taking the first steps toward reducing your sodium intake, Anderson recommends to honestly assess what you are currently eating and identify the main sources of sodium in your diet. You can then consult with a registered dietitian, nutrition professional or health educator about dietary modifications.

Very little sodium occurs naturally in food, so choose whole foods you enjoy and build a diet around these items. The idea is not to give up salt completely, Anderson said. Salt is an essential nutrient, but the human physiological need is approximately 200 milligrams per day. A diet too low in sodium, however, is also not recommended for the typical American because it would likely be deficient in other essential nutrients.

Anderson notes that salt is largely an acquired taste and that data from their study suggests you can sensitize your pallet to lower levels of sodium over a four-week period. Once you are

accustomed to lower sodium levels, you may find processed and packaged foods overly salty and it will be much easier to embrace healthy lifestyle choices that can help you beat the odds.

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