

Consuming a little less salt could mean fewer deaths

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For every gram of salt that Americans reduce in their diets daily, a quarter of a million fewer new heart disease cases and over 200,000 fewer deaths would occur over a decade, researchers said at the American Heart Association's 49th Annual Conference on Cardiovascular Disease Epidemiology and Prevention.

These results were derived from a validated computer-simulation of [heart disease](#) among U.S. adults.

"A very modest decrease in the amount of [salt](#) — hardly detectable in the taste of food — can have dramatic health benefits for the U.S.," said Kirsten Bibbins-Domingo, Ph.D., M.D., M.A.S., lead author of the study and an assistant professor of Medicine and of Epidemiology at the University of California, San Francisco. "It was a surprise to see the magnitude of the impact on the population, given the very small reductions in salt that we were modeling."

A 3-gram-a-day reduction in [salt intake](#) (about 1200 mg of [sodium](#)) would result in 6 percent fewer cases of new heart disease, 8 percent fewer heart attacks, and 3 percent fewer deaths. Even larger health benefits are projected for African Americans, who are more likely to have high [blood pressure](#) and whose blood pressure may be more sensitive to salt. Among African Americans, new heart disease cases would be reduced by 10 percent, heart attacks by 13 percent and deaths by 6 percent.

For years, ample evidence has linked salt intake to [high blood pressure](#) and heart disease. Yet, [salt consumption](#) among Americans has risen by 50 percent and blood pressure has risen by nearly the same amount since the 1970s, according to researchers.

Currently, Americans eat 9-12 grams of salt per day (or 3600-4800 mg of sodium). This amount is far in excess than recommended by most health organizations (5-6 grams/day of salt or 2000-2400 mg sodium). Each gram of salt contains 0.4 grams of sodium.

"It's clear that we need to lower salt intake, but individuals find it hard to make substantial cuts because most salt comes from processed foods, not from the salt shaker," Bibbins-Domingo said. "Our study suggests that the food industry and those who regulate it could contribute substantially to the health of the nation by achieving even small reductions in the amount of salt in these processed foods."

To estimate the benefit of making small reductions in salt intake, the investigators used the Coronary Heart Disease Policy Model, a computer simulation of heart disease in the U.S. adult population. The model can be used to evaluate the impact of policy changes on the health of the nation, and has previously been used to project the future of heart disease in the United States given the current rate of childhood obesity, Bibbins-Domingo said.

The researchers used the model to estimate the impact of an immediate reduction of daily salt intake by 0.5 grams on the incidence of cardiovascular disease and deaths between 2010-2020. In that period, the model suggests that more than 800,000 life-years could be saved for each gram of salt lowered. Larger reductions would have greater benefits, with a 6 gram reduction resulting in 1.4 million fewer heart disease cases, 1.1 million fewer deaths and over 4 million life-years saved.

Because the majority of salt in the diet comes from prepared and packaged foods, the results of the study reveal the need for regulatory changes or voluntary actions by the food industry to make achievable changes in heart health, Bibbins-Domingo said.

The researchers are planning to assess the cost-effectiveness of various interventions already being used to reduce salt consumption in other countries, including industry collaborations, regulations and labeling changes.

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