Small Salt Reduction Would Have Big Benefits

VITALS

Major Finding: Reducing salt by 3 g daily may reduce the annual new cases of coronary heart disease in the United States by 60,000 to 120,000, annual new cases of stroke by 32,000 to 60,000, and annual new cases of myocardial infarction by 54,000 to 99,000.

Data Source: The Coronary Heart Disease Policy Model.

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BY HEIDI SPLETE

A reduction in salt intake of 3 g per day could have an impact on cardiovascular disease and reduce all-cause mortality in the United States by an estimated 44,000 to 99,000 deaths each year, based on a recent study.

"A reduction in dietary salt of 3 g per day would have approximately the same effect on rates of coronary heart disease (CHD) events as a 50% reduction in tobacco use, a 5% reduction in body mass index among obese adults, or the use of statins to treat persons at low or intermediate risk for CHD events," the researchers wrote.

Dr. Kirsten Bibbins-Domingo of the University of California, San Francisco, and her colleagues used a computer simulation model to predict the effects of a population-wide reduction of salt intake on cardiovascular events in the United States (N. Engl. J. Med. 2010 Jan. 20 [Epub doi: 10.1056/NEJMoa0907355]).

Reducing daily dietary salt by 3 g would reduce the number of new cases of CHD per year by an estimated 60,000-120,000, according to the computer model. New cases of stroke would be reduced by 32,000-66,000, and new cases of MI would be reduced by 54,000-99,000.

The model predicted that, although all age groups would benefit, middle-aged and older populations would likely have larger relative reductions in CHD incidence and in rates of new and recurrent MI and stroke.

In adults aged 35-64 years, the relative reduction in mortality would be approximately 7%-11% for blacks and 3%-6% for nonblacks.

In addition, a nationwide 3 g per day decrease in salt consumption would save approximately $10 billion to $24 billion in health care costs annually and add approximately 194,000-392,000 quality-adjusted life years.

The researchers acknowledged that the results were limited by the uncertainty of the data used in the model, but added that, despite those limitations, their findings build on those from previous studies.

"Our findings underscore the need for an urgent call to action that will make it possible to achieve these readily attainable cardiovascular benefits," they said.

The results also showed positive, although less dramatic, improvements in all-cause mortality, CHD, stroke, and MI with reductions of daily salt intake by either 1 g or 2 g.

"As salt intake is reduced, people appear to prefer food with less salt, a phenomenon that is probably related to the accommodation of taste receptors over the course of weeks to months," the researchers noted.

The benefits seen in the study may be an underestimate, according to an accompanying editorial by Dr. Lawrence J. Appel and Cheryl A.M. Anderson, Ph.D., of Johns Hopkins University in Baltimore. The study did not factor in the impact of modest daily salt reduction on reducing blood pressure in children or mitigating age-related rise in blood pressure in adults, they wrote (N. Engl. J. Med. 2010 Jan. 20 [Epub doi: 10.1056/NEJMe09103.52]).

Also, results from previous studies suggest that reduced salt intake may reduce the risk of other conditions not included in the computer model: gastric cancer, end-stage kidney disease, congestive heart failure, osteoporosis, and left ventricular hypertrophy, they noted. ■