

A Pinch Less Salt Could Save Lives, Money

By PEGGY PECK *MedPage Today*

Jan. 21, 2010—

go.com

Cutting daily salt intake by three grams – just over a teaspoon -- could prevent 32,000 strokes and 54,000 heart attacks a year. So say researchers at the University of California, San Francisco who developed a novel computer program to predict the clinical impact of salt reduction.

Using the computer model to simulate the impact of heart disease in U.S. adults age 35 to 84, the researchers found that even reducing salt intake by a mere one gram per day over the next decade would be a more cost-effective strategy for treating hypertension than use of even the cheapest antihypertensive drug, Dr. Kirsten Bibbins-Domingo and colleagues wrote in a paper published online today by the *New England Journal of Medicine*.

Dr. Lee Goldman of Columbia University, who co-authored the paper, told *MedPage Today* that study builds on what has long been known about the adverse health effects of a society that seems to believe that salt is the spice of life.

For example, Goldman said that most people seeking a healthy choice will check food labels and restaurant menus for calorie counts and trans fats, but will not pay attention to salt.

This is not the first time a call for salt reduction has been issued; as recently as last November, a review of past research published in the *British Medical Journal* suggested that if everyone cut their salt intake in half – all told, a reduction of about 5 grams a day -- they would lower the stroke rate by 23 percent and reduce overall cardiovascular disease by as much as 17 percent.

Americans, like those in many Western countries, average about 10 grams of daily salt intake, whereas the World Health Organization recommends only 5 grams per day, and the U.S. Department of Agriculture recommends daily intake be limited to 5.8 grams.

But even reductions that would simply bring Americans closer to this ideal could have big effects, the new study suggests. Bibbins-Domingo and colleagues reported that a three-gram-per-day reduction in dietary salt would "save 194,000 to 392,000 quality-adjusted life-years and \$10 billion to \$24 billion in health care costs annually," while more modest one-gram reduction over the next decade would "be more cost effective than using medications to lower blood pressure in all persons with hypertension."

In an editorial that accompanied the study, Dr. Lawrence Appel and Cheryl A.M. Anderson of Johns Hopkins University, wrote that "the evidence supporting the call to reduce salt intake as a means of preventing cardiovascular disease is compelling... As we deliberate health care reform, let us not neglect this inexpensive, yet highly effective public health intervention for the prevention of disease."

(Appel, incidentally, was also first author on a position paper from the American Society of Hypertension that also called for salt reduction as public policy.)

Dr. Franz Messerli, director of the hypertension program at St. Luke's-Roosevelt Hospital, said the computer model used in the study was impressive -- but he added that it probably even underestimated the benefit of reducing dietary salt.

This, he said, is because "salt reduction has been shown to have a direct [blood pressure independent] effect on the heart, the brain, the kidneys and also reduce stomach cancer and osteoporosis -- factors that were not considered in this analysis."

But Messerli found it difficult to lead the victory parade, noting, "this is a modeling study, and statements such as, 'A modest reduction of one gram per day would be more cost effective than using medication to lower blood pressure in all persons with hypertension' are to be taken with a good grain of salt."

Messerli's measured response was not echoed by his colleagues in the hypertension world. Dr. Henry Black, president of the American Society of Hypertension and director of hypertension research at the New York University School of Medicine, said that while the paper extended the findings of many other studies, the new work is "more comprehensive and is especially useful by comparing the benefits of [sodium] and [salt] reduction to those of other widely accepted public health approaches that the public and governmental bodies have embraced, including drug treatment."

Dr. Clyde Yancy, president of the American Heart Association, said that while the study was a computer modeling analysis, in terms of research on this topic it may be as good as it gets. "It would be impossible to do a randomized trial in large numbers of high vs. low sodium consumption, and the use of modeling with reasonable assumptions represents a solid if not ideal alternative," he said.

Yancy went so far as to say that the data from this study could provide a strong enough imperative to set or change national policy.

Still, for average Americans, cutting back on salt could be a hard concept to swallow. While it's true that three grams of salt comes to about a teaspoonful, Goldman said it was foolish to think of sodium reduction in terms of such measurements because some much sodium comes from processed foods and from restaurant food. For that reason, he said, achieving the needed reduction requires a concerted national effort.