Salt Tax Could Save $22.4 Billion in Medical Costs

BY DOUG BRUNK

If the United States government were to establish a tax on sodium consumption or—preferably—to collaborate with food manufacturers to reduce sodium in processed foods, the cardiovascular benefits and cost savings to the nation would be significant, a novel analysis demonstrated.

Either strategy would likely avert acute strokes and myocardial infarctions, increase quality-adjusted life-years, and save billions of dollars in medical costs, investigators led by Dr. Crystal M. Smith-Spangler of Stanford (Calif.) University reported online in the Archives of Internal Medicine. But collaboration with industry "is likely to be more effective than a sodium tax and appears to be an appropriate first step [toward] reducing population sodium intake and the burden of cardiovascular disease," the researchers concluded.

Using a computer-simulated Markov model and evidence from other populations, the researchers assessed dietary, health, and cost effects of the two strategies. Government collaboration with food manufacturers to cut sodium in processed foods would achieve a 9.5% reduction in sodium intake among adults aged 40-85 years in the United States, the team estimated. A sodium tax—similar to the cigarette tax—would decrease sodium intake among adults by 6%.

To assess the economic and cardiovascular impacts of those reductions, the researchers drew data from sources including the Medical Panel Expenditure Survey, the Framingham Heart Study, and the DASH (Dietary Approaches to Stop Hypertension) trial. The impacts of the two strategies were measured in 2008 U.S.

Statin Users See Lipid Benefits With Eprotirome

Adding eprotirome to statin therapy further reduced serum LDL cholesterol, non-HDL cholesterol, and apolipoprotein B in a phase II study.

Eprotirome, an investigational thyroid hormone analogue, also decreased levels of two other atherogenic lipids—triglycerides and Lp(a) lipoprotein—which are known to have a comparatively poor response to statins alone, said Dr. Paul W. Ladenson of Johns Hopkins University, Baltimore, and his associates.

The investigators conducted a double-blind trial in 189 patients already taking simvastatin or atorvastatin to determine whether adding eprotirome would decrease levels of atherogenic lipoproteins even further. These subjects continued to have a mean LDL cholesterol level of 116 mg/dL despite statin therapy.

The study subjects were randomly assigned to receive placebo or one of three doses of eprotirome—25, 50, or 100 mcg—in the form of enteric-coated tablets for 12 weeks. The study was sponsored by Karo Bio, maker of eprotirome.

A total of 168 subjects completed the trial.

Serum LDL cholesterol decreased 22% from baseline levels at the lowest dose of eprotirome, 28% at the intermediate dose, and 32% at the high dose, compared with a 7% decrease with placebo.

The proportion of subjects who had an LDL level of less than 100 mg/dL was 36% at the lowest dose of eprotirome, 50% at the intermediate dose, and 57% at the high dose, compared with 6% with placebo.

"Eprotirome was associated with larger decreases in levels of serum LDL cholesterol than would be expected with a doubling of the statin dose," Dr. Ladenson and his colleagues said (N. Engl. J. Med. 2010;362:906-16).

The drug lowered serum levels of the atherogenic compounds apolipoprotein B, triglycerides, and Lp(a) lipoprotein. However, it also decreased serum levels of the favorable compounds HDL cholesterol and apolipoprotein A-I.

Dr. Ladenson reported that he received consulting fees from Karo Bio and Genzyme.

—Mary Ann Moon

dollars, quality-adjusted life-years, and the number of MIs and strokes averted.

The researchers projected that the 9.5% sodium-intake reduction from government-industry collaboration would result in a 1.25–mm Hg decrease in mean systolic blood pressure of adults aged 40-85 years. In turn, this blood pressure reduction "would avert 513,885 strokes and 480,358 MIs and increase life-years lived by over 1.3 million over the lifetime of U.S. adults [aged] 40-85 years alive today, saving $32.1 billion in direct medical costs," the team concluded. More than half of the direct medical cost savings (56%) would come from fewer persons needing chronic care after MIs or strokes.

In comparison, the 6% decrease in sodium intake from a tax "would avert 327,892 strokes and 306,137 MIs and increase life-years lived by 840,000, saving $22.4 billion over the lifetime of adults [aged 40-85 years who are] alive today," the researchers said.

Dr. Smith-Spangler and her associates said that their model found greater benefits from the strategy of collaborating with food manufacturers "because we have assumed that manufacturers do not reformulate their products in response to a tax and currently demand for salty foods is relatively unresponsive to prices." A tax's effect would increase if there were more acceptable alternatives to salty foods available, decreasing demand for the latter with higher prices, they said.

The team acknowledged that the reduction of sodium intake from either strategy "might lead people to consume more fats and sugars or simply more calories, leading to other health risks. It will be important to monitor the unintended consequences, both positive and negative, of any strategy for decreasing sodium intake." ■

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