



Reducing Dietary Salt to Lower Heart Disease and Save Lives: A Public Health Approach

Introduction

Salt consumption and high blood pressure among Americans has risen by nearly 50 percent despite evidence linking salt intake to high blood pressure and heart disease. The U.S. diet is particularly high in salt, with 75-80% of salt intake coming from processed foods and only 11% come from the actual salt shaker. Given the high consumption of processed foods with salt already added, individuals face considerable barriers to reducing their daily salt intake on their own. These barriers are particularly great in low-income communities with lower access to alternative fresh foods options.

Researchers from the UCSF Center for Vulnerable Populations at San Francisco General Hospital and Trauma Center (www.cvp.ucsf.edu), Columbia University Medical Center, and Stanford University Medical Center studied the health benefits of modest reductions in dietary salt. Using a computer simulation of heart disease and stroke in US adults ages 35 to 84, the team estimated the effects of marginal salt reductions on different populations and compared these effects to other public health interventions (e.g. smoking cessation, weight reduction, and drug therapy). The team also analyzed the cost implications of reducing dietary salt.

Key Findings

Study data revealed that reducing daily salt intake by 3 grams (or 1/2 teaspoon) resulted in the following annual benefits:

- Health benefits to the entire U.S. population including up to:
 - 11% or 120,000 fewer new cases of heart disease;
 - 13% or 99,000 fewer cases of myocardial infarction;
 - 8% or 66,000 fewer cases of stroke; and
 - 4% or 92,000 fewer deaths from any cause
- Even greater benefits for at-risk groups like American Americans with up to:
 - 16% fewer new cases of heart disease;
 - 19% fewer cases of myocardial infarction;
 - 12% fewer cases of stroke; and
 - 7% fewer deaths from any cause
- Other groups also have greater reductions for particularly types of outcomes, including women who benefit from greater reductions in stroke, young adults who benefit from reductions in premature

- mortality, and older adults who benefit from lower rates of heart attacks
- Reducing salt by 3 gm/day would yield the same health benefits for the entire US population as reducing smoking rates by 50%.
 - Using the World Health Organization estimates for the cost of regulatory interventions to reduce salt in the diet, such an intervention in the US would actually be cost-saving. Between 7-72 dollars in healthcare costs would be saved each year for each dollar spent on reducing salt. Reducing salt across the US population is cost-saving even if only small reductions (1 gm/day) are achieved slowly over time.

Summary and Recommendations

Modest reductions in dietary salt would lower cardiovascular events, reduce costs, and provide health benefits to the entire U.S. population, with even greater benefits to vulnerable groups like African Americans. Vulnerable groups are at increased risk because of their greater access to processed foods and limited availability of lower salt foods like fresh fruits and vegetables.

The food industry and those who regulate it could improve the nation's health through reductions in the amount of salt in processed foods. New York City is leading a national effort to form voluntary partnerships with the food industry to limit salt in several categories of food products <http://tinyurl.com/adxf2s>. The Food and Drug Administration recently announced the first legal limits to salt in food, and the Institute of Medicine has released a report outlining strategies to reduce salt in foods. Policy efforts to regulate processed foods have already proved successful in many other countries including the United Kingdom.

This fact sheet was prepared by Kirsten Bibbins-Domingo, PhD, MD, MAS and Natalie Collins, MSW and is based on the following reference:

Bibbins-Domingo K, Chertow GM, Coxson PG, Moran AE, Lightwood JM, Pletcher MJ, Goldman L. Projected Effect of Dietary Salt Reductions on Future Cardiovascular Disease. *N Eng J Med*, 2010; 362 (7): 590-9.