

## RAND RESEARCH AREAS

CHILDREN AND FAMILIES  
 EDUCATION AND THE ARTS  
 ENERGY AND ENVIRONMENT  
 HEALTH AND HEALTH CARE  
 INFRASTRUCTURE AND TRANSPORTATION  
 INTERNATIONAL AFFAIRS  
 LAW AND BUSINESS  
 NATIONAL SECURITY  
 POPULATION AND AGING  
 PUBLIC SAFETY  
 SCIENCE AND TECHNOLOGY  
 TERRORISM AND HOMELAND SECURITY

# Hold the Salt

## Lowering Sodium Intake Would Improve Health and Save Money

Overconsumption of sodium is a persistent problem in the United States. It leads to high blood pressure and contributes to related illnesses, such as cardiovascular disease. The Institute of Medicine (IOM) recommends that adults consume no more than 2,300 milligrams (mg) of sodium each day, with lower amounts recommended for groups at higher risk of developing high blood pressure. It seems intuitively clear that reducing sodium intake would improve Americans' health and reduce medical costs; yet, to date, the potential benefits have not been quantified. To address this gap, RAND researchers used a simulation model to estimate the effects of reducing average sodium consumption, across the adult U.S. population, on

1. the prevalence of hypertension
2. the direct medical costs of treating high blood pressure
3. quality of life.

The model incorporated information about adult Americans' blood pressure levels, use of antihypertensive medications, and sodium intake from the National Health and Nutrition Examination Survey, a federal study that assesses Americans' health and nutritional status. Results showed the following:

- **Reduced prevalence of high blood pressure.** The study estimated that the average American adult consumes 3,400 mg of sodium per day and that 70 percent of adults consume more than the recommended amount. Reducing average consumption to meet IOM's national sodium guidelines could eliminate at least 11 million cases of high blood pressure nationally, which could extend the lives of thousands of people each year.
- **Lower direct medical costs.** The lower prevalence of high blood pressure would translate into approximately \$18 billion per year in direct health care cost savings. About half of the savings are likely to accrue to the public sector.
- **Improved quality of life.** Meeting sodium consumption guidelines would save, in one year, 312,000 quality-adjusted life years—a metric that accounts for increased longevity as well as the relative healthiness experienced during additional years of life. The annual monetary value of this improvement would be an estimated \$32 billion.

The researchers note that these estimates are conservative because they exclude several sources of potential savings: health benefits experienced by people who start with low blood pressure or who retain high blood pressure even after lowering their sodium intake, the benefits of reducing the ill effects of cardiovascular disease outside of the hypertension link, and the benefits of reducing future illness by lowering current blood pressure levels.

Lowering sodium intake across the nation's population will not be easy. Studies suggest that more than 75 percent of Americans' dietary sodium intake comes from processed foods, rather than from salt added during cooking at home or at the dining table. Restaurant food also is generally high in sodium. Strategies that are currently being considered by policymakers include redesigning food labels to highlight sodium levels, having manufacturers voluntarily lower sodium levels, and adopting regulations that would require food processors to lower sodium.

This fact sheet is part of the RAND Corporation research brief series. RAND fact sheets summarize published, peer-reviewed documents.

Headquarters Campus  
 1776 Main Street  
 P.O. Box 2138  
 Santa Monica, California  
 90407-2138  
 TEL 310.393.0411  
 FAX 310.393.4818

© RAND 2009

Office of Congressional Relations | 703-413-1100 x5320 | [ocr@rand.org](mailto:ocr@rand.org) | [www.rand.org/congress](http://www.rand.org/congress)

---

The research was funded by a subcontract from Harvard University.

This fact sheet was written by David M. Adamson. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.

**RAND Offices**

Santa Monica, CA • Washington, DC • Pittsburgh, PA • New Orleans, LA/Jackson, MS • Boston, MA • Doha, QA • Cambridge, UK • Brussels, BE



# HEALTH

- THE ARTS
- CHILD POLICY
- CIVIL JUSTICE
- EDUCATION
- ENERGY AND ENVIRONMENT
- HEALTH AND HEALTH CARE
- INTERNATIONAL AFFAIRS
- NATIONAL SECURITY
- POPULATION AND AGING
- PUBLIC SAFETY
- SCIENCE AND TECHNOLOGY
- SUBSTANCE ABUSE
- TERRORISM AND HOMELAND SECURITY
- TRANSPORTATION AND INFRASTRUCTURE
- WORKFORCE AND WORKPLACE

This PDF document was made available from [www.rand.org](http://www.rand.org) as a public service of the RAND Corporation.

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

---

## Support RAND

[Browse Books & Publications](#)

[Make a charitable contribution](#)

## For More Information

Visit RAND at [www.rand.org](http://www.rand.org)

Explore [RAND Health](#)

View [document details](#)

## Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND PDFs to a non-RAND Web site is prohibited. RAND PDFs are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).