

Public Health Strategies to Reduce Dietary Sodium Consumption

Changing the Menu: Strategies for Healthy Eating and Sodium Reduction in California

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Centers for Disease Control and Prevention

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Division for Heart Disease and Stroke Prevention

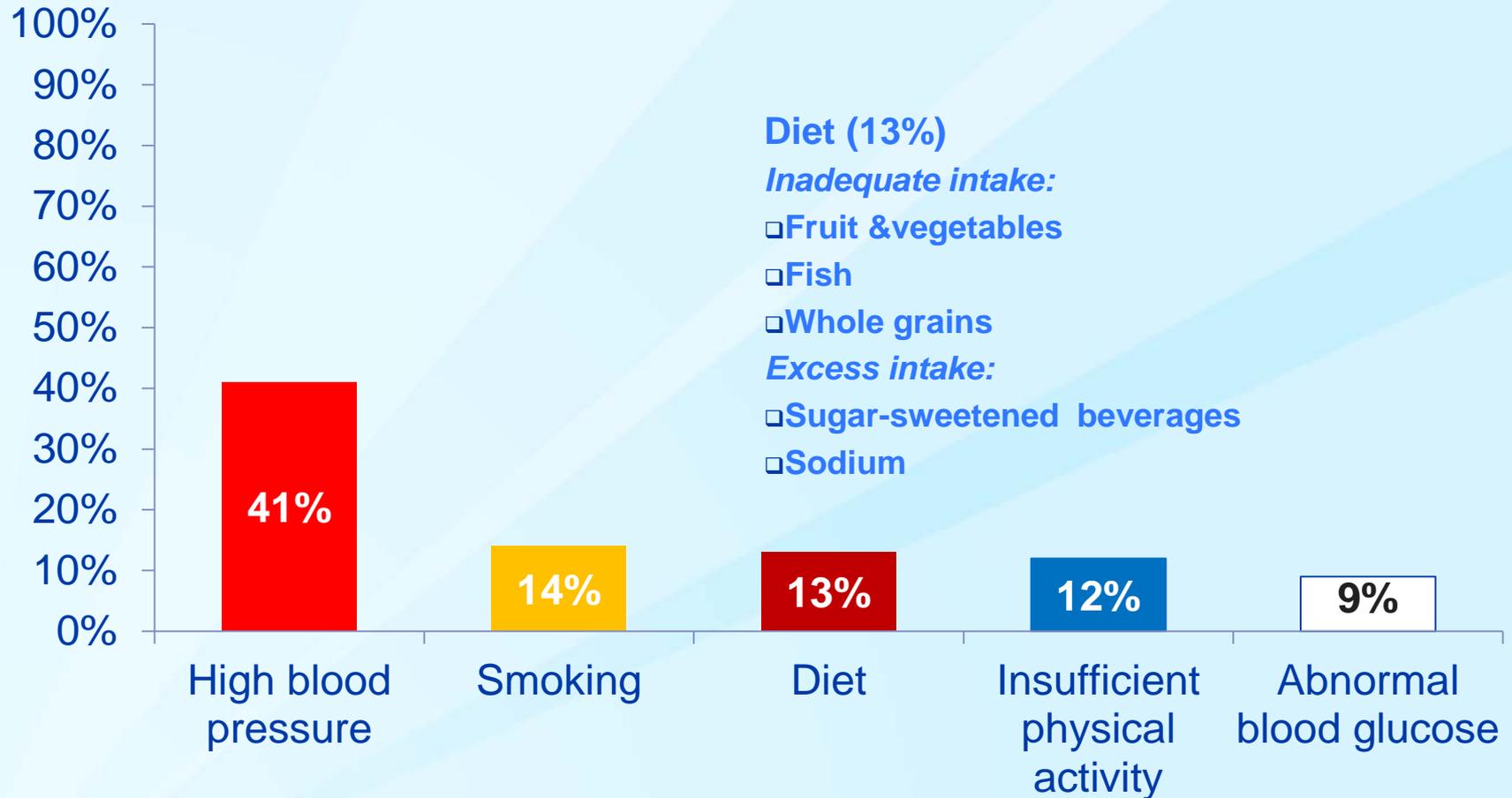


Overview

- ❑ **Public health importance of sodium reduction**
- ❑ **National efforts to reduce sodium**
- ❑ **Monitoring sodium intake and reducing sodium consumption**
- ❑ **State and local action**



U.S. Cardiovascular Disease Deaths Attributable Factors



Source: NHANES follow-up data, Yang, Cogswell, Flanders, et al. *JAMA* 2012;1273-83.

What's at Stake

- ❑ About one-in-three U.S. adults (71 million) have high blood pressure and about half have their blood pressure controlled
- ❑ High blood pressure is a major cause of heart disease and stroke, leading causes of death in the United States
- ❑ Excess sodium raises blood pressure
- ❑ Reducing average U.S. population sodium intake as little as 400 mg daily (11%)
 - Prevent >28,000 deaths
 - Save \$7 billion health care dollars annually



Nwankwo T, et al.. 2013 Hypertension among adults in the United States: NHANES, 2011–2012. NCHS data brief, no 133; CDC, *MMWR* 2011;60:103-8; Bibbins-Domingo et al., *NEJM* 2010;60:103-108 CDC. Vital signs: awareness and treatment of uncontrolled hypertension among adults--United States, 2003–2010. *MMWR*. 2012;61:703–9. Palar K, Sturm R. Potential societal savings from reduced sodium consumption in the U.S. adult population. *Am J Health Promot*. 2009;24(1):49–57.

U.S. Sodium Intake

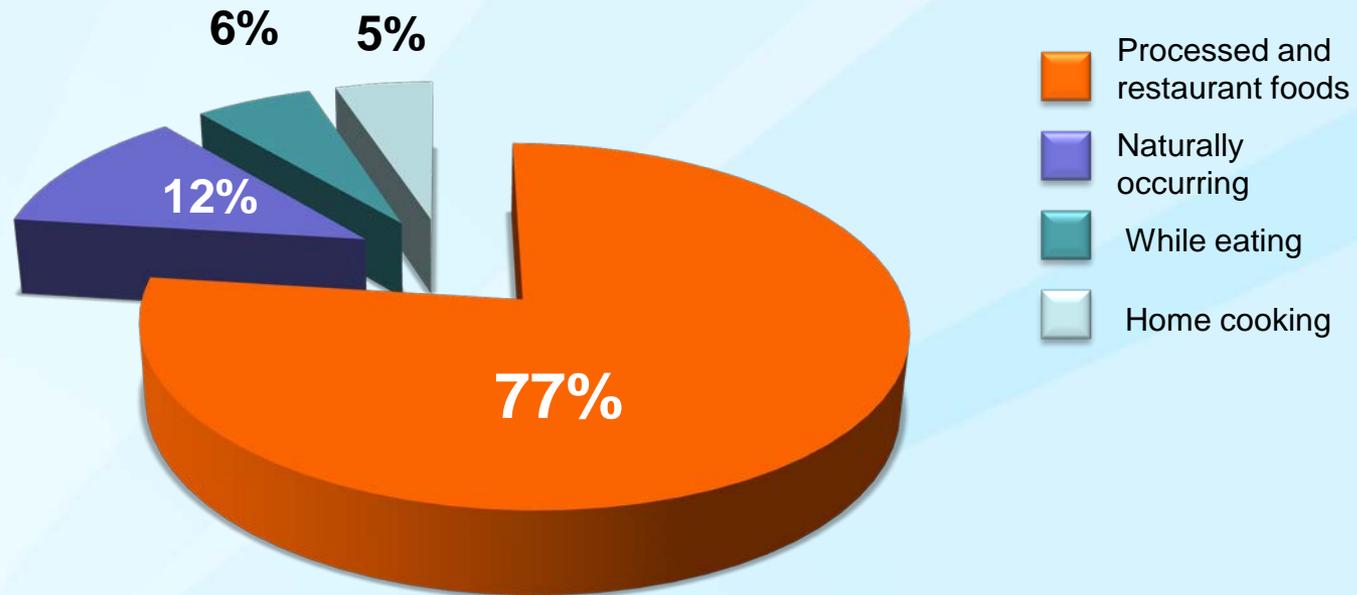
- ❑ **Americans age 2 and older consumed an average of 3,478 mg of sodium each day**
 - Sodium intake among males is higher than among females, regardless of age
 - Sodium intake is highest among men aged 20-49 years:
 - Race-ethnicity: Among adults (≥ 20), slightly fewer non-Hispanic blacks and Hispanics consume $\geq 2,300$ mg/day (85.2% and 85.9% respectively), compared to non-Hispanic whites (92.5%)

US Dept of Health and Human Services, US Dept of Agriculture. What We Eat in America. NHANES 2011-2012. Agricultural Research Service Web site. http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/1112/Table_1_NIN_GEN_11.pdf. Accessed May 10, 2015.

U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2010*. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010.

Cogswell ME, Zhang Z, Carriquiry AL, Gunn JP, Kuklina EV, Saydah SH, et al. Sodium and potassium intakes among US adults: NHANES 2003–2008. *Am J Clin Nutr*. 2012;96:647–57.

Most of the Sodium in U.S. Diets is from Processed and Restaurant Foods



Mattes R, Donnelly. *J AM Coll Nutr* 1991;10:383–393; IOM, Strategies to reduce sodium intake in the United States. 2010; Anderson et al., *The INTERMAP study. J Am Diet Assoc* 2010;110:736-745.

44% of U.S. Sodium Intake Comes from Ten Types of Foods

Rank	Food Types	%
1	Bread and rolls	7.4
2	Cold cuts and cured meats	5.1
3	Pizza	4.9
4	Poultry	4.5
5	Soups	4.3
6	Sandwiches	4.0
7	Cheese	3.8
8	Pasta mixed dishes	3.3
9	Meat mixed dishes	3.2
10	Savory snacks	3.1

Dietary Guidelines for Americans – National Recommendations

□ 2015 DGA Committee Scientific Report

- Supports the 2010 recommendation for the general population to reduce to <2,300 mg/day
- Sources of scientific evidence:
- Reviewed existing reports
- Updated systematic reviews done in 2013 by the IOM and NHLBI and identified four additional articles published since 2013 measuring sodium intake and cardiovascular disease outcomes
- Recommends primary emphasis on policy; consumer education; and local, state, and Federal agency strategies that include partnerships with the food industry to reduce the sodium content of foods in the U.S.

Other Guidelines and Recommendations

❑ **Healthy People 2020**

- Reduce mean U.S. population sodium intake to 2,300 mg per day by 2020

❑ **Institute of Medicine**

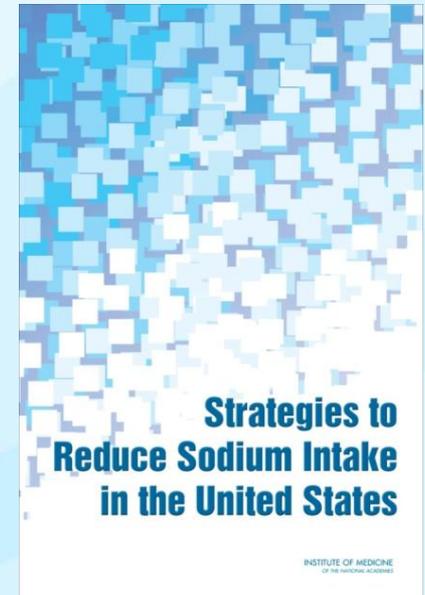
- Reduce the sodium content of the U.S. food supply

❑ **American Heart Association**

- Reduce population sodium intake to 1500 mg per day

❑ **American Medical Association**

- Stepwise, minimum 50% reduction in sodium in processed foods, fast-food products, and restaurant meals over the next decade



EFFORTS TO REDUCE SODIUM CONSUMPTION IN THE UNITED STATES

Million Hearts®: Getting to the Goal

Intervention	Baseline	Target	Clinical target
A spirin for those at high risk	47%	65%	70%
B lood pressure control	46%	65%	70%
C holesterol management	33%	65%	70%
S moking cessation	23%	65%	70%
Sodium reduction	~ 3.5 g/day	20% reduction	
Trans fat reduction	~ 1% of calories	50% reduction	

Unpublished estimates from Prevention Impacts Simulation Model (PRISM)

Key Components of Million Hearts[®]

Keeping Us Healthy
Changing the environment

**Health
Disparities**

Excelling in the ABCS
Optimizing care



Focus on
the ABCS



Health tools
and technology



Innovations in
care delivery





Other National Efforts

- ❑ **Healthy, Hunger Free Kids Act**
- ❑ **Nutrition Labeling**
- ❑ **Menu Labeling**
- ❑ **Industry Engagement**
- ❑ **National Salt Reduction Initiative**
- ❑ **National Prevention Strategy**
- ❑ **Consumer Education**
- ❑ **Monitoring**



HHS/GSA Health and Sustainability Guidelines for Federal Concessions and Vending Operations

- ❑ Updating through collaborative federal effort**
- ❑ Anticipated dissemination following the release of the Dietary Guidelines for Americans, 2015**
- ❑ RFI used to gather responses on the successes and barriers encountered when implementing the guidelines**
- ❑ The public comment period has been extended to September 30, 2015**

**EFFORTS TO MONITOR SODIUM
INTAKE AND REDUCE SODIUM
CONSUMPTION IN THE U.S.**

Sodium in the U.S. Food Supply

- ❑ **Sentinel foods**
- ❑ **Packaged food database**
- ❑ **Monitoring systems for restaurant foods**

Monitoring Sodium Intake

□ Dietary

- NHANES- dietary assessment
- Salt sources study

□ Biomarker

- NHANES 2014 – 24 hour urine
- Historic spot samples
- Calibration studies

Consumer Awareness

- ❑ **Consumer awareness can drive action aimed at sodium reduction**
- ❑ **BRFSS 2013 Sodium Modules**
 - Half are “monitoring or reducing” intake
 - 20% received medical advice to do so
 - More likely to report doing something about sodium if hypertensive
 - Southern states more likely to report action
 - Doctor or health professional advice is strongly associated with action to reduce sodium intake
- ❑ **Nutrition Education Resources**
 - www.cdc.gov/salt

Sodium Intake Among U.S. Adults — 26 States, the District of Columbia, and Puerto Rico, 2013 MMWR
July 3, 2015 / 64(25);695-698

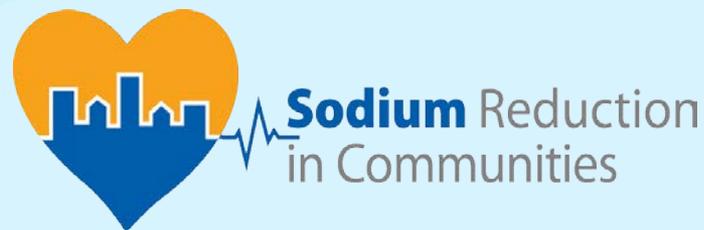
Jackson et al. *Health Professional Advice and Adult Action to Reduce Sodium Intake*. Am J Prev Med
2015

STATE AND LOCAL ACTION

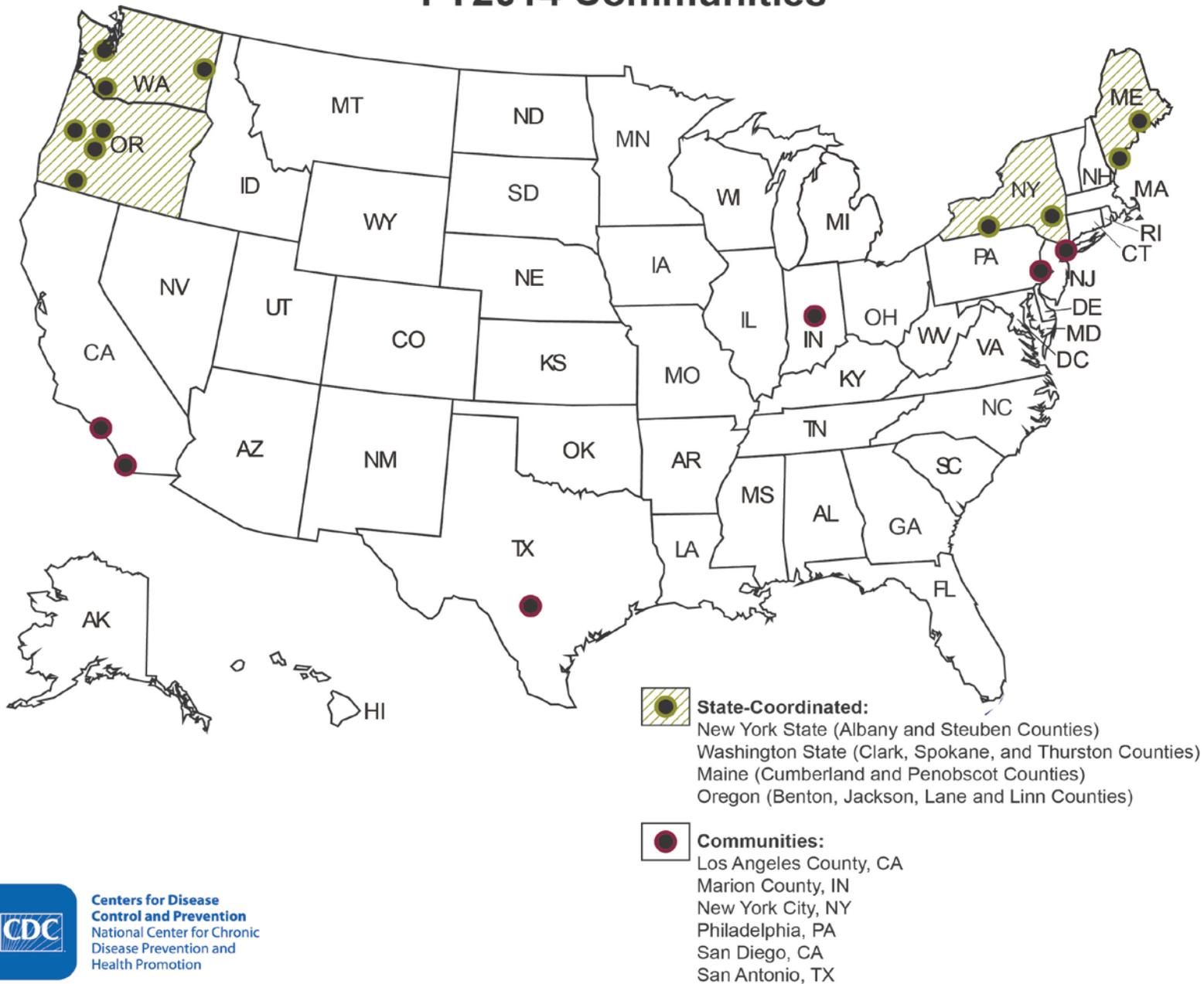
Sodium Reduction in Communities Program

□ Program outcomes:

- Increased availability and accessibility of lower sodium food products
- Increased accessibility of lower sodium food products
- Reduced sodium intake
- **10 current sites**



CDC - Sodium Reduction in Communities Program, FY2014 Communities



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SRCP Data Collection and Impact



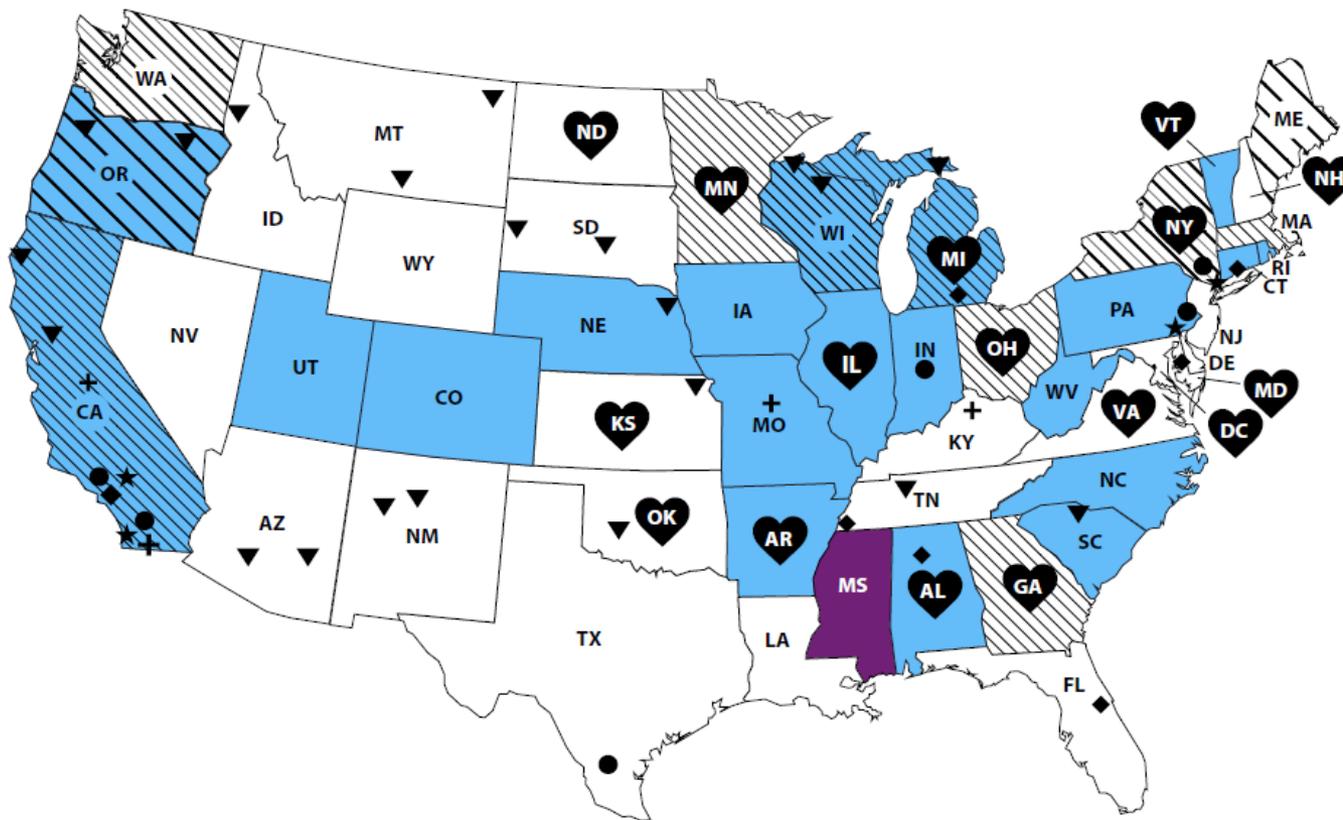
For discussion purposes only. Not intended as official CDC recommendation or guidance.

Other State and Community Priority Chronic Disease Programs

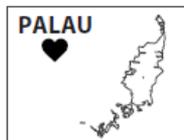
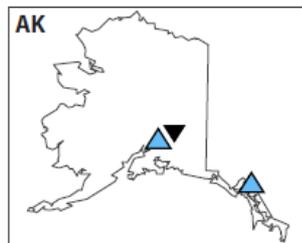
- ❑ Support healthy environments in workplaces, schools, early childhood education facilities, and in the community.
- ❑ Work through health systems and communities to reduce complications from multiple chronic diseases such as diabetes, heart disease, and stroke.
- ❑ **Priority Nutrition Strategies:**
 - Increase access to healthy foods and beverages
 - Implement food service guidelines/nutrition standards, including sodium, where foods and beverages are available
 - Create supportive nutrition environments in schools

Division for Heart Disease and Stroke Prevention Programs

Fiscal Year 2015



-  State Public Health Actions
(All 50 States and DC)*
-  Local Public Health Actions
(4 City Health Departments)
-  Tribal Public Health Actions
(22 Tribal Organizations)
-  WISEWOMAN States (20)
-  WISEWOMAN Tribes
(2 Local Areas)
-  Coverdell Stroke
Program States (9)
-  Million Hearts® ASTHO
Learning Collaborative
States and Territories
(15 States, DC, and Palau)
-  Sodium Reduction States (4)
-  Sodium Reduction Communities
(6 Local Areas)
-  Million Hearts®
National Association
of Community
Health Centers
Networks
(4 Networks Comprising
78 Health Centers)
-  Million Hearts®
YMCA of the USA Programs
(7 Pilot Participants)
-  Mississippi Delta
Health Collaborative



*In FY2014, DHDSP funded statewide initiatives in all 50 states and DC to prevent, manage, and reduce risk factors associated with heart disease and stroke.



Challenges to Advancing and Promoting Awareness of Sodium Reduction in U.S.

- ❑ **Competing (and important) nutrition priorities including those related to obesity**
- ❑ **75%-80% of sodium intake is from processed and restaurant foods**
- ❑ **Lack of consumer awareness about primary sources of sodium; lack of desire to reduce personal sodium intake**

What Can You Do?

- ❑ Work with employers to implement nutritional standards**
- ❑ Continue to raise awareness among food distributors to meet standards**
- ❑ Identify ways to leverage buying power to increase demand for lower sodium products**
- ❑ Heighten awareness of healthful food and beverage choices for consumers**
- ❑ Share successes with other agencies working to improve nutrition**

Summary

- ❑ **Sodium reduction work in the U.S. spans across Federal, state, and local government agencies**
- ❑ **Increasing access to healthful, lower sodium foods can help consumers make more healthful choices**
- ❑ **Further changes in the food supply are needed to reduce sodium intake within recommended levels**

Resources: www.cdc.gov/salt

SOUNDBITES

A WEBINAR SERIES ON EARNED MEDIA



**Lowering salt intake could
improve your health.**



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Under Pressure

Strategies for Sodium Reduction in the School Environment

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



For More Information

Centers for Disease Control and Prevention
www.cdc.gov/salt

Food and Drug Administration
www.fda.gov

United States Department of Agriculture
www.usda.gov



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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.