

# The Emerging Local Policy Approach and Food Environment Change in Los Angeles County

*Shasta County Sodium Forum: Building Support for Sodium Reduction*

June 6, 2011

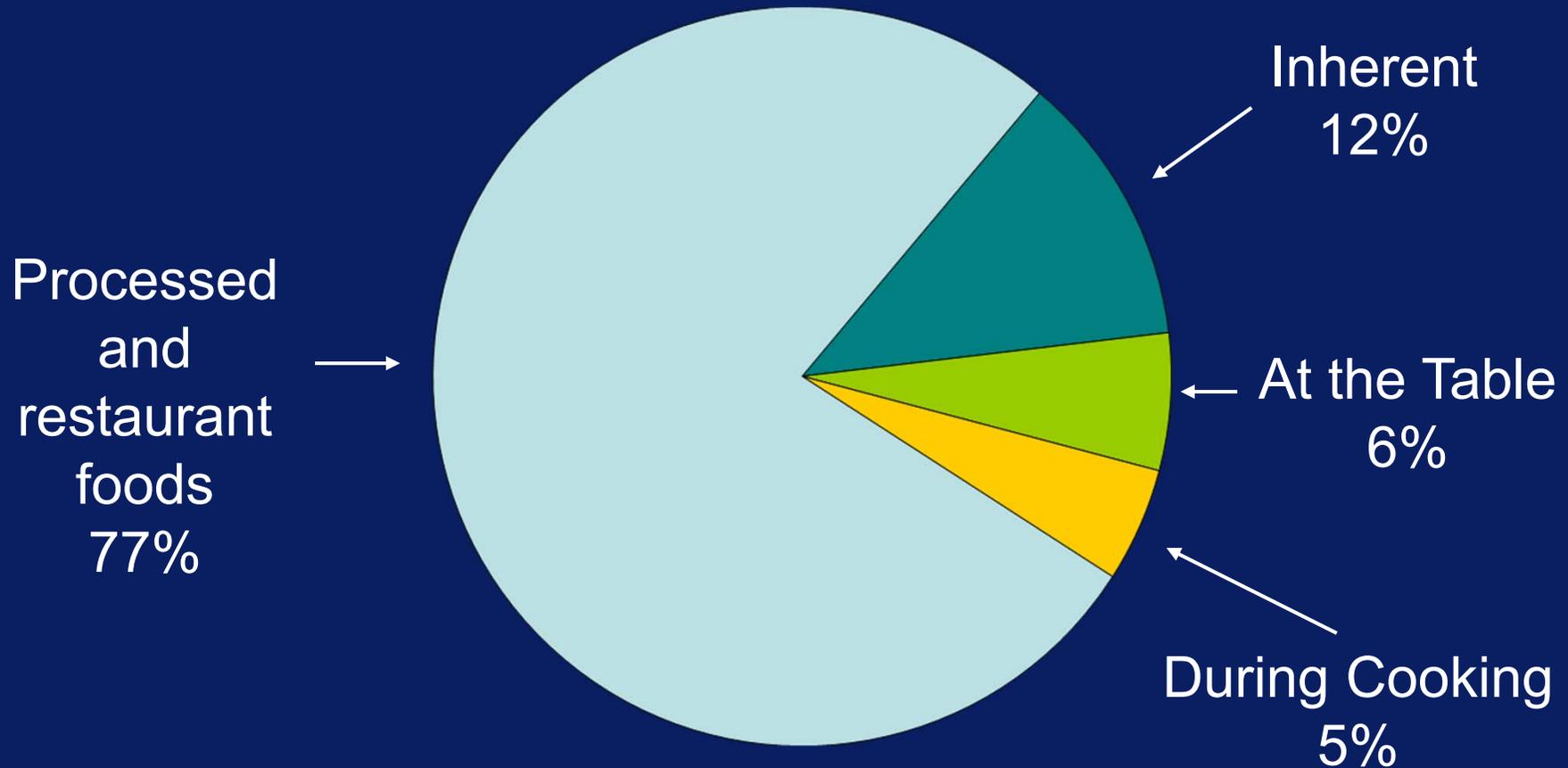
Tony Kuo, MD, MSHS  
Director  
Office of Senior Health



# What's at Stake?



# Sources of Dietary Sodium



(Data from 62 adults who completed 7-day dietary records)

Mattes and Donnelly. *JACN*. 1991;10:383



# U.S. Food Grade Salt Sales

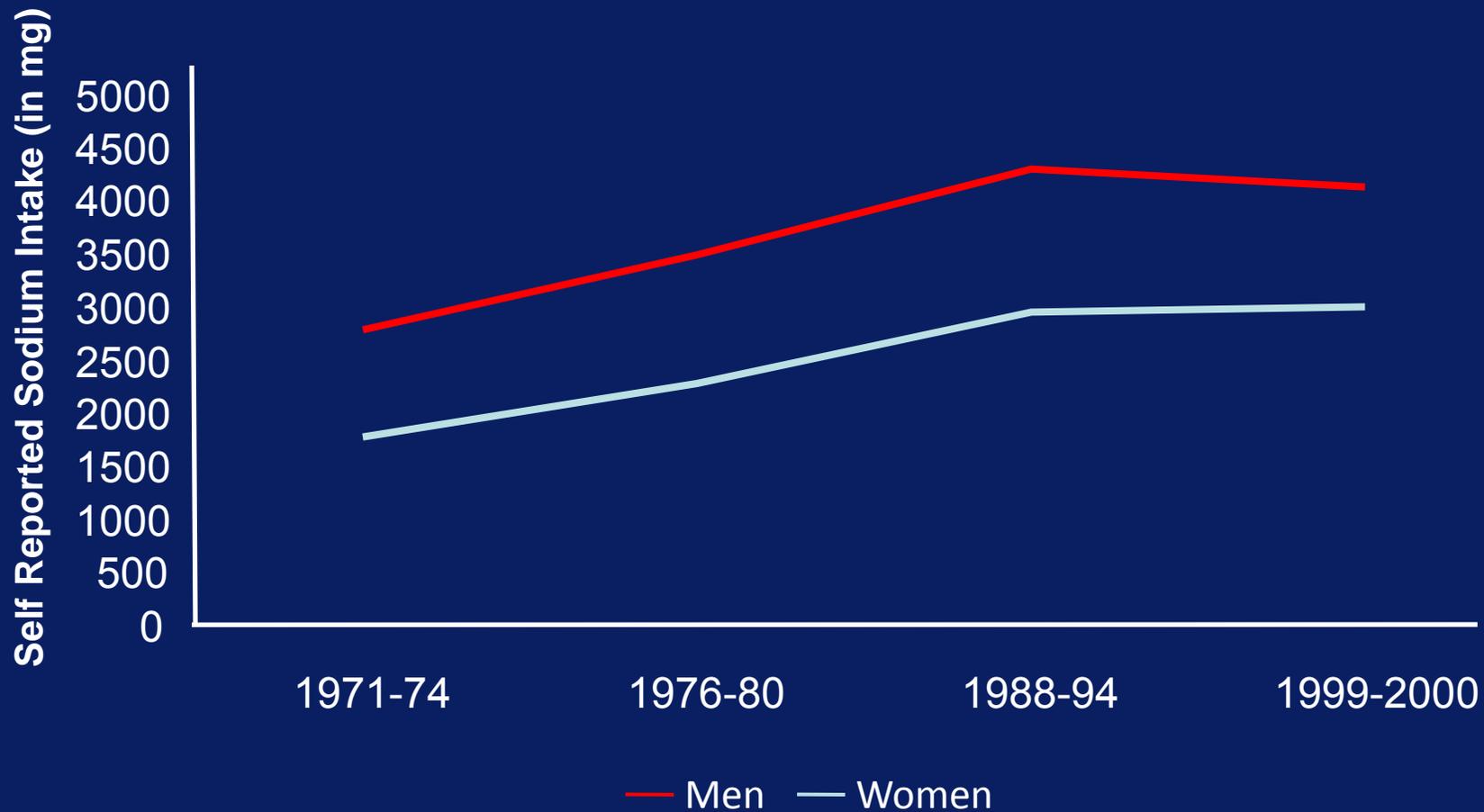
## *Increasing Use of Salt in the United States*



Source: [www.saltinstitute.org](http://www.saltinstitute.org), accessed Jan. 15<sup>th</sup>, 2009



# Mean Daily Sodium Intake (in mg) for Men and Women in the U.S., Ages 20-74 Years (NHANES)



Source: NHANES. Estimates are based on self reports and are considered underestimates of mean daily sodium intake for the U.S. population, 1971 to 2000.



# Eating Out – Need to Remember That Low Calorie Doesn't Always Mean Low Sodium



Subway Cold Cut Combo Sandwich (6-inch): 410 calories, **1,530 mg sodium**



Pizza Hut All Natural Pepperoni Pizza (1 slice): 250 calories, **590 mg sodium**



McDonald's Premium Grilled Chicken Classic Sandwich: 420 calories, **1,190 mg sodium**

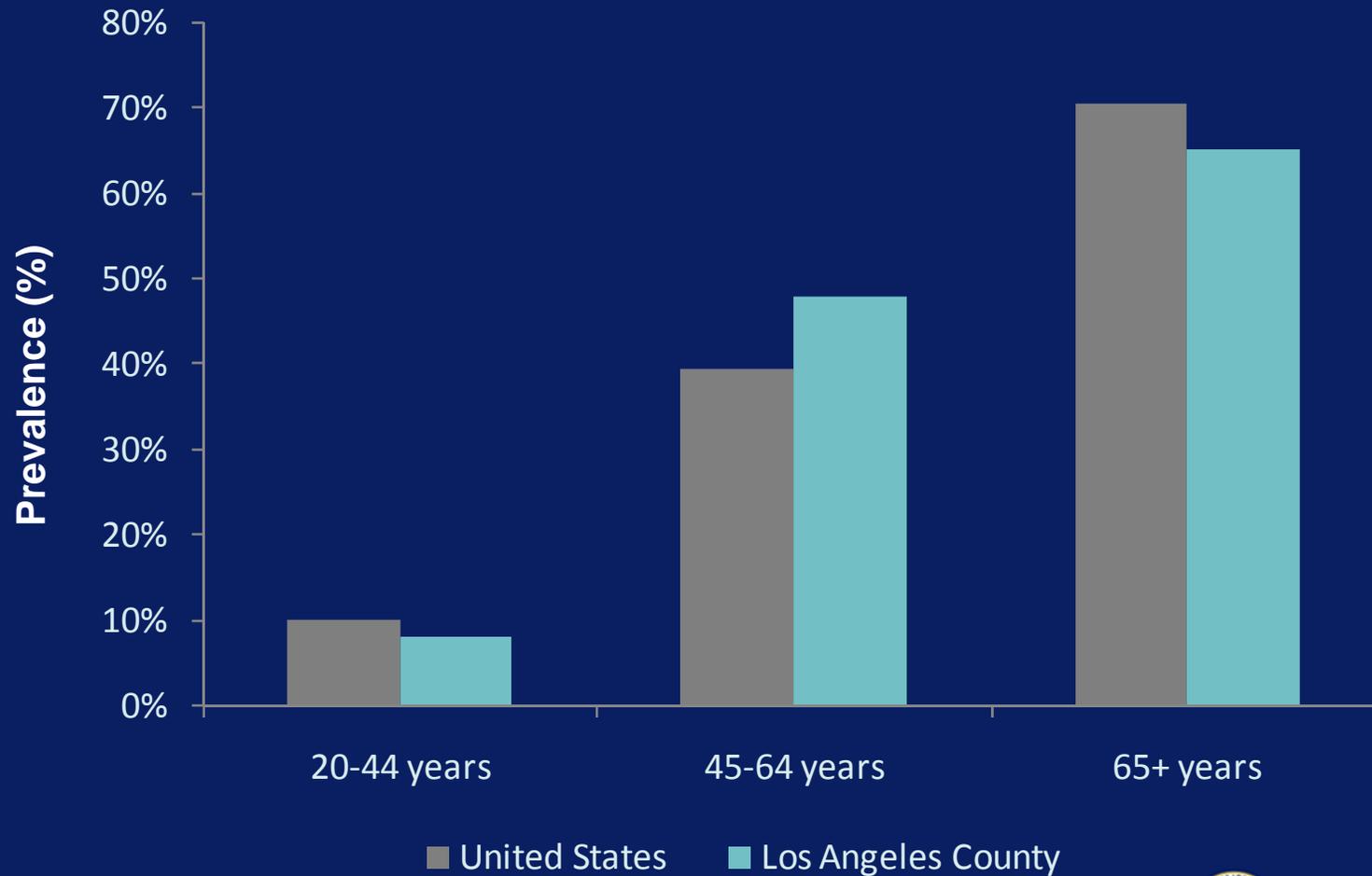


# Consequences of Elevated Blood Pressure

- Increased risk of cardiovascular disease (CVD)
  - ↑ strokes
  - ↑ heart attacks
  - ↑ heart failure
- Increased risk of renal disease
  - ↑ chronic kidney disease (CKD)
  - ↑ progression of proteinuria  
(especially among those with diabetes)
  - ↑ end stage renal disease (kidney failure)



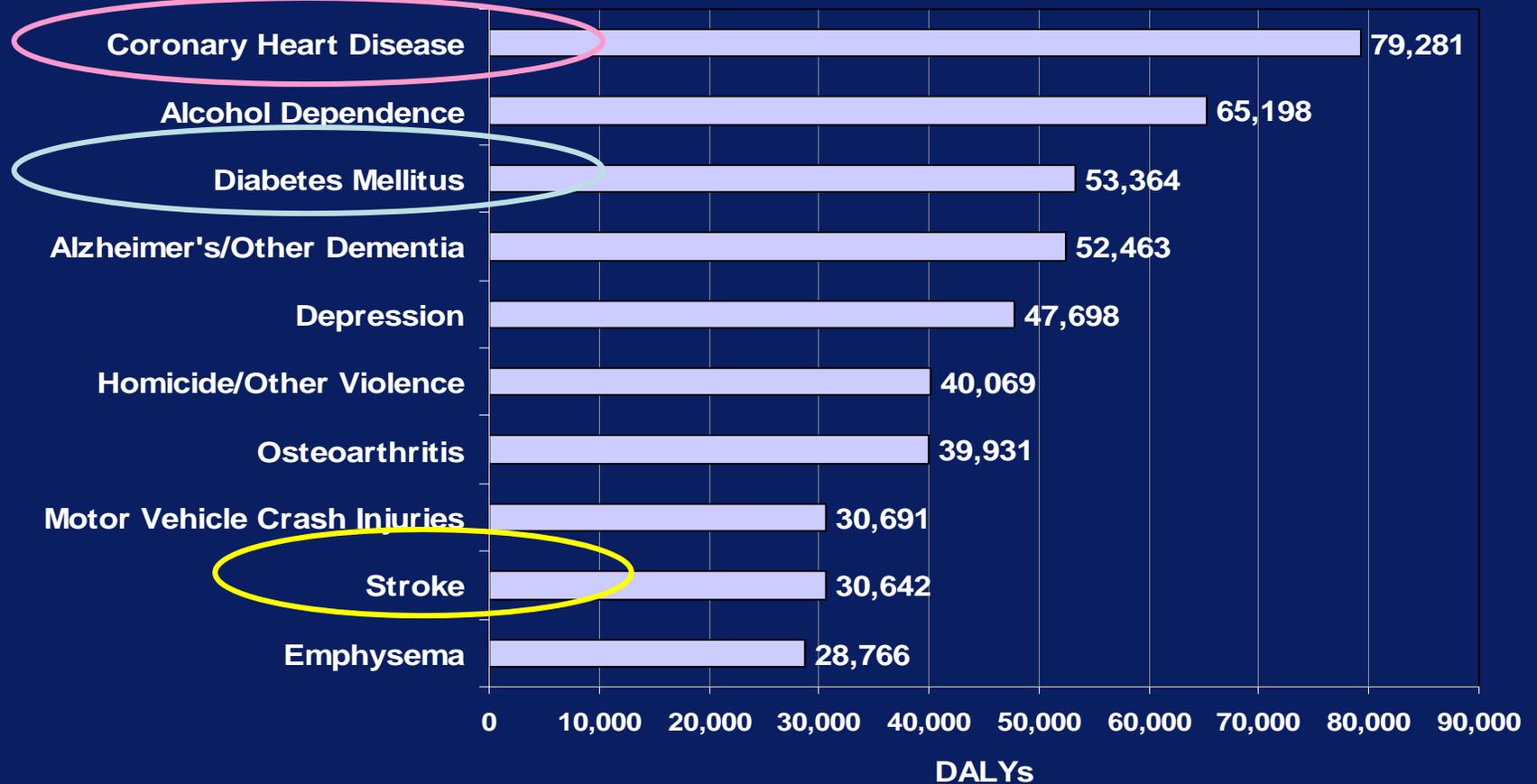
# Hypertension by Age Group in Los Angeles County and the U.S.



Source: NHANES, 2005



# Leading Causes of Disability-Adjusted Life Years (DALYs) in Los Angeles County, 2005

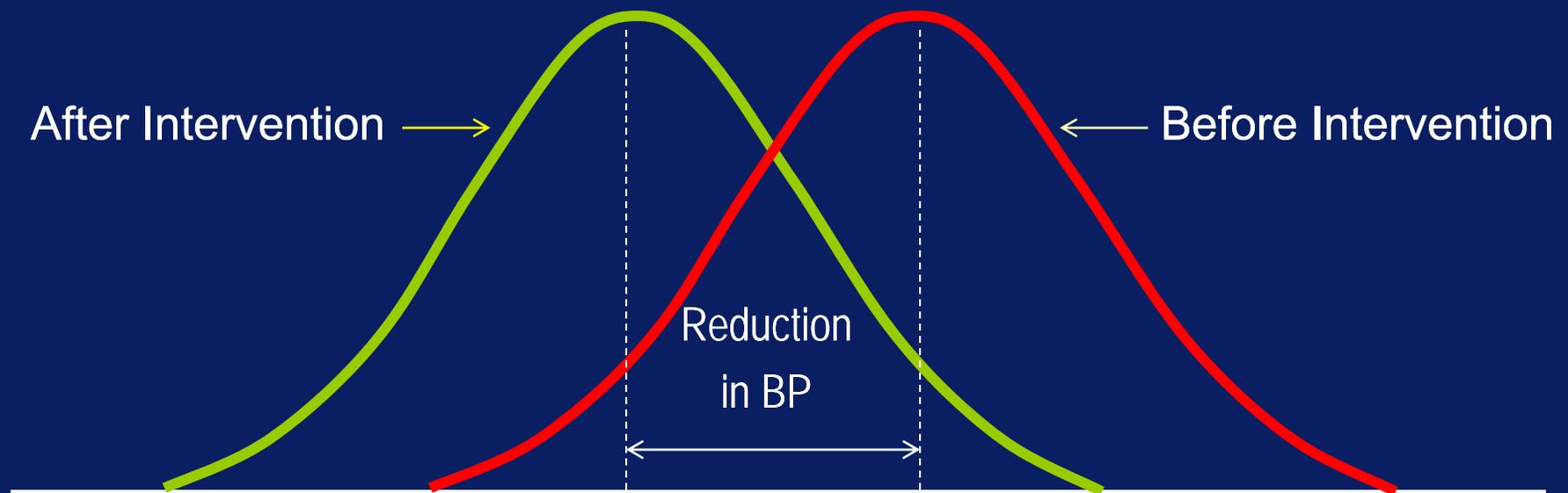


# Blood Pressure Reduction Through Reduced Salt Intake Would Save Lives in the U.S.

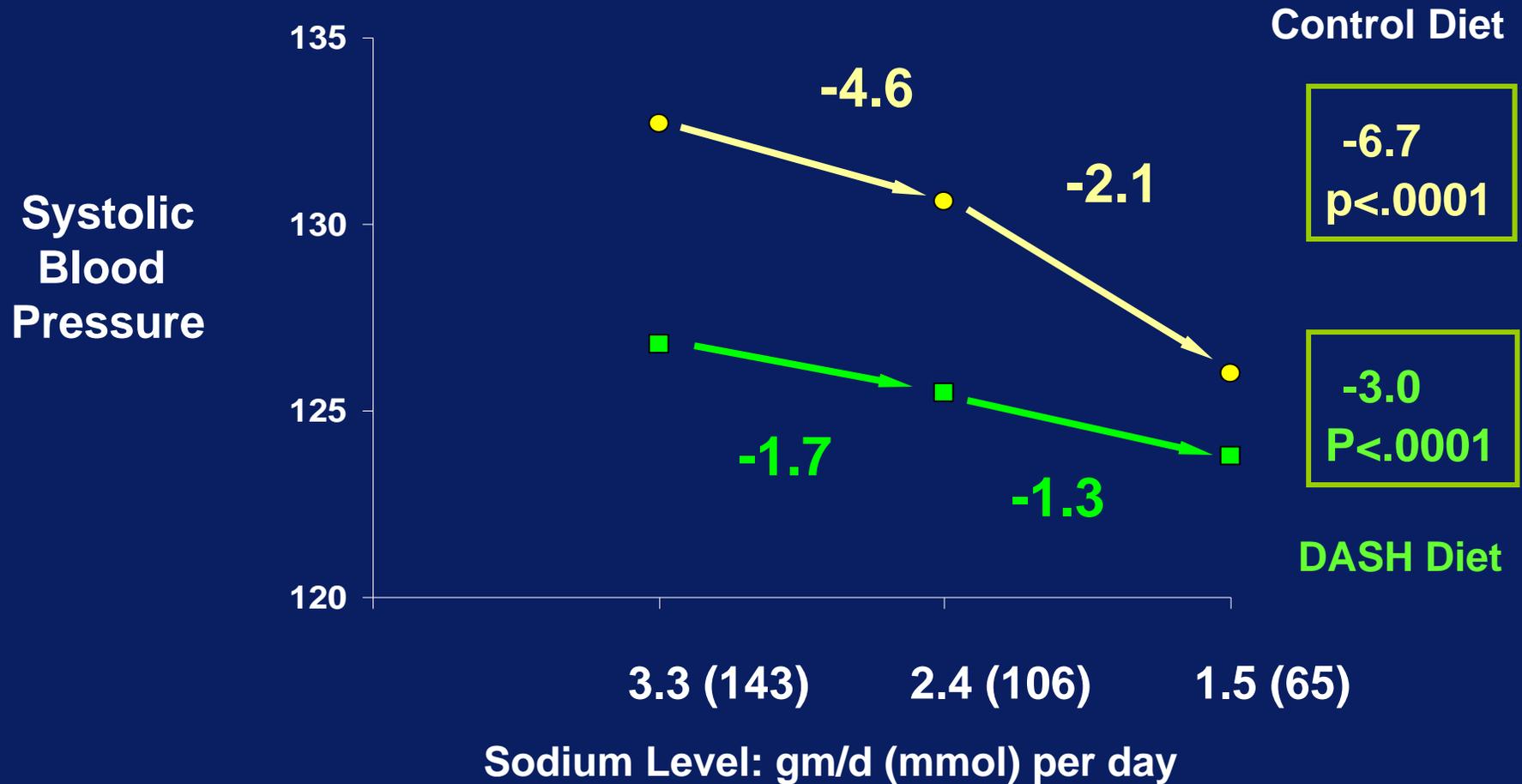


# Population-Based Strategy

## SBP Distributions



# DASH-Sodium Trial: Effect of Sodium Level on Systolic Blood Pressure, a Dose-Response Relationship



Source: Sacks, 2001 (412 pre- and stage 1 hypertensive adults)



# Potential Health Impact in Los Angeles County

**Table 1. Potential Decrease in Cases of Hypertension and Annual Savings in Hypertension Treatment Costs from Reducing Sodium Consumption in Los Angeles County.**

Scenario: Percent Reduction in Population Sodium Consumption (decrease in sodium intake in mg) <sup>a</sup>	Average Systolic Blood Pressure Reduction (mm Hg) <sup>b</sup>	Percent Decrease in the Prevalence of Hypertension <sup>c</sup>	Decrease in the Number of Cases of Hypertension <sup>d</sup>	Potential Annual Cost Savings [in 2010 dollars] (\$) <sup>e</sup>
10% (344 mg)	0.71	1.7%	31,953	62 million
20% (687 mg)	1.41	2.8%	52,629	102 million
30% (1,031 mg)	2.11	4.2%	78,944	153 million
40% (1,374 mg)	2.82	5.3%	99,619	193 million
50% (1,718 mg)	3.52	6.8%	127,814	247 million

Note: for key formulas used in the above analysis (columns a-e), see page 6.



# Potential Health Impact in Los Angeles County

SBP Rise Averted

Potential number of lives saved per year  
(% Reduction in Mortality)

mmHg

5



Total

4,210 (-7)





## Food Environment Matters



# International: Product Variability

Burger King Double Whopper

	Sodium per serving	Sodium per 100 gm
Brazil	1,300 mg	349 mg
Australia	1,153 mg	321 mg
US	1,090 mg	291 mg
Germany	1,010 mg	285 mg
Canada	980 mg	263 mg
UK	875 mg	246 mg
Italy	819 mg	231 mg

Kellogg's Special K

	Sodium per serving	Sodium per 100 gm
Canada	270 mg	931 mg
Mexico	260 mg	867 mg
US	220 mg	710 mg
France	200 mg	450 mg
Italy	200 mg	450 mg
UK	100 mg	450 mg
Turkey	200 mg	400 mg



# National Sodium Landscape

- IOM's new report: "Strategies to Reduce Sodium Intake in the United States"
- FDA is investigating
  - Considering the GRAS status of sodium
  - Looking into packaged food labeling and how sodium information is displayed
- CDC working to enhance sodium surveillance at the national level
- National support for sodium reduction growing amongst packaged food and restaurant industry



# National Salt Reduction Initiative

## Announcement: April 26, 2010

**The Boston Globe**

16 food companies  
pledge to cut salt



*The Washington Post*

Salt taking a cut in  
groceries, restaurant menus



**REUTERS**

Bloomberg's salt shakeup

Bloomberg recruits 16  
companies to cut salt  
intake



Mayor unveils food companies'  
voluntary salt-cutting plan



gothamist

Bloomberg's Anti-Salt Crusade  
Gets Big Business Participation

*Los Angeles Times*

It's a new season for consumers as 16 companies,  
chains announce reductions in salt



Bloomberg Announces Companies  
That Will Pass on Salt

**NEW YORK POST**

Mike shakes up salt firms

**CBS  
NEWS**

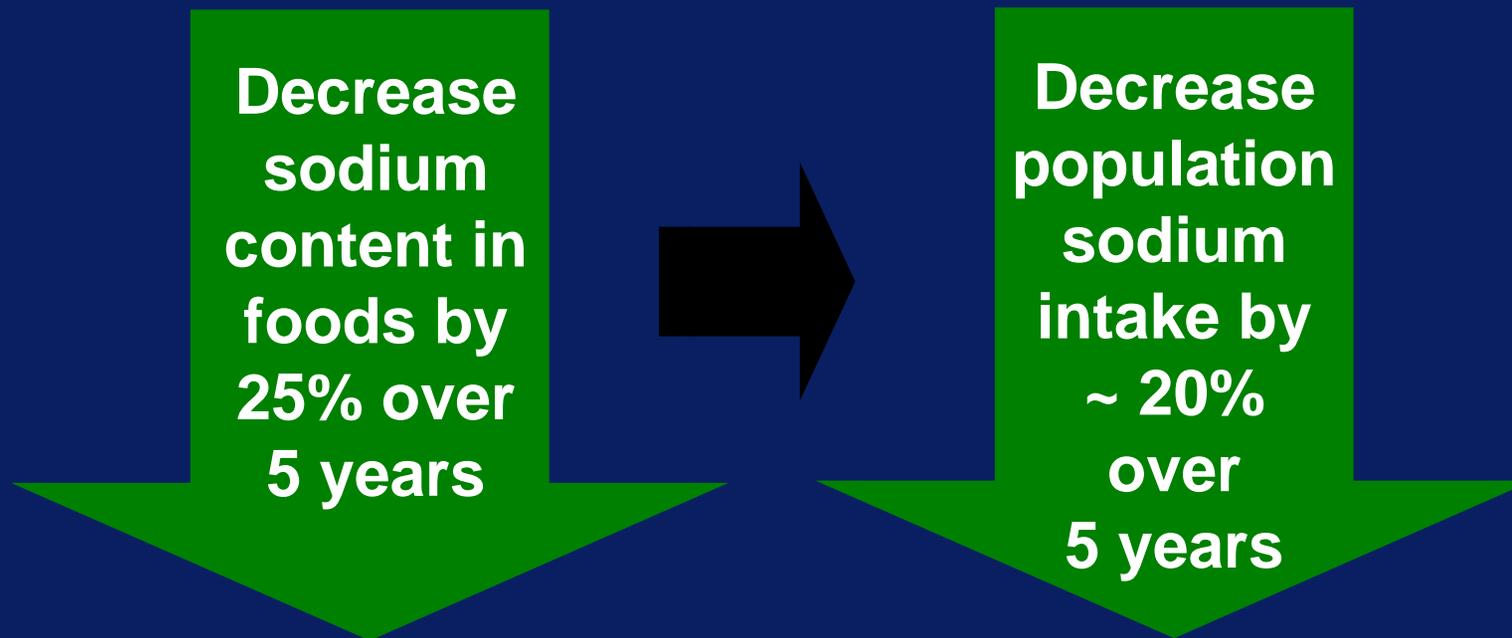
**16 Food Companies Agree to Reduce Salt**

New York City Spearheads Campaign to Cut Sodium Consumption, Major  
Food Manufacturers, Restaurants Sign On



COUNTY OF LOS ANGELES  
**Public Health**

# NSRI Goal: 20% Reduction in Sodium Intake in 5 Years



*Reductions will vary among food categories*



# Companies Committed to NSRI

## Packaged Food

- Boar's Head
- Fresh Direct
- Goya
- Hain Celestial
- Heinz
- Kraft
- LiDestri
- Mars Food
- McCain Foods
- Red Gold
- Unilever
- White Rose

## Restaurants

- Au Bon Pain
- Starbucks
- Subway
- Uno Chicago Grill



# Examples of Industry Commitments for Sodium Content Reductions



Source: Wall Street Journal, April 26, 2010



# Why Local Food Policy?



# Healthier Food Environment = Healthier Population

- Changing the food environment gives consumers a broader range of healthful foods from which to choose.
- Policy and environment strategies are effective at the state and local level and may help drive demand for federal action.
- One of the most promising strategies to decrease the prevalence of heart disease and stroke is to lower sodium content of processed and restaurant foods.
- Sodium reduction will benefit most individuals.



# Settings Impacted by Food Procurement Policies

- Daycare facilities, schools
- Prisons, juvenile detention centers, probation camps
- Worksite cafeterias
- Distributive food programs (i.e. senior meals programs)
- Concession stands operated by the jurisdiction



# LA County - Background

## County of Los Angeles

- 5 Supervisors, complex governing infrastructure
- Over 101,000 employees
- 37 departments, many bigger than many municipalities and local jurisdictions in California
- Operate or contract with many food service venues
- 87 regional and local parks, 344 miles trails, and 19 public golf courses (world's largest system)
- Several museums, libraries, theaters, and beaches also under purview of the County



# Needs Assessment

## PREVENTING CHRONIC DISEASE PUBLIC HEALTH RESEARCH, PRACTICE, AND POLICY

VOLUME 8: NO. 2

MARCH 2011

ORIGINAL RESEARCH

### Facilitators of and Barriers to Implementing a Local Policy to Reduce Sodium Consumption in the County of Los Angeles Government, California, 2009

Lauren N. Gase, MPH; Tony Kuo, MD, MSHS; Diane O. Dunet, PhD; Paul A. Simon, MD, MPH

*Suggested citation for this article:* Gase LN, Kuo T, Dunet DO, Simon PA. Facilitators of and barriers to implementing a local policy to reduce sodium consumption in the County of Los Angeles government, California, 2009. *Prev Chronic Dis* 2011;8(2). [http://www.cdc.gov/pcd/issues/2011/mar/10\\_0060.htm](http://www.cdc.gov/pcd/issues/2011/mar/10_0060.htm). Accessed [date].

PEER REVIEWED

Abstract

key barriers were identified: 1) unique features among food service settings, 2) costs and unavailability of low-sodium foods, 3) complexity of food service arrangements, 4) lack of consumer demand for low-sodium foods, 5) undesirable taste of low-sodium foods, 6) preference for prepackaged products, 7) lack of knowledge and experience in operationalizing sodium standards, and 8) existing multiyear contracts that are difficult to change. Despite perceived barriers, several participants indicated that their organizations have successfully implemented nutritional standards that include limits on sodium.



# Facilitators

- Organizations have the authority to impose nutrition standards
- Serving nutritious food is a high priority
- Take advantage of opportunities to build on existing policies
- Not restricted to just County of Los Angeles, relevant to other entities with purchasing leverage



# Barriers to Implementation



- Unique features of each food service setting
- Cost and availability of low-sodium foods
- Complexity of food service arrangements
- Difficulty of modifying existing contracts
- Lack of consumer demand for low-sodium foods
- Unaccustomed/undesirable taste of low-sodium foods
- Vendors preference for prepackaged items
- Lack of knowledge and experience in operationalizing sodium standards



# Health Impact Assessment

- HIA methods were adapted to estimate potential health impacts of a local food procurement policy on selected populations in the County and policy implementation costs
  - Used qualitative input and data provided by County food service vendors
- Mathematically simulated:
  - Potential costs and health impacts of implementing a food procurement policy
  - Varying levels of reductions in the sodium content of foods served
  - Estimated potential impacts on the mean Systolic Blood Pressure (SBP) in the targeted patron groups





# Model Considerations



- Cafeteria patrons in County food service settings are relatively stable
- Average sodium consumption of patrons mirrored national averages
- Prevalence of hypertension among patrons mirrored the Los Angeles population
- The model assumed that the relationship between sodium consumption and SBP is linear at all levels of sodium reduction
- Health care costs could be reduced if number of uncontrolled hypertension cases could be reduced



# Preliminary Study Findings

## Results

- Analysis predicted that adults eating at the targeted food service venues could consume 233 fewer mg of sodium each day.

This corresponded to:

- a decrease of approximately 0.71 mm Hg in SBP among adult hypertensives;
  - fewer cases of uncontrolled hypertension in the study population;
  - lower costs of treatment
- Preliminary findings suggests that a food procurement policy can contribute to positive health impacts in Los Angeles County



# Local Efforts: RENEW LA County and Los Angeles County Sodium Reduction Initiative

- 1) Adopt healthy food and beverage policies in eight cities
- 2) Adopt healthy food/beverage policies in three L.A. County departments
- 3) Improve school meal nutrition in four local districts, including LAUSD
- 4) Adopt nutrition and physical activity guidelines for preschools
- 5) Adopt policies to support breastfeeding in county and private firms
- 6) Increase teacher capacity to implement physical education requirements
- 7) Adopt or strengthen joint-use policies in school districts
- 8) Adopt land use policies to increase pedestrian activity and biking
- 9) Sodium reduction strategies



# County of Los Angeles Board Motion: Passed March 8, 2011

## I THEREFORE MOVE THAT THE BOARD OF SUPERVISORS:

Instruct the CEO and County Departments to consult with the Director of the Department of Public Health prior to the release of any Requests for Proposals for County food services contracts that involve the purchase, distribution, and/or sale of food and beverages in County facilities and programs to ensure that dietary requirements within the final contract promote healthy nutrition and comply with previously adopted Board policies. The Director of the Department of Public Health will work directly with affected agencies to incorporate nutrition recommendations to the extent feasible within each contract.



# Estimated Reach of Food Procurement Policies in Los Angeles County

- RENEW & LACSRI work with LAUSD and School Districts (over 730 schools; 690,000+ students; 500,000 meals produced each day)
- County of Los Angeles Food Procurement Policies in the various department food service venues
  - \* Hospital cafeterias: 90,000+ visitors each year; serves approx. 593 adults/day.
  - \* Senior meals program: serves approx. 9,200 adults/day
  - \* Childcare venues: serves approx. 24,000 children/day
- \* Other County cafeterias: serves approx. 1,800 adults/day



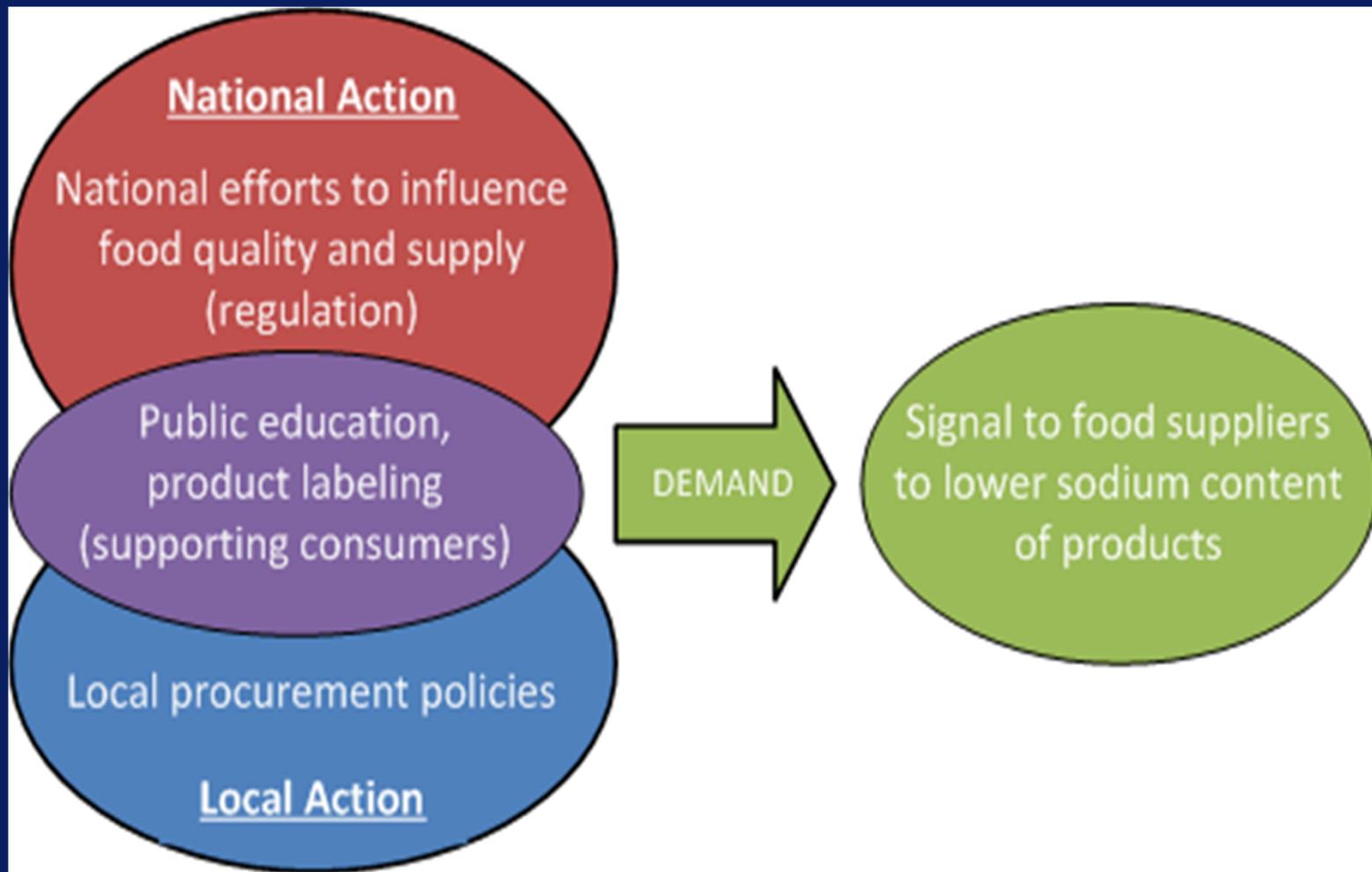
# Sodium Reduction Efforts

- “Salt Shocker” videos
- <http://www.youtube.com/choosehealthla>
- RENEW LA County’s social media campaign – *Choose Health LA* – kicked off during World Salt Awareness Week, March 21-27.
- **Current total views of the “Salt Shocker” videos: more than 7,000**



# Next Steps





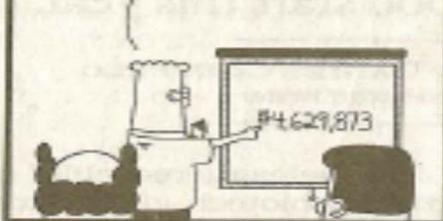
## Local Efforts Can Compliment National Efforts



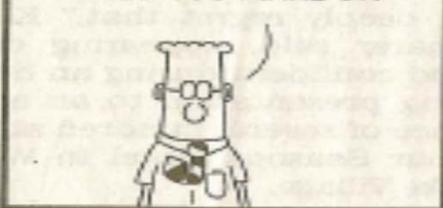
# Dilbert

BY SCOTT ADAMS

I DIDN'T HAVE ANY ACCURATE NUMBERS SO I JUST MADE UP THIS ONE.



STUDIES HAVE SHOWN THAT ACCURATE NUMBERS AREN'T ANY MORE USEFUL THAN THE ONES YOU MAKE UP.



HOW MANY STUDIES SHOWED THAT?

EIGHTY-SEVEN.



## Data are Critical for Driving Change

- To Understand the Problem (Assessment)
- Identify Potential Solutions (Policy Development)
- Monitor Progress (Assurance)



# Change is Difficult at All Levels



# Thank you! Q & A

## Citations:

Gase LN, Kuo T, Dunet DO, Simon PA. Facilitators and barriers to implementing a local policy to reduce sodium consumption in the County of Los Angeles government, California, 2009. *Prev Chronic Dis* 2011;8(2).

[http://www.cdc.gov/pcd/issues/2011/mar/10\\_0060.htm](http://www.cdc.gov/pcd/issues/2011/mar/10_0060.htm)

Gase LN, Kuo T, Dunet D, Schmidt SM, Simon P, Fielding JE. Estimating the potential health impact and costs of implementing a local policy for food procurement to reduce the consumption of sodium in the County of Los Angeles. Accepted for publication in the *Am J Public Health* (in press).

Division of Chronic Disease and Injury Prevention. (2010) *The Potential Health Impact of Reducing Excess Sodium Consumption in Los Angeles County*. Los Angeles, CA: Los Angeles County Department of Public Health.

<http://www.naccho.org/toolbox/tool.cfm?id=2187>

