

Monitoring Sodium in Sentinel Foods



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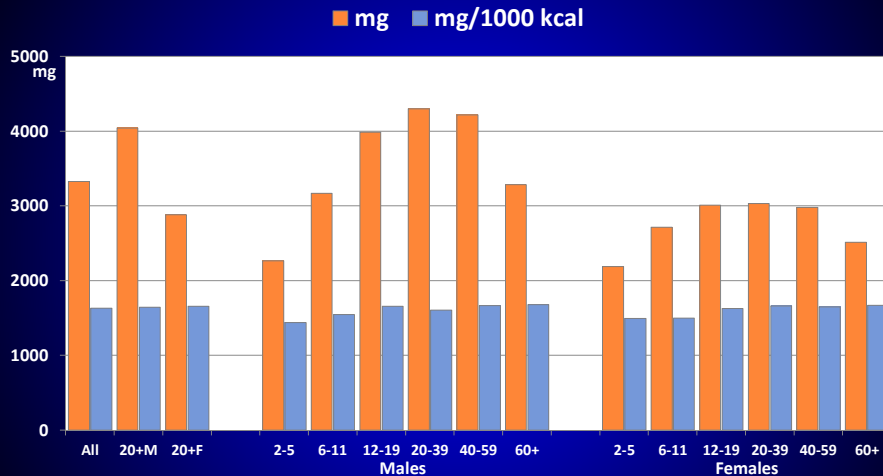


Topics to address

- sentinel foods for monitoring sodium
- related work at FSRG



Sodium Intakes of Americans



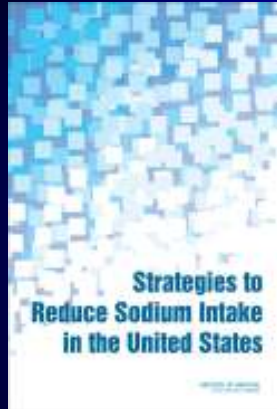
Source: What We Eat In America, NHANES 2007-08, individuals 2+ years, 1 day, n=8529



Challenges of Sodium

- new foods in the marketplace
- food reformulations
- sodium variability within food types/brands
- survey participants ability to report "details"
- ~ 35% of calories from restaurants, fast food establishments, and other away from home sources





IOM Report Recommendations

. . . for monitoring and surveillance

- identification of foods to be monitored
- regular tracking of sodium content of foods
- evaluation of changes in sodium intake
- reporting results in timely manner

Sentinel Foods

Plan for Tracking Changes in Sodium Content of Foods

- Identified a list of ~130 *sentinel foods* for sodium monitoring
- Developed by staff at ARS:
 - Food Surveys Research Group
 - Nutrient Data Laboratory
- Close and critical collaboration with:
 - Center for Disease Control--Atlanta
 - Food and Drug Administration

What are Sentinel Foods

- Specific food items that will serve as *primary indicators* of change in sodium content of foods.
- Tracking these *indicator* foods will serve to inform the monitoring and composition work at FSRG and NDL.
- Important to note that tracking and monitoring these foods **will not replace** nutrient updates for sodium across the USDA nutrient databases.

Identification of Sentinel Foods

- Data sources to identify foods that contribute substantially to sodium intake:
 - What We Eat in America, NHANES 2007-2008
 - Food and Nutrient Database for Dietary Studies, 4.1
 - USDA National Nutrient Database for Standard Reference 22
- Established guidance criteria for identifying foods
- Consideration given to foods:
 - more likely to be from commercial food establishments
 - have the potential for sodium reduction

Selection of Sentinel Foods

Guidance Criteria (not mutually exclusive)	guidance values	Foods (n=124)
1. Foods with high density of sodium.	~ 400 mg/100 gm	87
2. Foods with high levels of sodium/report.	> 600 mg mixed dishes > 400 mg discrete items	64
3. Foods frequently consumed by a large proportion of the population that provide moderate amounts of sodium/report.	> 400 reports	17
4. Foods that are a major contributor to total sodium within a food category.		74
5. Foods that are common basic ingredients and seasonings.		17

	No. of foods	Selected Examples of Proposed Sentinel Foods
Mixed dishes	28	pizza, pasta-based dishes, chili, egg roll
Grain products	18	Bread, rolls, tortilla, bagel, taco shell, RTE cereals, pancakes, biscuit
Vegetable dishes, beans	16	Canned corn, French fries/fz and ff, potato salad
Chicken, seafood, pork	15	Nuggets/fz and ff, rotisserie, brd fish fillet, fried shrimp, pork chops
Cured/processed meats	9	Deli ham/turkey, bologna, bacon, hot dog, salami
Fast food sandwiches/ Mexican type dishes	9	Double cheeseburger, hamburger, beef taco, bean burrito
Cheeses	7	Cheddar, fried mozzarella sticks, nacho cheese dip, cottage cheese
Soups/broths	7	Tomato soup, ramen noodle soup, chicken noodle soup/broth
Savory snacks/crackers	7	Pretzels, potato chips, popcorn, tortilla chips,
Cakes, cookies, pastry	6	Doughnut, cinnamon bun, chocolate chip cookie
Nuts, peanut butter	2	Peanuts, peanut butter

Intakes and Na values

WWEIA, NHANES 2007-08, day 1

Food Code	Food	Criteria	# of reports	mg Na/ report	mg Na/ 100 gm
581-45114	Macaroni with cheese, made from dry mix	2	142	453	315
252-10210	Frankfurter or hot dog, beef	1, 2, 4	244	901	1152
581-06200	Thin crust cheese pizza	1, 2, 4	136	731	581

Strategy for AMPM Updates

- USDA Automated Multiple-Pass Method, 24-hr dietary recall used in WWEIA, NHANES, updated yearly
- > 21,000 questions, ~130 categories
- Comprehensive review and update launched in 2008

Thus far, reviewed foods and beverages = 2/3 of intake

2011-12 WWEIA, NHANES (release in 2014)

2013-14 WWEIA, NHANES (release in 2016)

Changes in Food and Nutrient Database for Dietary Studies (FNDDS)

FNDDS versions	1.0 (2001-02)	2.0 (2003-04)	3.0 (2005-06)	4.1 (2007-08)	5.0 (2009-10)	6.0 (2011-12) <i>in preparation</i>
Codes	6,974	6,940	6,921	7,174	7,253	est. 7,554
SR Codes	2,678 (SR 16-1)	2,685 (SR 18)	2,739 (SR 20)	2,927 (SR 22)	2,946 (SR 24)	
Nutrients	61	63	64	65	65	

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Look for the *Sentinel Foods for Monitoring Sodium*
on the FSRG web site later this year . . .

www.ars.usda.gov/ba/bhnrc/fsrg

