

U.S. Cholesterol Guidelines and Government Food Programs

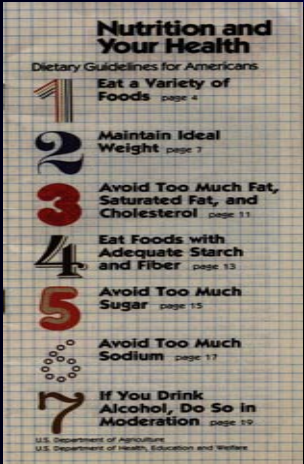


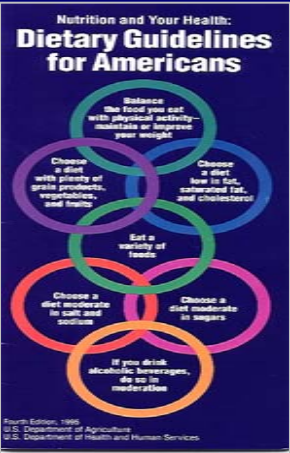
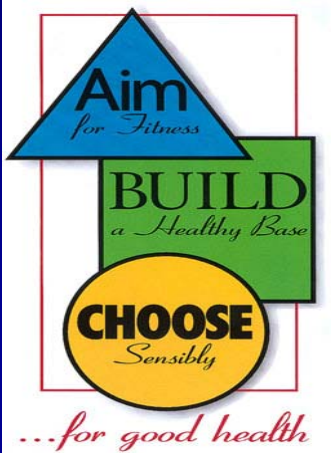
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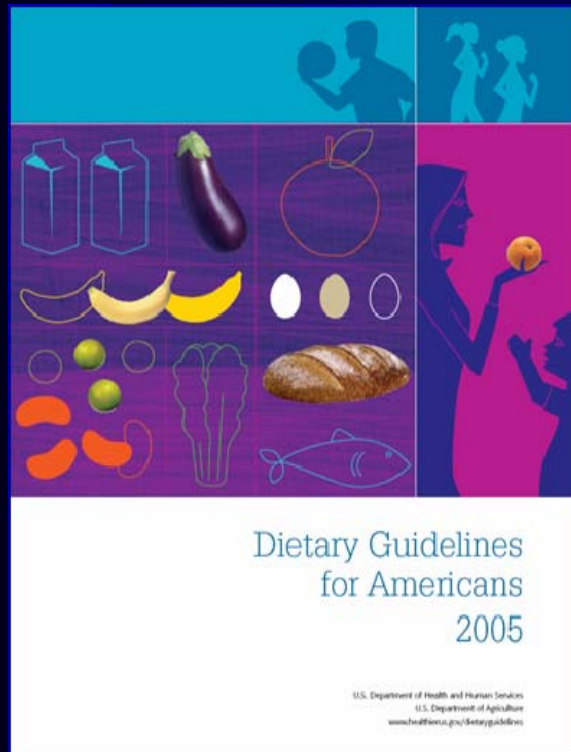
Challenge: *Du jour* v. Consensus

- Perspective: Scientifically-based public policy must consider the historical research and preponderance of evidence, not just the latest “hot topic” study.
- Federal Policy making must not overreact to individual studies.
- It should follow the preponderance of scientific evidence as embodied in the most current Dietary Guidelines for Americans and Dietary Reference Intakes.
- These should be taken as the scientific foundation upon which decisions are based for our programs.

Dietary Guidelines for Americans, 1980-2000

1980	1985	1990	1995	2000
<p>Avoid too much fat, saturated fat and cholesterol</p> 	<p>Avoid too much fat, saturated fat and cholesterol</p> 	<p>Choose a diet low in fat, saturated fat and cholesterol</p> 	<p>Choose a diet low in fat, saturated fat and cholesterol</p> 	<p>Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.</p> 

The 2005 Dietary Guidelines for Americans (DGAs) include significant recommendations based on the DRIs



Quantitative recommendations for certain nutrients

- ◆ **total fat:**
 - ages 2 - 3 years = 30 to 35% of calories
 - ages 4-18 years = 25 to 35 % of calories
 - mostly from fish, nuts and vegetable oils
- ◆ **saturated fat:** less than 10% of total calories
- ◆ **cholesterol: less than 300 mg/day**
- ◆ **sodium:** less than 2,300 mg/day
- ◆ **fiber:** 14 grams per 1,000 calories

Major Domestic Food and Nutrition Assistance Programs

Supplemental Nutrition Assistance Program (Food Stamp Program)

- FY 2007 Participation 26.5 million; Total Costs 33.2 billion

Supplemental Feeding Program for Women, Infants, & Children (WIC)

- *FY 2007 Participation 8.3 million; Total Costs 5.4 billion*

Child Nutrition Programs:

◆ National School Lunch Program

- *FY 2007 Participation 30.5 million; Total Costs 8.7 billion*

◆ School Breakfast Program

- *FY 2007 Participation 10.2 million; Total Costs 2.2 billion*

◆ Summer Food Service Program

- *FY 2007 Participation 1.9 million; Total Costs 292 million*

◆ Child and Adult Care Food Program

- *FY 2007 Participation 3.2 million; Total Costs 2.2 billion*

Other Domestic Food and Nutrition Assistance Programs

Commodities

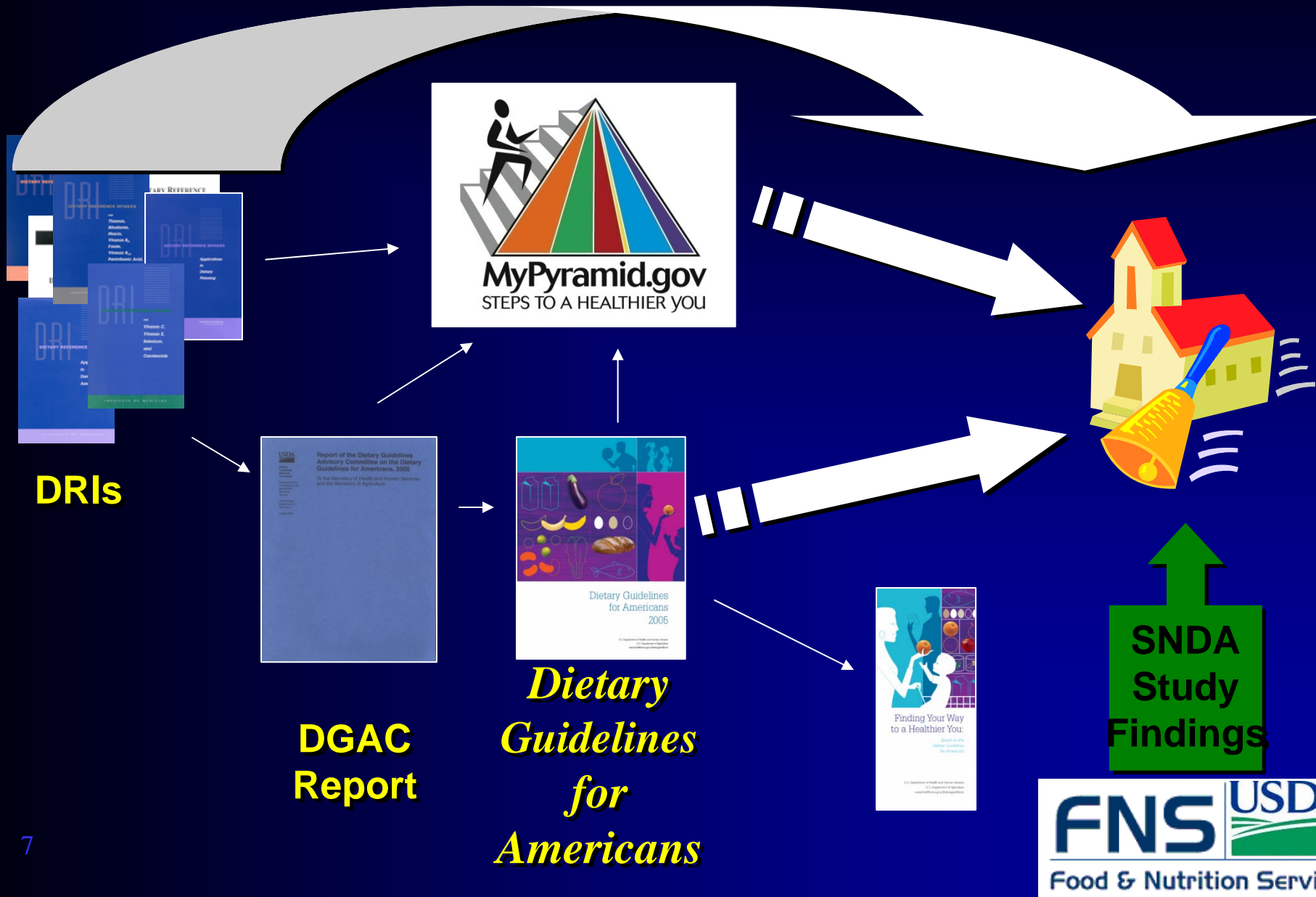
- ◆ Commodity Supplemental Food Program
- ◆ The Emergency Food Assistance Program (Food Banks and Soup Kitchens)
- ◆ Food Distribution Program on Indian Reservations

Farmer's Market Nutrition Programs

Nutrition Services Incentive Program

(formerly the nutrition program for the elderly; receives commodity foods from FNS)

Nutrition Implications for School Meals



National School Lunch Program and School Breakfast Program Fact Sheet

- The *2005 Dietary Guidelines for Americans* recommend we eat less than 300 mg of cholesterol per day.
- Aim for less than 100 mg of cholesterol at lunch and less than 75 mg at breakfast on average over a week (note that this is not a requirement).
- Schools can meet these recommendations by serving lean meats, encouraging more fruits, vegetables, dry beans, and whole grains, and serving only fat-free or low-fat (1%) milk.
- Liver, other organ meats, egg yolks, and dairy fats contain higher levels of cholesterol. Plant foods such as vegetables, fruits, whole grains, and nuts contain no dietary cholesterol.

Cholesterol Standards in School Meals

- Quantitative goals for sodium and cholesterol content are not included in SMI nutrition standards.
- NSLP regulations (210.10(b)), however, include recommendations to reduce sodium and cholesterol levels and the requirement to monitor these nutrients.

NSLP/SBP: Current Requirements for Reimbursable Meals *Nutrients*

- **Nutrients** in meals are averaged over a school week; weekly averages must meet regulatory standards
 - 1/3 of **1989** RDA for protein, calcium, iron, vitamin A and vitamin C at lunch; 1/4 of RDA for these nutrients at breakfast
 - Appropriate level of calories for age/grade groups
 - Consistent with the **1995 DGA**
 - ◆ Limit the percent of calories from total fat to 30% of the actual number of calories offered
 - ◆ Limit the percent of calories from saturated fat to less than 10% of the actual number of calories offered
 - ◆ Reduce sodium and cholesterol levels (no current quantitative standard)
 - ◆ Increase the level of dietary fiber

School Nutrition Dietary Assessment (SNDA) Studies

- SNDA studies measure changes in the nutritional quality of school meals for various nutrient standards, including cholesterol.
- SNDA-I (SY 1991-92)
- SNDA-II (SY 1998-99)
- SNDA-III (SY 2004-05)

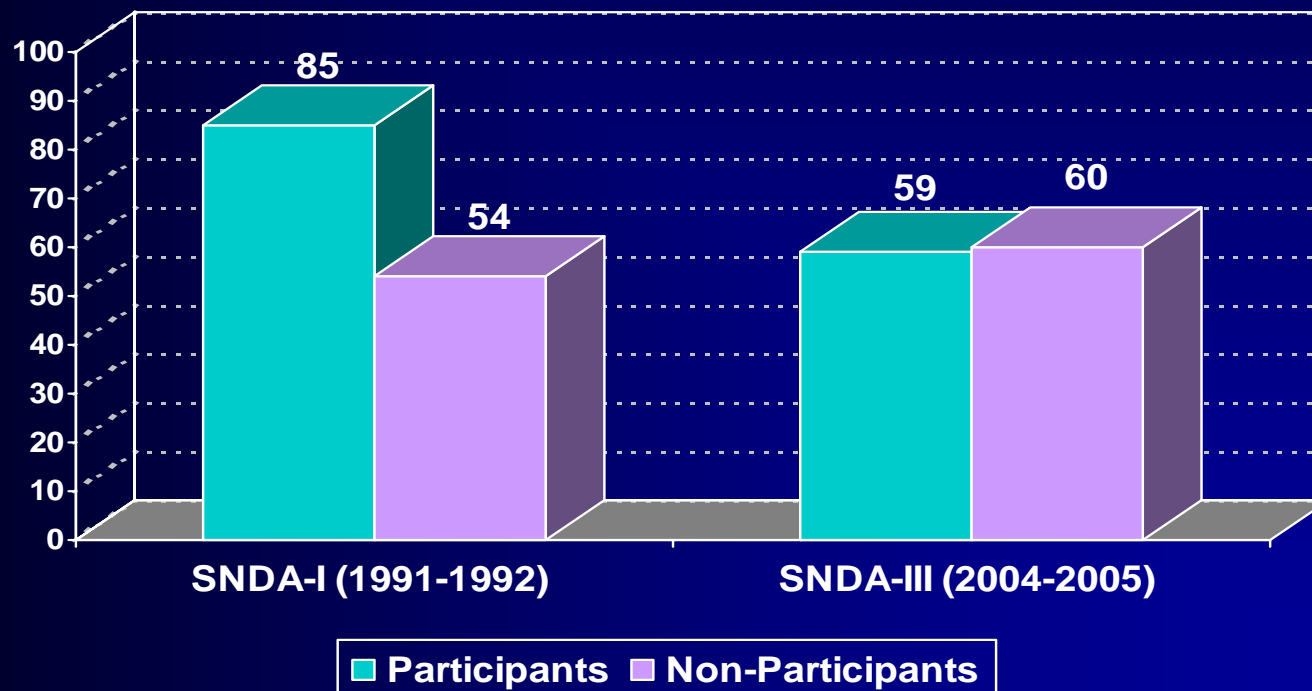


SNDA Studies

- To assess the levels of these dietary components, as in the previous SNDA studies, benchmarks for cholesterol were based on the National Research Council's 1989 Diet and Health study.
- NSLP < 100 mg; SBP < 75 mg
- Overall, fewer than 10 percent of students had usual daily cholesterol intakes that exceeded the recommended maximum of 300 mg.
- Almost all schools met the benchmark for cholesterol at lunch (96% lunches offered and 99% lunches served were under 300 mg).
- Excessive usual daily cholesterol intakes was higher among high school students (16 to 21 percent) than among elementary and middle school students (6 to 7 percent).

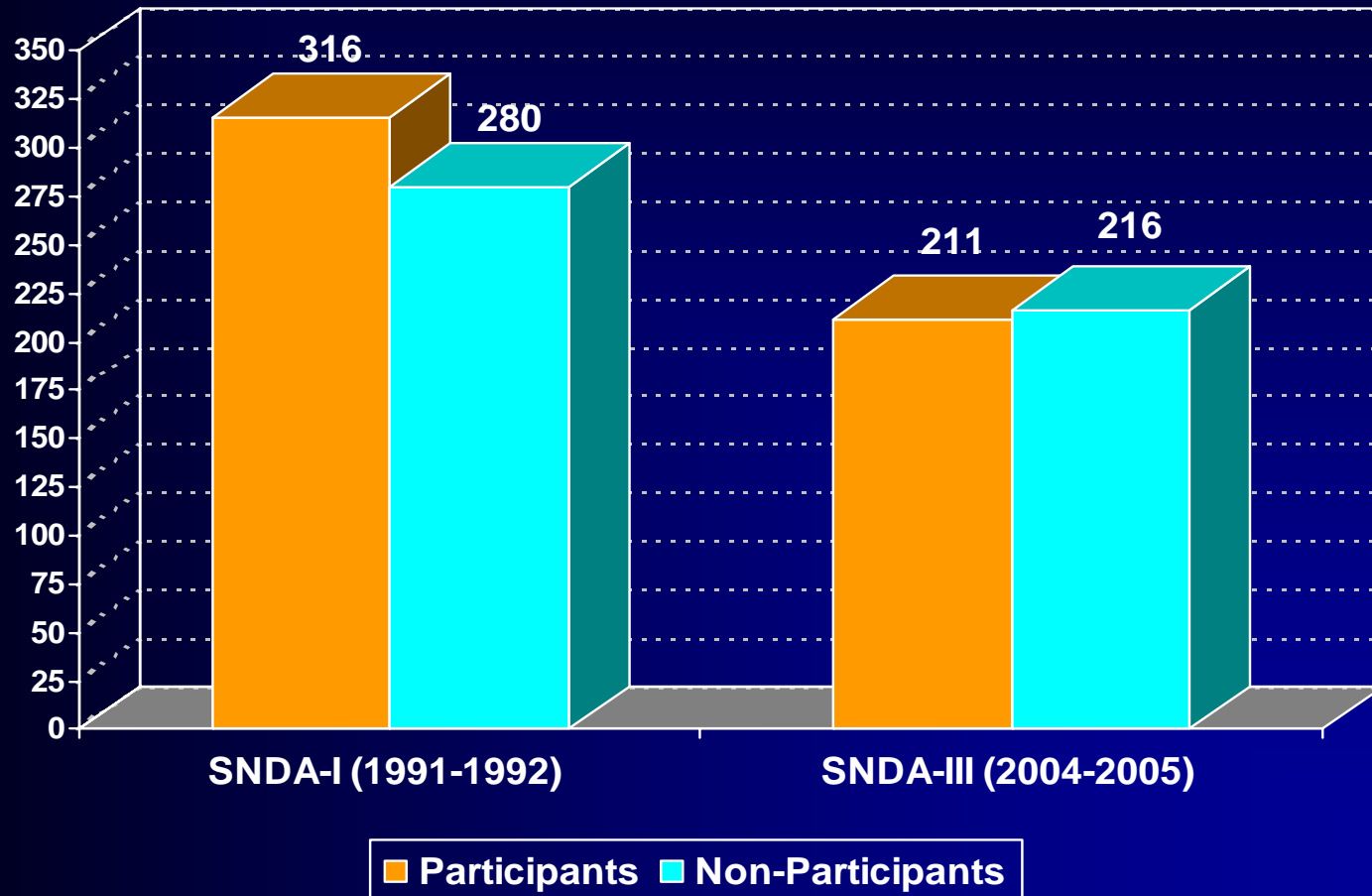
SNDA I and SNDA III Cholesterol Trends: Lunch

Mean Cholesterol (mg) Intakes of NSLP
Participants and Nonparticipants



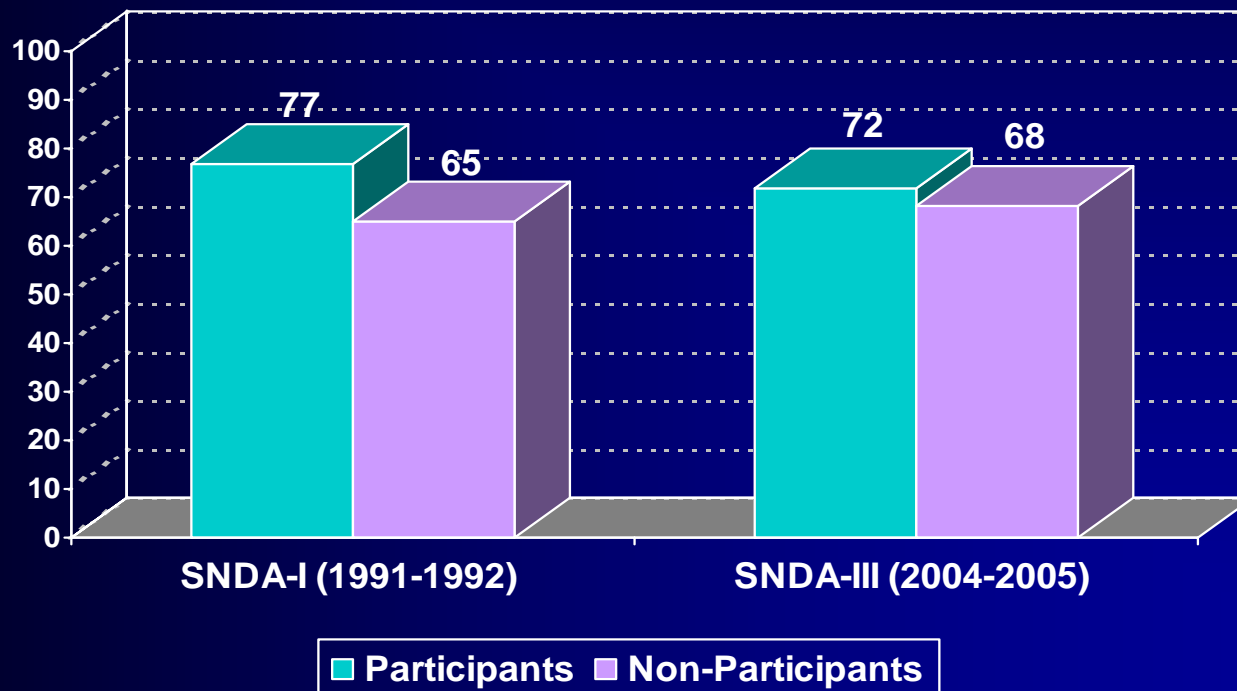
SNDA I and SNDA III

Mean 24-Hour Cholesterol Intakes (mg) of NSLP Participants and Non-Participants



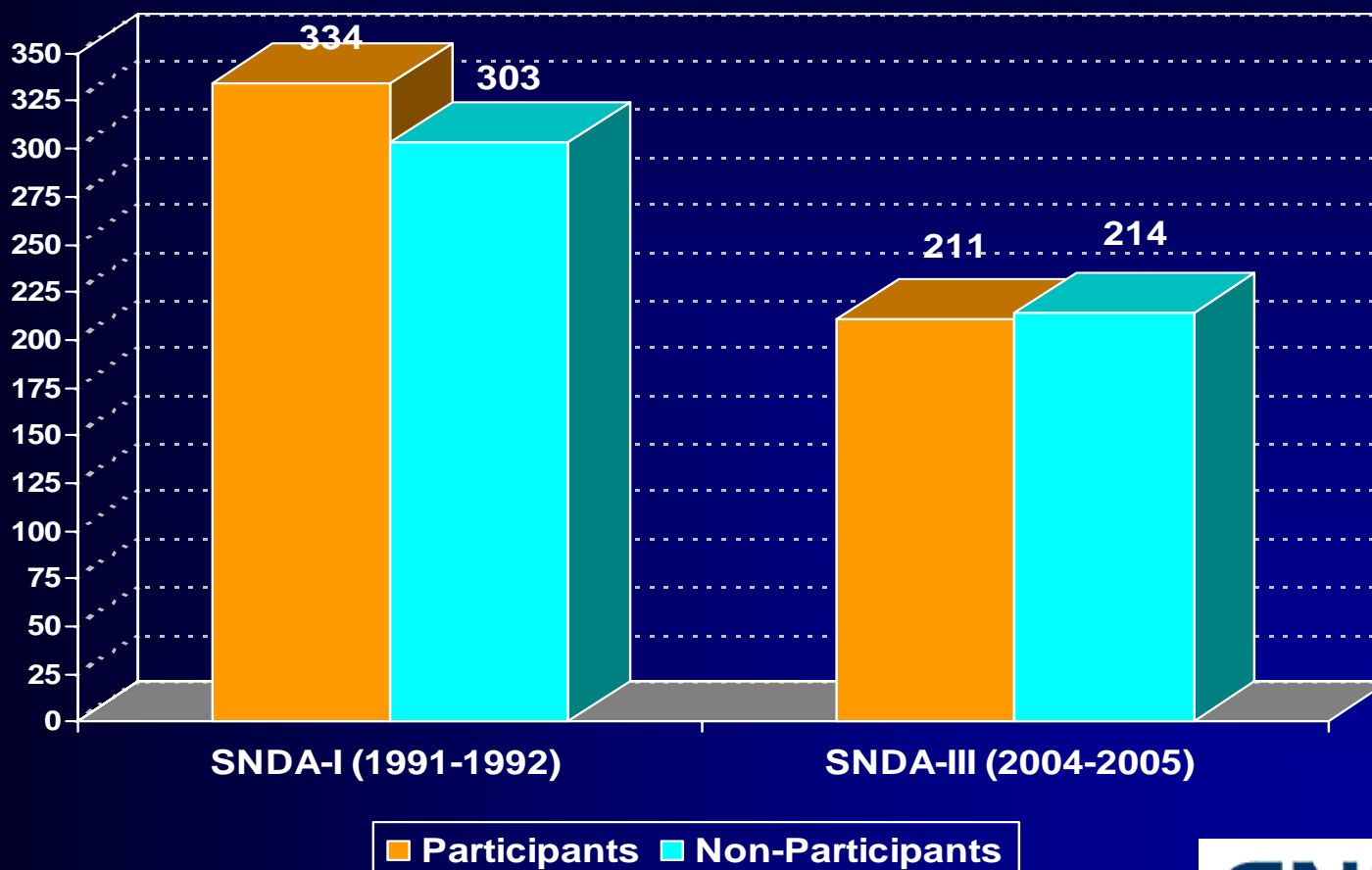
SNDA I and SNDA III Cholesterol Trends: Breakfast

Mean Cholesterol (mg) Intakes of SBP
Participants and Nonparticipants



SNDA I and SNDA III

Mean 24-Hour Cholesterol Intakes (mg) of SBP Participants and Non-Participants



Top Sources of Cholesterol in NSLP and SBP Meals

Lunch

- Breaded/Fried Chicken Products
- Hamburgers/Cheeseburgers
- Pizza products
- Breaded/fried beef/pork/fish
- Sandwiches with plain meat or poultry
- Unbreaded poultry/meat/fish
- 1% milk, flavored
- Hot dog/corn dog
- 2% milk, unflavored
- 1% milk, unflavored
- Dairy-based desserts
- Eggs
- Cookies, Cakes, brownies
- Cheese

Breakfast

- Eggs
- 2% milk, unflavored
- Whole Milk, unflavored
- Pancakes, waffles, French toast, breakfast sandwiches
- Mexican-Style entrees
- Cookies, cakes, brownies
- Condiments and spreads
- 1% milk, unflavored
- Sausages, hot dogs, cold cuts
- Muffins, sweet/quick breads
- Sweet rolls, doughnuts, toaster pastries

Source: School Nutrition Dietary Assessment-III, SY 2004-2005.

Commodity Foods

- USDA has reduced or eliminated saturated fat and cholesterol in many commodities offered to schools.
- Shortening and butter are no longer available. Processors now use lean meat in place of skin and fat in processed poultry products.
- Schools can order lean meats and poultry items, part-skim mozzarella cheese, and other reduced-fat cheeses through the commodity program.
- A list of available foods can be found at: www.fns.usda.gov/fdd/programs/schcnp/

Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps Program)

Thrifty Food Plan Cholesterol Standards



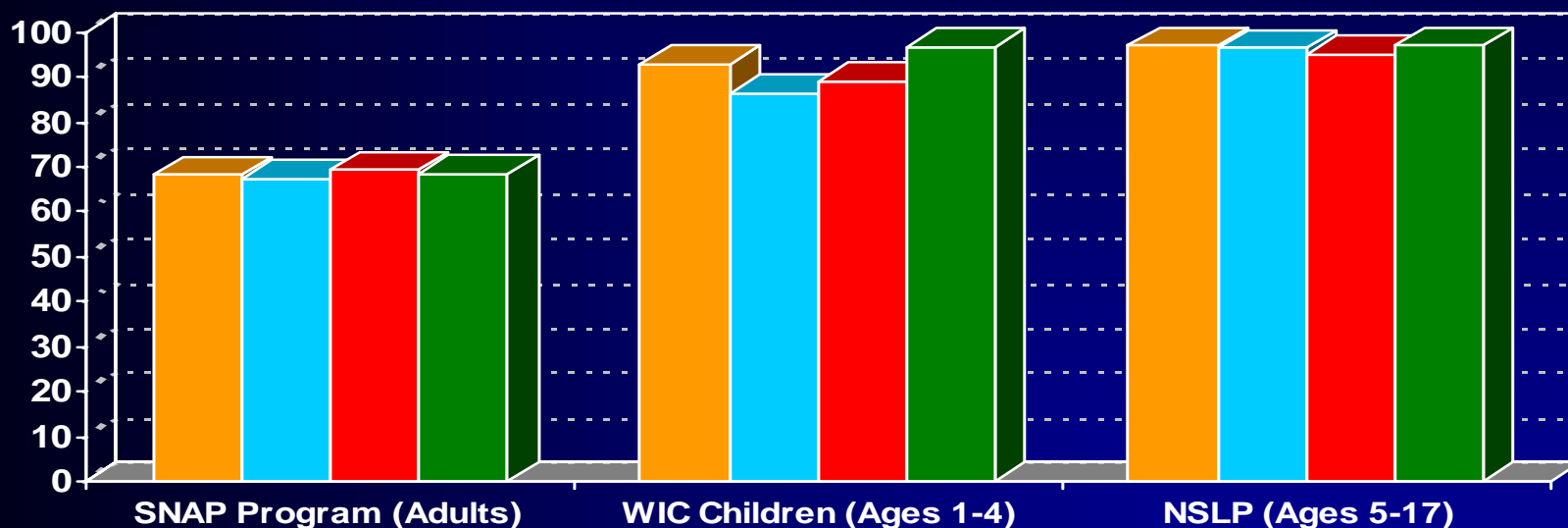
- 1981 Dietary Standard- 350 mg or less per day
- 1999 Dietary Standard- 300 mg or less/day;
unrestricted for children age 1
- 2005 Dietary Standard- 300 mg or less per day

Healthy Eating Index (HEI)

- HEI is a summary measure of the overall quality of people's diets and was developed by the USDA Center for Nutrition Policy and Promotion.
- Cholesterol Component in original HEI (1995): A score of 10 points was assigned when daily cholesterol intake was 300 milligrams (mg) or less.
- *The HEI was revised in 2005 (HEI-2005) and does not include a cholesterol component.*
 - Limiting saturated fat is considered the more important because current intake of saturated fat is more excessive than that of *trans* fat or cholesterol.
 - Separate components for total fat and cholesterol were not needed in the HEI-2005 because intakes of both are significantly correlated with saturated fat.

Cholesterol Intake of FNS Program Participants National Health and Nutrition Examination Survey, 1999-2004

Percent of Persons Meeting Recommended Intakes of Cholesterol (less than or equal to 300 mg/day)



Food Distribution Program on Indian Reservations (FDPIR)

- The daily average for cholesterol in 2006 for the FDPIR food package was 322 mg (2413 calories in food package)
- The daily average for cholesterol in 2008 for the FDPIR food package was 261 mg (2308 calories in food package)
- This indicates a decrease of 19% in daily average cholesterol
 - Cholesterol density dropped from 133 mg/1000 calories to 113 mg/1000 calories

WIC Food Package Revisions

- The interim final rule revisions largely reflect recommendations made by the Institute of Medicine (IOM) of the National Academies in its report, "*WIC Food Packages: Time for a Change*,"
 - certain cost containment and administrative modifications found necessary by the Department to ensure cost neutrality.
- Maximum monthly allowance for fresh shell eggs were reduced from 2 or 2½ to 1 dozen fresh shell eggs for children and women in Food Packages IV, V, and VI.
- The proposed maximum monthly allowance of eggs is consistent with recommendations of the IOM and the DGA to reduce cholesterol.
- The reductions in the current levels of eggs ensures that FNS was able to provide a more balanced nutrient intake for WIC participants *while maintaining cost neutrality*.

Institute of Medicine Contract: School Meals and CACFP

- **USDA has contracted with the Institute of Medicine (IOM) to make recommendations on the implementation of the 2005 *Dietary Guidelines for Americans* in school meals and the CACFP program.**
 - **A phase I report will be released in mid-December 2008.**
 - **The report with recommendations for school meals is expected in December 2009 for school meals.**
 - **The CACFP recommendations will be released in early 2011.**
- **Once we receive IOM's report, FNS will follow the process to update the NSLP regulations to incorporate any changes to the nutrition standards and meal patterns.**



FNS research web site:

<http://www.fns.usda.gov/oanel/>