USDA

Sustainable Agriculture:

The Key to
Health & Prosperity

Agricultural Outlook Forum 2010

Nutrition, Education & Promotion & Its Effects on Health

Nutrition Promotion and Its Effects on Health

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Conceptualizations of Health

Models for Defining Health

Four Conceptualization of Health

Medical Model	WHO Model	Wellness Model	Environmental Model
The absence of disease or disability.	***Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.***	***Health promotion and progress toward higher functioning, energy, comfort, and integration of mind, body, and spirit***	***Adaptation to physical and social surroundings—a balance free from undue pain, discomfort, or disability***

Source: James S. Larson. The conceptualization of health. *Medical Care Research and Review*, Vol. 56 No. 2, (June 1999) 123-136.

Health and Diet Quality Metrics

The Consequences of a Poor Diet

Diet and nutrition are important factors in the promotion and maintenance of good health throughout the entire life span.

Some Major Conditions Linked to a Poor Diet

- ✓ Coronary heart disease
- ✓ Some types of cancer
- ✓ Elevated cholesterol levels
- ✓ Kidney failure
- ✓ Stroke
- ✓ Obesity

Obesity Trends Among U.S. Adults

BMI ≥30%

2008

AL

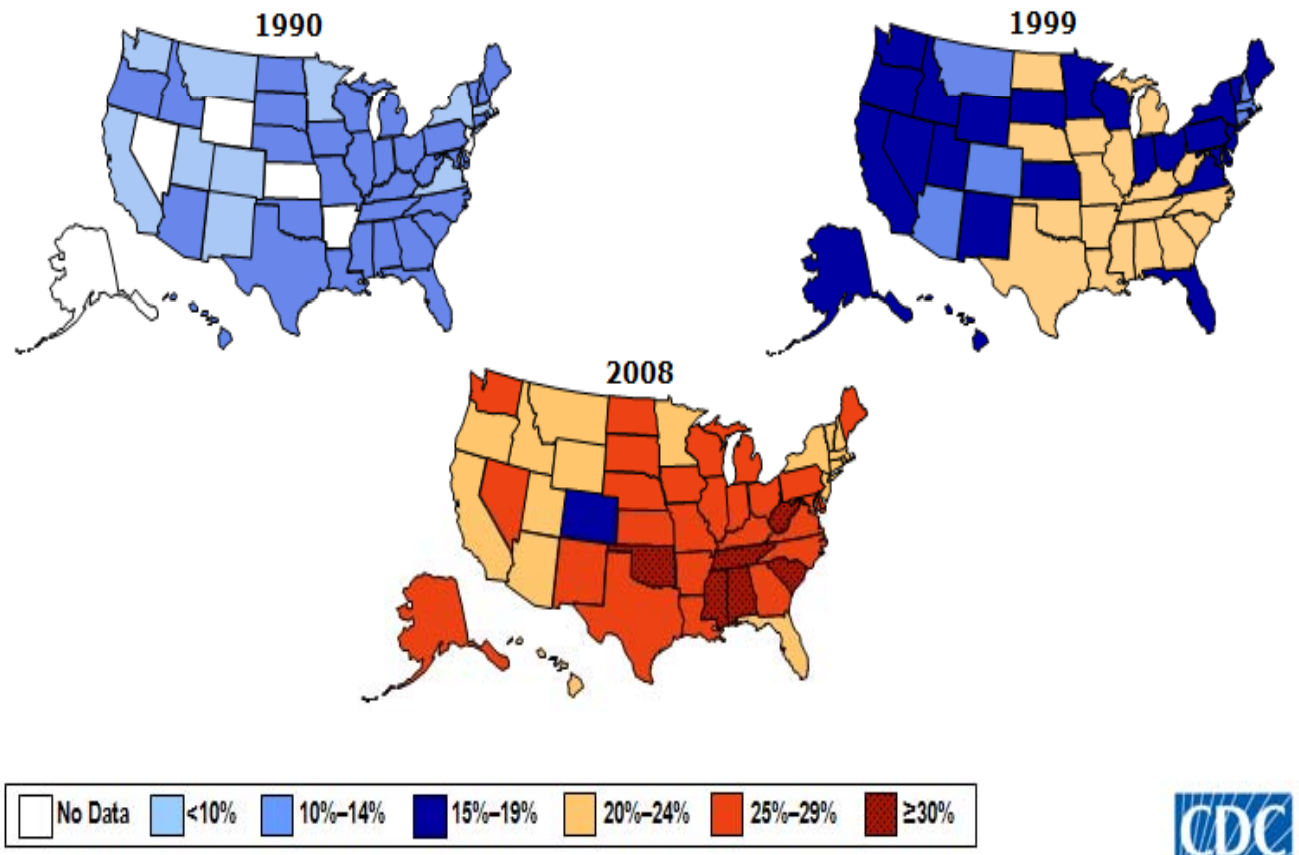
MS

OK

SC

TN

WV



Source: CDC Behavioral Risk Factor Surveillance System.

Obesity Trends* Among U.S. Adults

BRFSS, 1990, 1999, 2008

(*BMI ≥30, or about 30 lbs. overweight for 5'4" person)

The Health Consequences of Obesity

- Coronary heart disease
- Type 2 diabetes
- Cancer (endometrial, breast, and colon)
- Hypertension (high blood pressure)
- Dyslipidemia (high total cholesterol or high levels of triglycerides)
- Stroke
- Liver and gallbladder disease
- Sleep apnea and respiratory problems
- Osteoarthritis (degeneration of cartilage and underlying bone within a joint)
- Gynecological problems (abnormal menses, infertility)

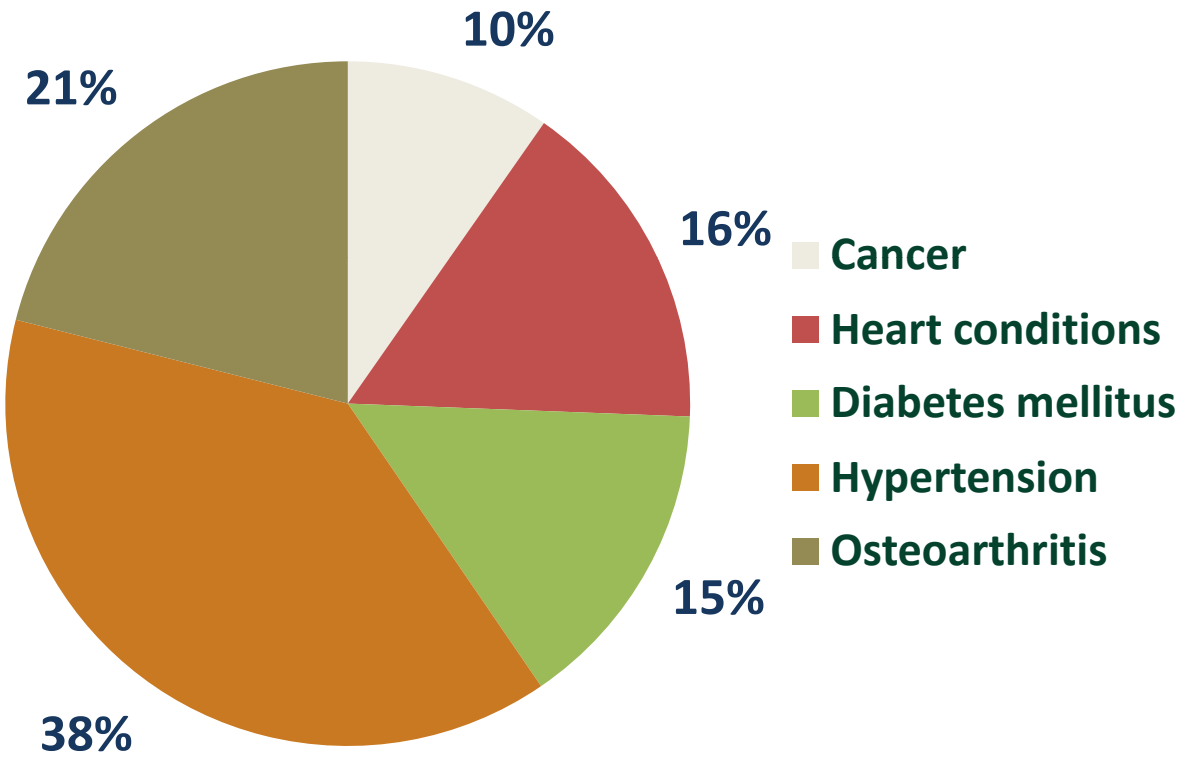
Source: ***Obesity: Halting the Epidemic by Making Health Easier*****, CDC, 2009**

Distribution of People Receiving Health Care for Select Conditions, 2007

Cost of Obesity in U.S.

As High as $147 Billion Per Year

Source: Finklestein et al. 2009. Annual medical spending attributable to obesity: Payer- and Service-Specific Estimates. *Health Affairs* w822-w831



Calculated from Number of People with Care for Selected Conditions by Type of Service: United States, 2007, Table 1. Medical Expenditure Panel Survey.

Return on Investment in Community-Based Disease Prevention Programs

National return on investments* of $10 per person (net savings), in 2004 dollars			
	1-2 Years	**5 Years**	**10-20 Years**
Total care cost savings	$5,784,081,647	$19,479,731,068	$21,387,802,964
Costs of interventions	$2,936,380,000	$ 2,936,380,000	$ 2,936,380,000
U.S. net savings	$2,847,701,647	$16,543,351,068	$18,451,422,964
Return on Investment (ROI)	***0.96:1***	***5.60:1***	***6.20:1***

This return on investment represents medical cost savings only and does not include the significant gains that could be achieved in worker productivity, reduced absenteeism at work and school, and enhanced quality of life.

Source: Trust in America's Health. February 2009. *Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities.* www.healthyamericans.org

The American diet needs to improve

HEI-2005 Component (max. score)	1994-96 Score	2001-02 Score
Total fruit (5)	3.1	3.1
Whole fruit (5)	4.5	3.4
Total vegetables (5)	3.6	3.2
Dark green & orange vegetables and legumes (5)	1.4	1.4
Total grains (5)	5.0	5.0
Whole grains (5)	1.2	1.0
Milk (10)	5.9	6.3
Meat and beans (10)	10.0	10.0
Oils (10)	6.0	6.8
Saturated fat (10)	6.5	6.4
Sodium (10)	3.2	4.1
Calories from solid fats, alcoholic beverages, and added sugars (20)	7.8	7.5
Total HEI-2005 score (100)	***58.2***	***58.2***

Children need to increase the consumption of whole fruit, whole grains, and dark green and orange vegetables and legumes, in particular, based on HEI-2005 data for 2003-04

Component (max. score)	Age 2-5 yrs	Age 6-11 yrs	Age 12-17 yrs	Age 2-17 yrs
Total fruit (5)	5.0	2.9*	2.5+	3.2
Whole fruit (5)	4.3	2.7*	2.2+	2.8
Total vegetables (5)	2.2	2.3	2.4	2.3
Dark green & orange vegetables and legumes (5)	0.6	0.5	0.6	0.6
Total grains (5)	5.0	5.0	5.0	5.0
Whole grains (5)	0.8	0.9	0.6+	0.8
Milk (10)	10.0	8.7*	7.7+	8.7
Meat and beans (10)	7.3	7.8	8.8+	8.1
Oils (10)	5.5	6.6	7.5+	6.7
Saturated fat (10)	4.7	5.2	5.4	5.2
Sodium (10)	4.8	4.5	4.2+	4.4
Calories from solid fats, alcoholic beverages, and added sugars (20)	9.4	7.7*	7.9+	8.1
Total HEI-2005 score (100)	**59.6**	**54.7**	**54.8**	**55.9**

Significantly Different: * = Age 2-5 versus 6-11; + = Age 2-5 versus 12-17.

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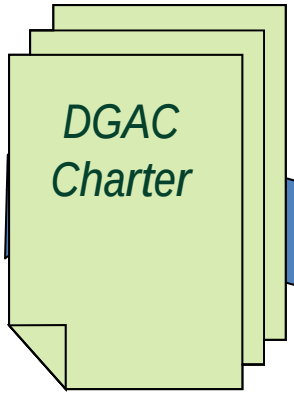
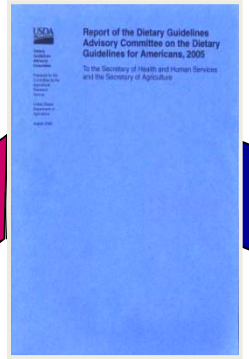
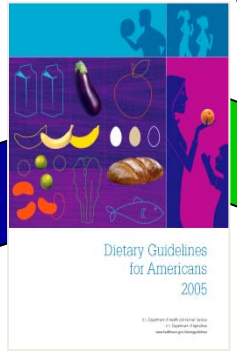
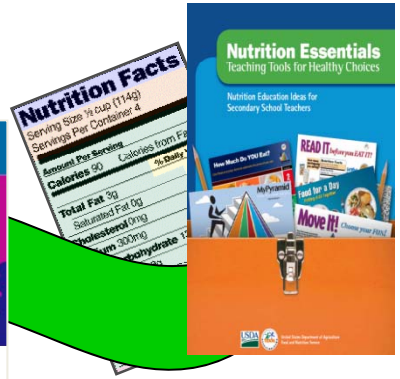
Nutrition Promotion and Improved Health Status: *Strategies for Success*

Establishing Science-based Policy









DGAC is chartered

DGAC holds public meetings and reviews the science

DGAC submits the Advisory Report to the Secretaries of USDA & HHS

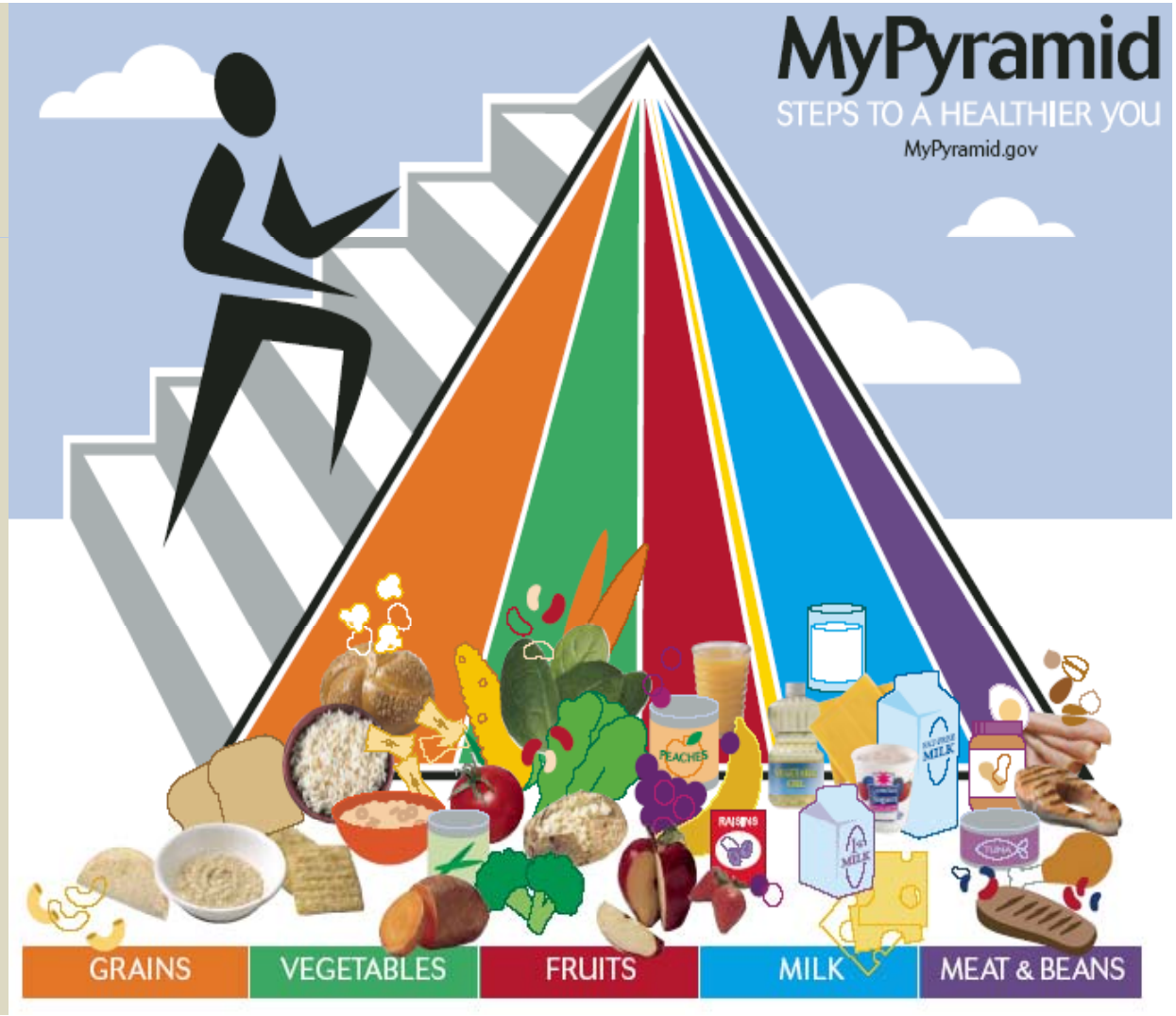
HHS & USDA write the Policy Document

DGs are implemented through Federal programs

Process is Repeated Every 5 Years

Implementing the Dietary Guidelines for Americans

Taking "Steps to a Healthier You"



Promoting Dietary Change and Improved Health by Using Multiple Approaches

- Starting with science-based Dietary Guidelines
- Developing effective education and communication strategies
- Testing and retesting messages & materials with target audiences
- Building strategic alliances to market messages
- Making healthier choices available
- Helping industry; professional, youth and education, and health care organizations; and media to see the win-win-win

Re-energizing the Communication of the Dietary Guidelines for Americans

- Bring Dietary Guidelines to forefront as epitome of best nutrition science
- Reach more audiences with specific needs
- Focus on proven methods of promoting behavioral change by using evidence-based findings

Increasing Awareness of the DGAs

Promoting Dietary Change and Improved Health by Using Multiple Approaches

- Conducting consumer research
- Developing web-based tools
- Having a collaborative launch in 2011

- Identifying evidence-based strategies
- Forming Federal partnerships
- Forming private-sector partnerships

Over 200 Partners Promoting Dietary Messages

Improving Effectiveness and Quality of Nutrition Education Strategies

Improving diet and exercise behavior of students by implementing national nutrition standards

Ensuring nutrition education investments have the greatest impact on combating childhood obesity

Improving credentials of teachers in nutrition education and college requirements

Improving Effectiveness and Quality of Nutrition Education Strategies

Enhancing effectiveness of nutrition education in schools

Linking classroom nutrition education with school food

Improving diet and exercise behavior of students by implementing national nutrition standards

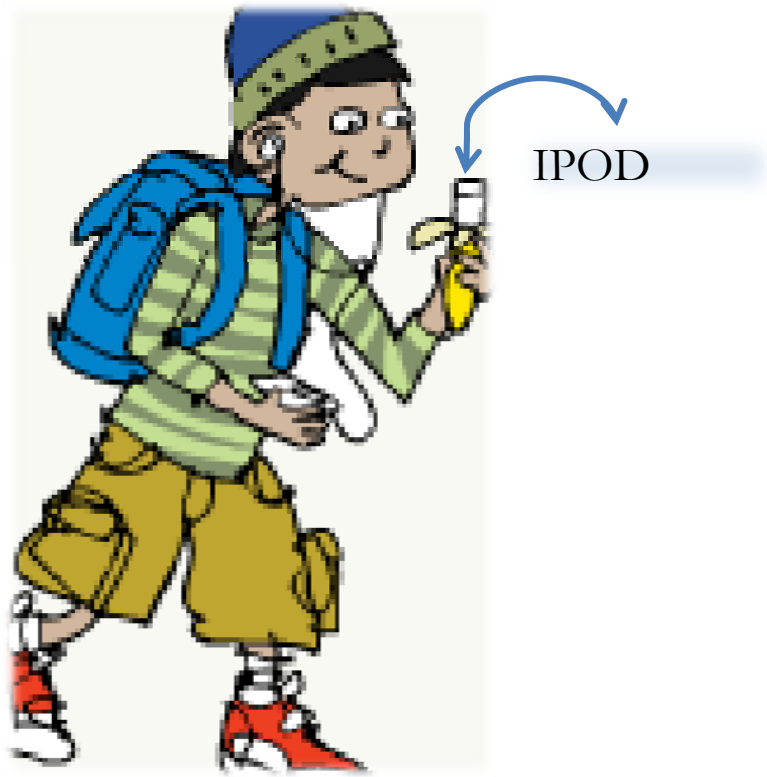
Promoting Nutrition Education and a Healthful Diet Where Americans. . .

Purchase Food

Promoting Nutrition Education and a Healthful Diet Where Americans. . .

Prepare and Consume Food

Promoting Nutrition Education and a Healthful Diet Where Americans. . .



Learn: Class, Cafeteria, and Off-site

Promoting Nutrition Education and a Healthful Diet Where Americans. . .

Play and Work

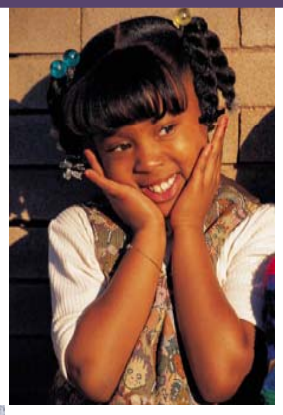
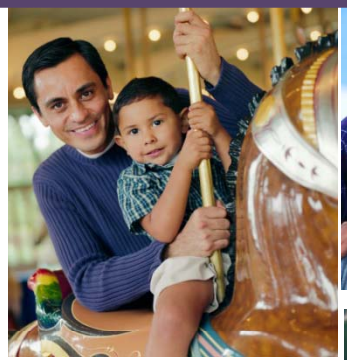
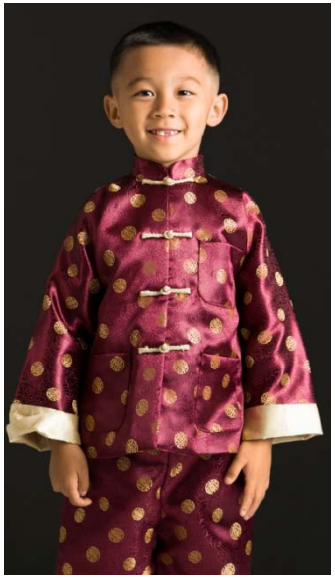
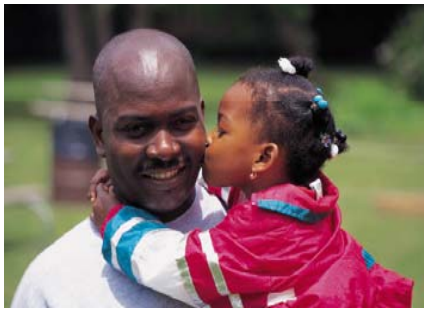
Promoting Nutrition Education and a Healthful Diet Where Americans. . .

Grow and Learn About Their Local Food Sources

PROMOTE HEALTHY EATING

Know Your Farmer, Know Your Food wants to empower consumers to be able to make smart decisions when they eat. This means understanding the importance of diet and regular exercise. It also means learning more about where your food comes from and how it gets to your plate, so that you can more closely link with your community and the hard-working farmers and ranchers that produce your food.

USDA wants to expand access to local, nutritious foods, especially for low-income folks, seniors, and nursing and pregnant women. Consumers that are aware and can make healthy decisions while supporting the local economy will lead to healthier communities and a healthier America.

Nutrition Promotion and a Healthy Life

Every Day, Every Way
For All Americans