

Implementation of the DRIs and DGA Guidelines

Linda Netterville, MA, RD, LD

Objectives

- Overview
- Menu Development
- Menu Options
- Menu Planning Principles
- Implementation

Overview

- Goals
- Requirements of OAA
- DRIs
- Dietary Guidelines for Americans

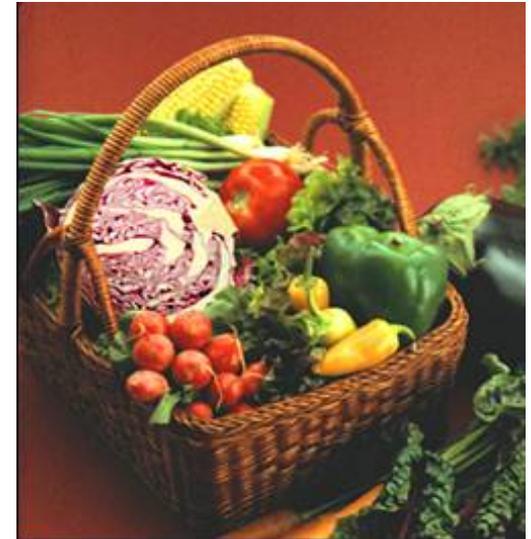
Goals of Community Based Nutrition Programs

- ▶ Improve health and nutritional status
- ▶ Prevent of hunger and food insecurity
- ▶ Continuation of the ability to live independently for older adults
- ▶ Provide nutritious, tasty, appropriate, and safe meals



Healthy Eating & Physical Activity

- ▶ Increase longevity
 - Even with cancer, heart disease
- ▶ Diabetes prevention
- ▶ Manage hypertension
- ▶ Best evidence for
 - Fruits, vegetables
 - Whole grains
 - Less salt
 - Less saturated fat (animal fat)
 - Vitamin D, calcium supplements



Requirements of the Older Americans Act

▶ Section 339 Nutrition Program

- “A State that establishes and operates a nutrition project under this chapter shall...”
- State must solicit advice of a dietitian or individual of comparable expertise in planning nutritional services and ensuring....

Requirements of the Older Americans Act

▶ Meals

- 1 / 3 DRI; Dietary Guidelines for Americans, 2005;
- Design meals to meet special dietary needs (cultural/ethnic preferences, health, religious needs)
- Design “appealing” meals, i.e. food/menu choice, include participant input

What are the Dietary Reference Intakes (DRIs)?

- ▶ Introduced in 1997
- ▶ Reference values of nutrients, primarily used by nutrition & health professionals
- ▶ Basis for
 - assessing & planning diets
 - federal nutrition & food programs



Dietary DRI Reference Intakes

The Essential
Guide to
Nutrition



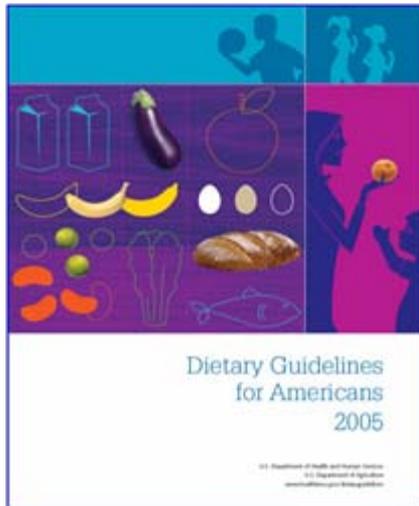
By American Dietetic Association and American Nutrition Association
Nutrition Reference Values for Total Energy, Protein, Fat, Carbohydrate, and
Fiber and Essential Amino Acids, Vitamins, and Minerals
and Trace Elements

© 1997 by American Dietetic Association

What is the purpose of the DRIs?

- ▶ Maintain nutritional adequacy
- ▶ Promote health
- ▶ Reduce risk of disease
- ▶ Provide a measure of excess

What are the Dietary Guidelines for Americans?



- ▶ Brief science-based statements & text published by federal government
- ▶ Promotes health & prevent disease
- ▶ Updated every 5 years. Due Fall 2010

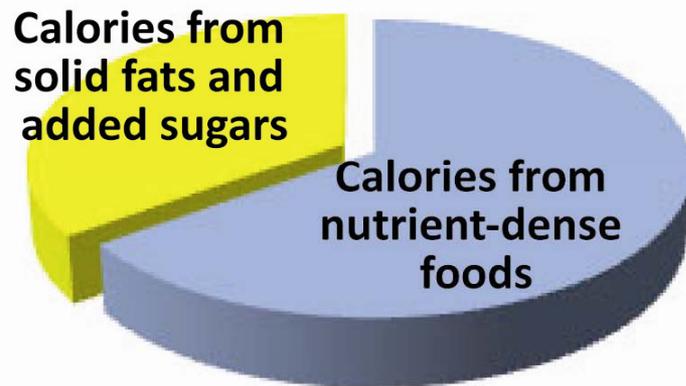
Highlights of the Dietary Guidelines for Americans 2010

- ▶ Addresses majority of Americans are overweight or obese
- ▶ Research supported
- ▶ Total diet = Energy balanced + nutrient dense



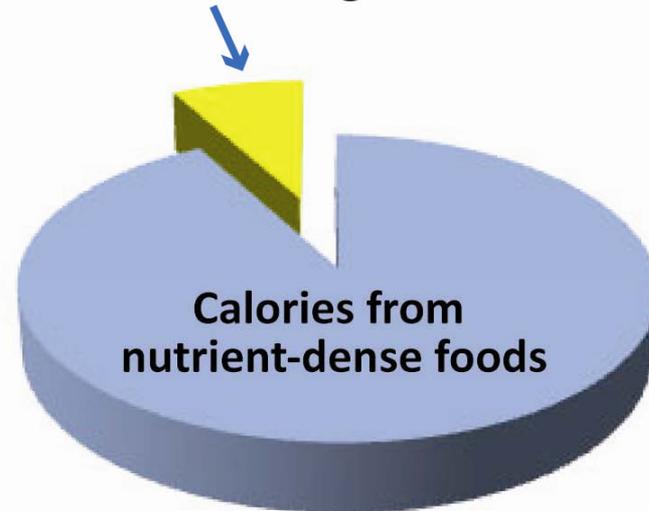
Dietary Guidelines for Americans 2010

What We Eat



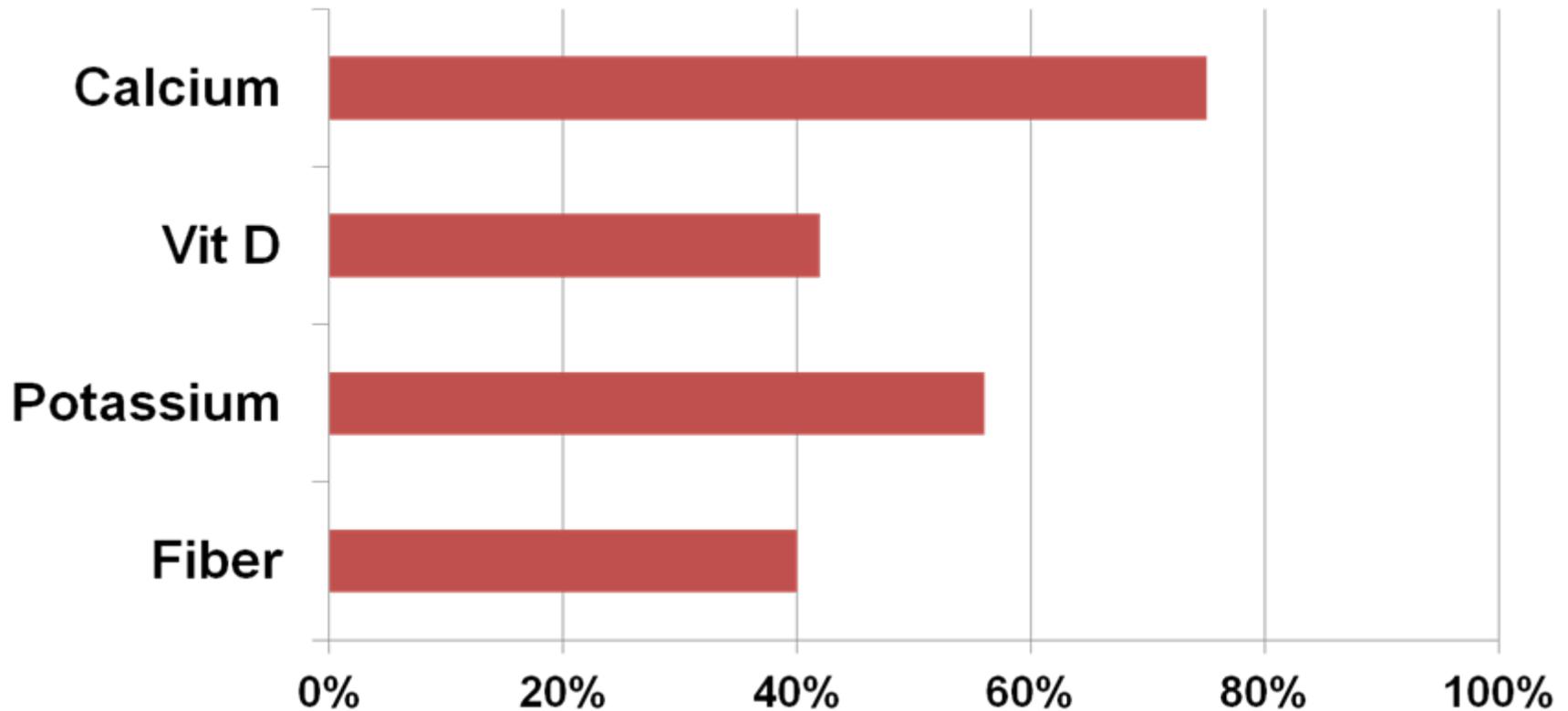
Recommended Limits

Calories from solid fats
and added sugars



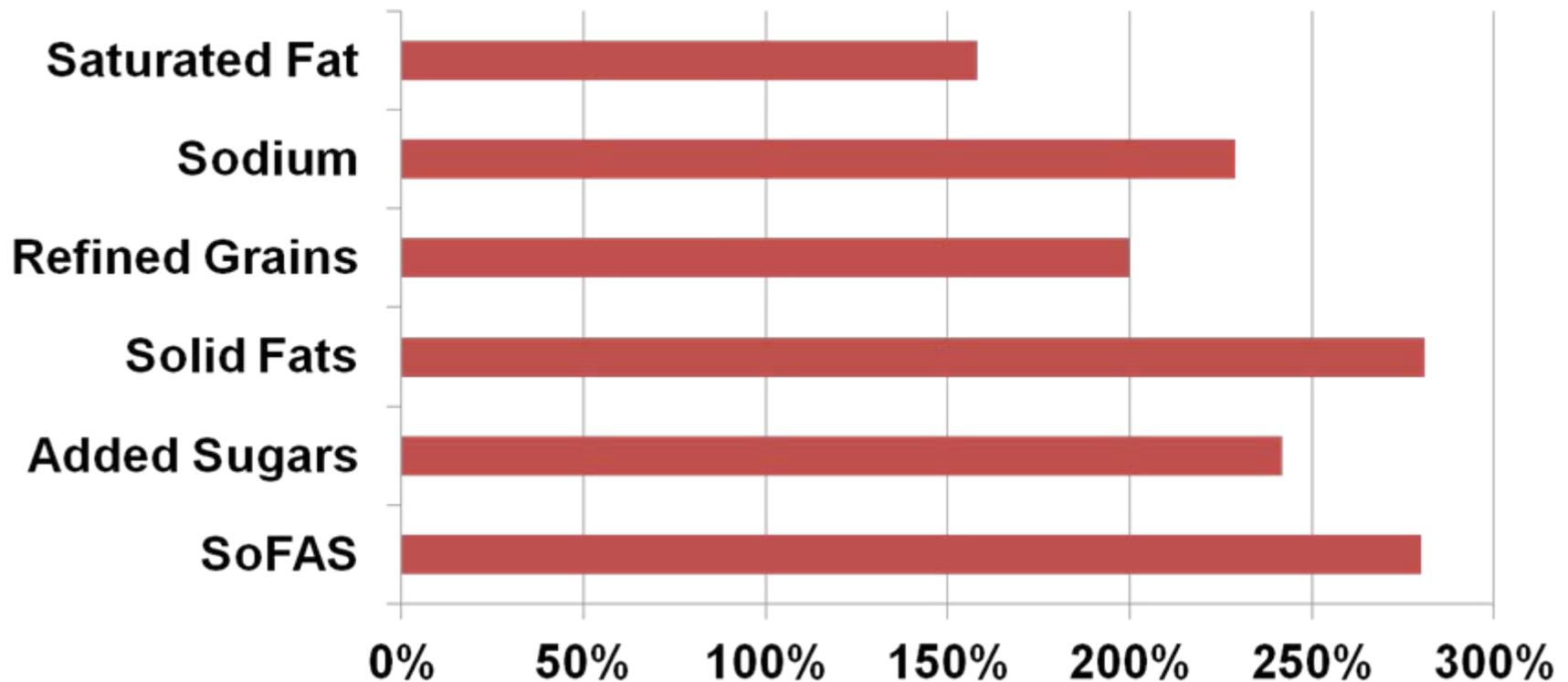
Dietary Intakes Compared to Recommended Levels

Eat More

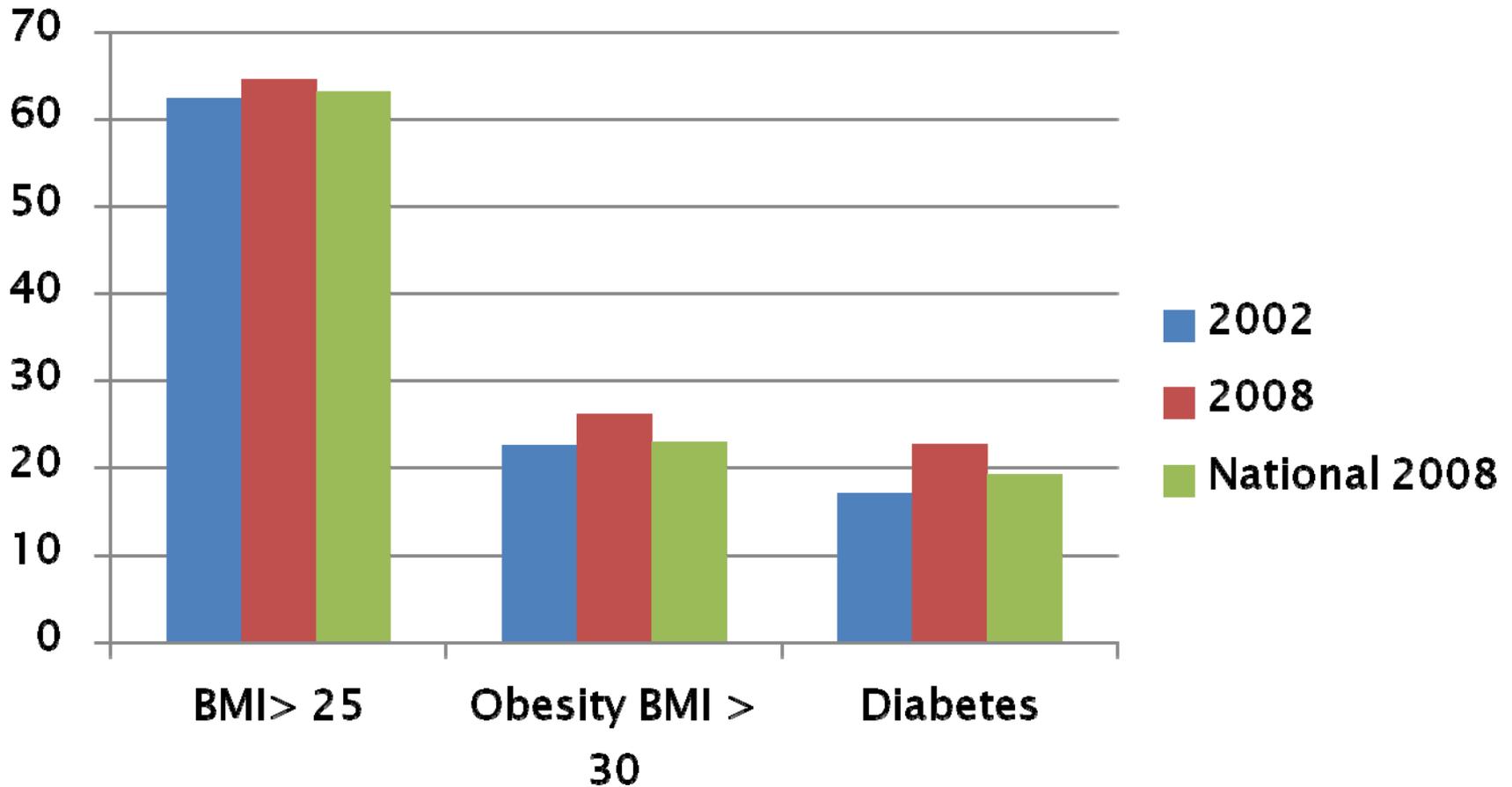


Dietary Intakes Compared to Recommended Levels

Eat Less

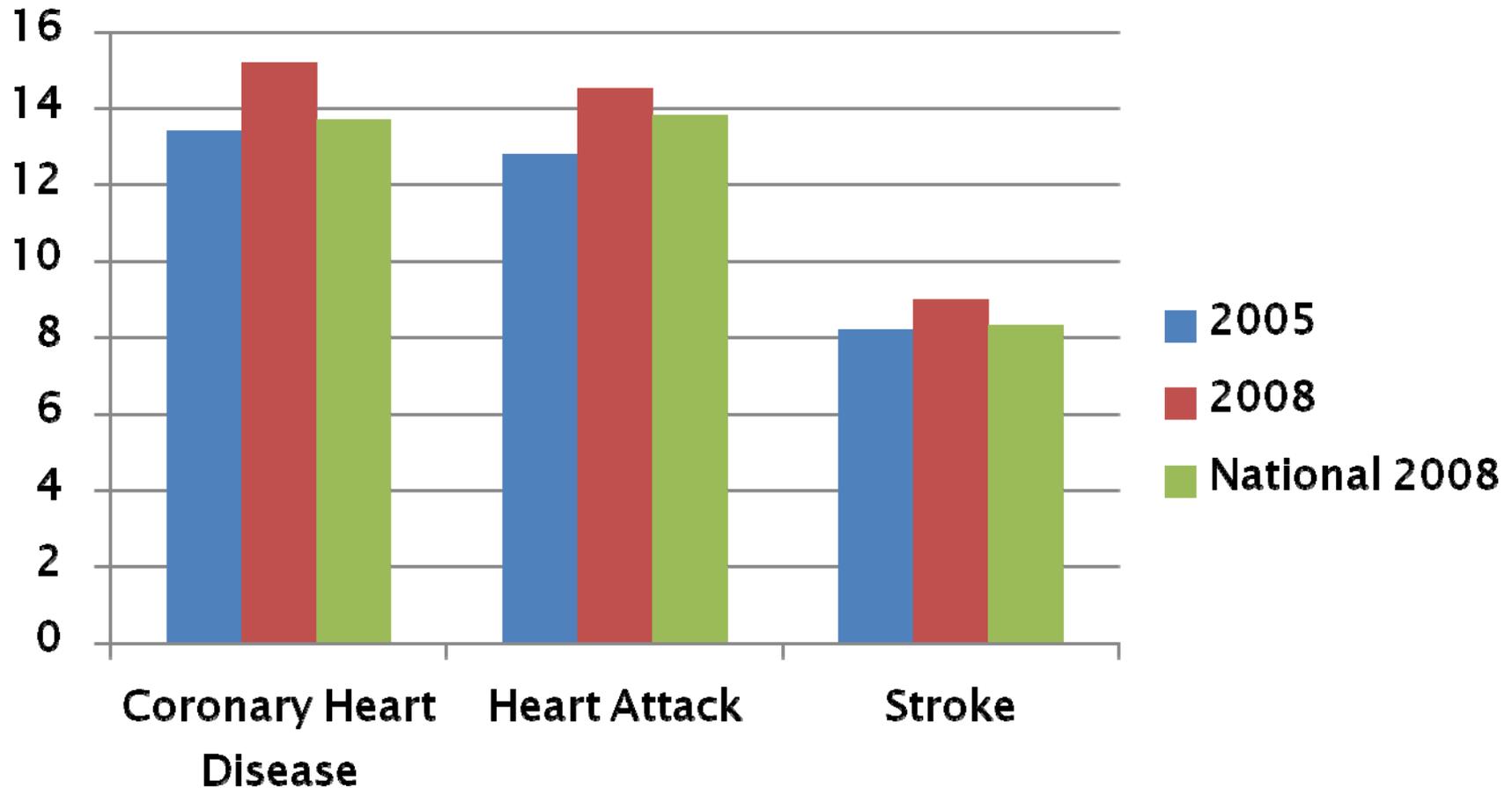


Health Profile of Older Texans



Behavioral Risk Factor Surveillance System
65+ Age Group

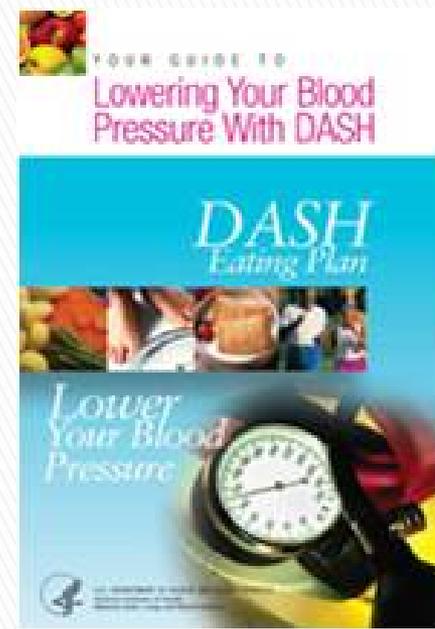
Health Profile of Older Texans



Behavioral Risk Factor Surveillance System
65+ Age Group

Dietary Guidelines for Americans

Meal Patterns



USDA Food Guide

DASH Eating Plan

Dietary Guidelines for Americans

Meal Patterns

- ▶ Lean Meats & Beans
 - ▶ Grains
 - ▶ Fruits
 - ▶ Vegetables
 - Dk Green, Orange
 - Legumes, starchy, other
 - ▶ Milk
 - ▶ Oils
 - ▶ Sweets discretionary calorie allowance
- ▶ Meat, poultry, fish
 - ▶ Nuts, seed, legumes
 - ▶ Grains
 - ▶ Fruits
 - ▶ Vegetables
 - ▶ Low-fat or fat free dairy foods
 - ▶ Fats and oils
 - ▶ Sweets and added sugars

USDA Food Guide

DASH Eating Plan

Key Recommendations for Older Adults:

- ▶ **Calories**
 - 1800 – 2050 calories/day
(Age/Activity)
- ▶ **Fat**
 - 25–35% of Total Calories
- ▶ **Protein**
 - 46–56 gm (10–35% of Calories)

Key Recommendations for Older Adults:

- ▶ Sodium – Limit to 1,500 mg/day
- ▶ Sources: Naturally occurring in foods; Table salt; processed, brine, smoked, or salty foods



Key Recommendations for Older Adults:

- ▶ Potassium – Meet 4,700 mg/day with food
- ▶ Sources: Found in meat, milk, fruits and vegetables;



Key Recommendations for Older Adults:

Keep Sodium and Potassium in Balance



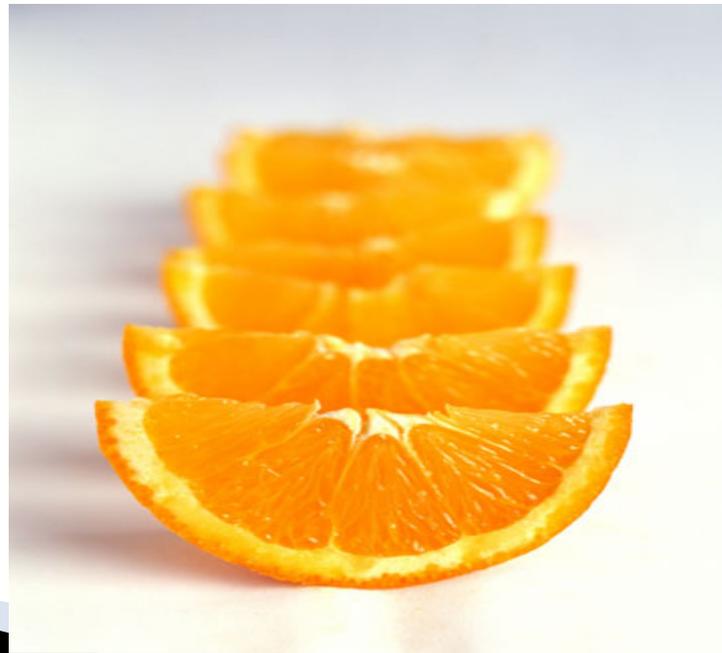
Key Recommendations for Older Adults:

- ▶ Fiber– 21 to 30 gm/day
- ▶ Source: Whole grains, Legumes, Nuts, Vegetables, Fruits



Key Recommendations for Older Adults:

- ▶ Vitamin C – 70 to 90 mg per day
- ▶ Sources: Citrus fruits, broccoli, strawberries, lemons, mustard and turnip greens, Brussels sprouts, cabbage, spinach



Key Recommendations for Older Adults:

- ▶ Vitamin A– 700 to 900 microgram/day
- ▶ Sources: Plant sources preferred–Dark green and orange vegetables



Menu Development

- Menu Planning
- Documentation
- Review and Approval

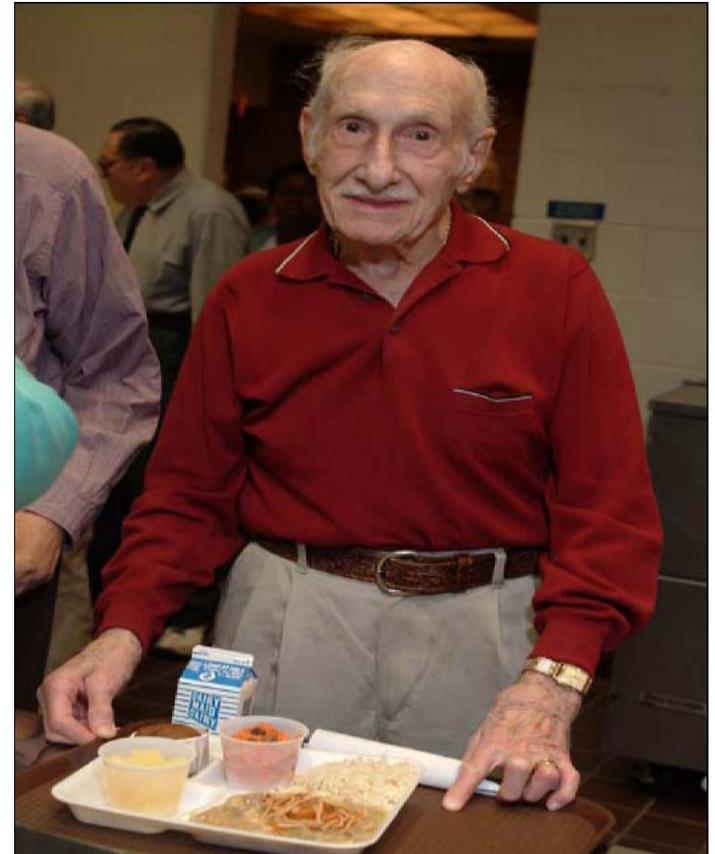
Menu Planning

- ▶ Planned with the advice and expertise of:
 - A dietitian or person with comparable expertise
 - Other knowledgeable persons
 - Customer input

Menu Planning

Customer Input

- ▶ Menu committees
- ▶ Product sampling
- ▶ Food preference surveys
- ▶ Satisfaction focus groups
- ▶ “Secret” diner
- ▶ Comment cards
- ▶ Satisfaction surveys



Menu Planning

- Enhance taste
- Strive for balance
- Emphasize variety
- Add contrast: texture & temperature
- Think about color
- Consider eye appeal
- Regional, traditional
- Time of year



Menu Planning

Older Adult Top Food Trends

- ▶ Scratch cooking
- ▶ Home-made
- ▶ Restaurant quality
- ▶ Comfort foods
- ▶ International flavors, ethnic
- ▶ Tasty, eye appeal
- ▶ Customer driven
- ▶ Choice
- ▶ Smaller portions
- ▶ Lighter fare
- ▶ Nutrient dense
- ▶ Healthy
- ▶ Variety

Institute of Food Technologists, 2005

Documentation of Nutritional Adequacy

Use one or both of the following methods:

▶ Computer Nutrient Analysis

Or

▶ Texas Model for Menu Planning

Nutrient Analysis Software

- ▶ Variety of Nutrient Analysis Software Available
 - Analysis of foods, recipes, and menus
 - Food production, inventory, and costing capabilities.
- ▶ Nutrient Analysis Software Used
 - *FoodWorks– Price, low cost updates, good technical support, accurate database
 - Food Processor
 - Nutritionist V, Nutritionist Pro (First Databank)
 - Computrition

Nutrient Analysis Software

- ▶ Contains current nutrient data base
- ▶ Utilizes standardized recipes
- ▶ Utilizes accurate nutrient data from vendors and manufacturers

Nutrient Analysis

Daily Averaged / Meal

Nutrient	DRI Target Value	Compliance Range
Calories	600–750 calories	600–1 000 calories
Protein	20 gm or higher	20 gm or higher

Nutrient Analysis

Weekly Averaged / Meal

Nutrient	DRI Target Value	Compliance Range
Fat (% of total calories)	25–30% of total calories	30% of total calories or less
Fiber	7 gms or higher	7 gms or higher
Calcium	400 mg	400 mg

Nutrient Analysis

Weekly Averaged / Meal

Nutrient	DRI Target Value	Compliance Range
Vitamin A	250– 300 ug	250 ug
Vitamin C	25–30 mg	25 mg
Calcium	400 mg	400 mg

Nutrient Analysis

Weekly Averaged / Meal

Nutrient	DRI Target Value	Compliance Range
Sodium	800–1,000 mg	1,200 mg or less
Potassium	1,500 mg or higher	1,200 mg or higher

Texas Model for Menu Planning

Food Group	Texas Model	USDA	DASH
Meat/Meat Alternates	3 oz	2 oz	2 -3 oz
Vegetables/Fruits	2-3 Servings	2-3 Serving	2-3 Servings
Grains	2 Servings	2 Servings	2 Servings
Milk/Milk Alternates	1 Serving	1 Serving	1 Serving
Desserts	Optional		
Oil/Fats	>1 Serving	7 gm	>1 serving
Other Foods	Optional		

Turkey Menu

Special Emphasis: Fiber, potassium, sodium,

- ▶ Roast turkey (2 oz)
- ▶ Baked sweet potato (1 small)
- ▶ Broccoli (1 /2 cup)
- ▶ Whole wheat roll (1 2.5" roll)
- ▶ Apple raisin crisp (1 /2 cup, includes topping of whole wheat flour and fortified flake cereal; almonds and raisins)
- ▶ Fat-free milk (1 cup)

Turkey Menu

	Compliance Range	Meal Content
Calories	600-1000 kcal	724 kcal
% Fat	30%	25 %
Fiber	7 gm	13 g
Calcium	400 mg	630 mg
Potassium	1,200 mg	1763 mg
Sodium	1,200 mg	423 mg

Meatloaf Sandwich

Special emphasis: whole grains, fruit, calcium

- ▶ Open-faced Meatloaf Sandwich (2 oz meatloaf w/ 1 sl. 7 grain bread)
- ▶ Gravy (2 Tb)
- ▶ Baked Winter Squash (1 /2 cup)
- ▶ Waldorf Salad on Bed of Greens (1 /2 cup, apples, walnuts, raisins on romaine)
- ▶ Orange Rice Pudding (1 /2 cup)
- ▶ Fat-free Milk (1 cup)

Meatloaf Meal

	Standard	Meal Content
Calories	600-1000 kcal	834 kcal
% Fat	30%	18%
Fiber	7 gm	9 g
Calcium	400 mg	1129 mg
Potassium	1,200 mg	1666 mg
Sodium	1,200 mg	627 mg

Menu Review and Approval

The Gatekeeper



The Dietitian

Menu Review and Approval

- ▶ Qualifications for the Dietitian
- ▶ 1) Texas licensed dietitian (LD). May also be registered with the Commission on Dietetic Registration, American Dietetic Association. (RD)
- ▶ 2) Experience in:
 - Food service management
 - Geriatric nutrition
 - Menu planning
 - Computerized nutrient analysis
 - Food service cost control

Dietitian's Role in Menu Review and Approval

- ▶ Certify compliance with Program Instruction guidelines
 - Texas Model for Menu Planning
 - Nutrient Analysis
- ▶ Assure a variety of foods, serving sizes, color, texture, consistency, and use of seasonal foods
- ▶ Approve substitutions comparable to nutrient content of original menu
- ▶ Make recommendations for cost control
- ▶ Make recommendations for meal quality improvement

Menu Options

- Frozen
- Shelf Stable / Emergency
- Special Dietary Needs
- Choice

Frozen

- ▶ Indications
 - Daily delivery is limited
 - Provide more menu choice
 - Offer weekend/holiday meal
 - Expand service–second meal
- ▶ Complies with PI guidelines

Shelf-Stable/Emergency Meals

- ▶ Shelf-stable
- ▶ Provided on a temporary basis when regular meal is not an option
- ▶ Used during bad weather, or other emergency meal replacements
- ▶ Does not require refrigeration and can be consumed at room temperature if needed
- ▶ May not comply with PI guidelines (sodium, potassium)

Special Dietary Needs

- ▶ **Culturally or ethnic appropriate meals**
 - Examples: Asian, Halal, Kosher, Vegetarian
- ▶ **Modified Meals**
 - Examples: Pureed, Low sodium
- ▶ **Therapeutic**
 - Examples: Renal, Gluten-free
- ▶ **Medical Nutritional Supplement**
 - Examples: Ensure, Boost

Choices

- ▶ **Accommodating Consumer Choice**
 - Time
 - Service location or place
 - Restaurant voucher programs
 - Café style service
 - Menu
 - Food
 - More than 1 meal/day
 - Fee for service/private pay options
 - Customer service emphasis



Menu Planning Principles

- Food Service
- Food Safety
- Cost Control
- Evaluation

Food Service Factors to Consider

- ▶ Type of Food Service Operation
 - Self operated
 - Catered
- ▶ Food Service System
 - On-site food production
 - Central kitchen with satellite service
 - Ready prepared/Cook-chill/Cook-freeze
 - Convenience
 - Restaurant/Restaurant Voucher

Food Service Factors to Consider

Size of operation

- ▶ Number of meals/day
- ▶ Type and frequency of meal service
 - 5day/7day
 - One meal/day, two meals/day, three meals/day



Food Service Factors to Consider

- ▶ Type of delivery system
 - Hot
 - Cold
 - Frozen
 - Shelf-stable

Food Service Factors to Consider

Menu Options

- ▶ Non-selective
- ▶ Selective
- ▶ Cultural/Ethnic
- ▶ Therapeutic
- ▶ Modified
- ▶ Emergency



Food Service Factors to Consider

- ▶ Labor considerations
 - Number of employees
 - Skill of Staff
- ▶ Equipment
 - Production
 - Delivery
- ▶ Packaging/Meal service delivery



Food Service Factors to Consider

- ▶ Cycle Menus
 - Different every day & repeats after number of weeks
- ▶ Cycle menus:
 - 4 – 6 week cycle
 - 3 – 4 cycles per year
- ▶ Cycle menus should consider:
 - Available storage
 - Purchasing & delivery schedule
 - Production limitations
 - Seasonal, regional, traditional foods

Food Safety

- Retains temperature
- Retains quality, despite holding times
- Selection of safe foods
- Ease of safe food handling
- Compliance with state and local food code



Cost Control in Menu Planning

- ▶ Cost Considerations
 - Raw Foods vs. Convenience Foods
 - Food availability
 - Purchasing procedures
 - Labor
 - Packaging/Food containers



Menu Evaluation

- ▶ Analysis of cost/meal
- ▶ Compliance with program requirements
 - Computer assisted menu analysis
 - State and local health food code
- ▶ Customer satisfaction
- ▶ Plate waste (Congregate setting)



Implementation

- Technical Assistance
- Resources
- Training
- Timeline

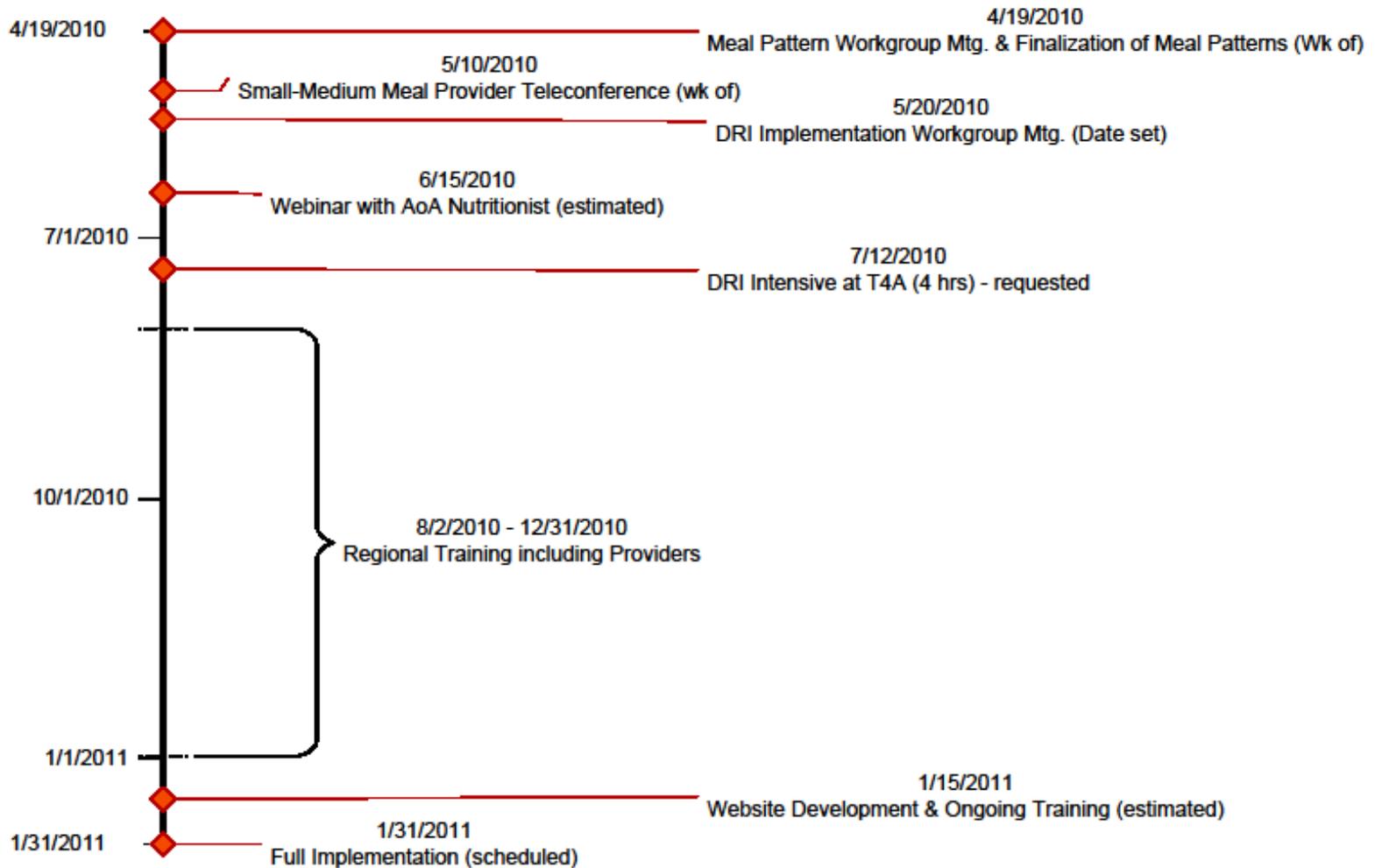
Resources

- ▶ Website
 - Best practices
 - Resources
- ▶ Recipe sharing
- ▶ Menu sharing

Training

- ▶ Training:
 - Texas Conference on Aging–March 21
 - Meals on Wheels Association of Texas Conference– April 28
 - AOA Webinar– June 12
 - Eight Regional Trainings Scheduled August–October
 - Nutrition Providers (3 hours)
 - Dietitians (1 hour)

DRI Implementation Timeline



4/19/10

Discussion

Resources

Resources

- ▶ Administration on Aging <http://www.aoa.gov/>
- ▶ AGing Integrated Database <http://www.agidnet.org/>
- ▶ Behavioral Risk Factor Surveillance Survey
<http://apps.nccd.cdc.gov/brfss/page.asp?yr=2008&state=US&cat=CV#CV>
- ▶ Dietary Reference Intakes
http://fnic.nal.usda.gov/nal_display/index.php?info_center=4&tax_level=1

Resources

- ▶ **Dietary Guidelines for Americans**
<http://www.health.gov/dietaryguidelines/dga2005/toolkit/default.htm>
- ▶ <http://www.cnpp.usda.gov/DietaryGuidelines.htm>
- ▶ **Older Americans Act Nutrition Service Providers Guide**
 - http://www.health.gov/dietaryguidelines/dga2005/toolkit/default.htm#older_adults
- ▶ **National Institutes of Health**
 - **National Heart Lung Blood Institute Recipes:**
<http://www.nhlbi.nih.gov/health/>

Resources

- ▶ **Food and Drug Administration- Food Safety**
 - <http://www.cfsan.fda.gov/list.html>
- ▶ **American Heart Association**
 - <http://www.americanheart.org/>
 - Including cookbooks, recipes
- ▶ **American Diabetes Association**
 - <http://www.diabetes.org/>
 - Including cookbooks, recipes

Resources

- ▶ **International Food Information Council**
 - <http://www.ific.org/>
- ▶ **National Resource Center on Nutrition, Physical Activity and Aging**
 - <http://nutritionandaging.fiu.edu>
- ▶ **National Food Service Management Institute**
 - <http://www.nfsmi.org/>
 - **Adult Day Care Manual, incl. Information on meal service**