



The 2010 Dietary Guidelines For Americans

Translating Research to Application



Jean L. Lloyd, National Nutritionist
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Overview

- **Factors that influence our decisions about nutrition & physical activity**
- **Nutrition Requirements of the Older Americans Act**
- ***Dietary Guidelines for Americans 2010 (DGAs)***
- **Embedding Evidence Based Practice Into Nutrition Services**
- **Resources**



What influences what we eat?

Obesigenic Environment

- **Individual factors**
 - Age, gender, genetics, disability
 - Knowledge, skills, attitude, beliefs, behavior
- **Environment**
 - Homes, schools, workplaces, senior centers, recreation facilities
 - Foodservice and other retail food facilities, grocery stores



What influences what we eat?

Obesigenic Environment

- **Sectors of influence**
 - Government, public health & health care
 - Agriculture
 - Marketing, advertisements
 - Industry: food, beverage, entertainment
 - Community safety and design



- **Social & cultural values**

What influences what we eat?

Obesigenic Environment

- **Social & cultural values**

- Heritage, culture & traditions
- Religious beliefs
- Values of your society & family
- Beliefs about weight, use of free time, body image
- Lifestyle
- Priorities
- Time



Purpose of the OAA Nutrition Programs

Sections 330, 601

- **Reduce hunger & food insecurity**
- **Promote socialization**
- **Promote the health and well-being of older individuals and delay adverse health conditions through access to nutrition and other disease prevention and health promotion services**



What are the Nutrition Program Requirements? Sections 339, 601

- **2010 *Dietary Guidelines for Americans***
- **Dietary Reference Intakes**
- **Food Safety Code**



Program Implementation

- **Partially Federally funded, state administered program**
- **Section 305 authorizes state administration, implementation varies**
- **OAA does not allow the nutrition requirements to be waived if services funded with Title III C 1, C 2, or Nutrition Service Incentive Program dollars**



Dietary Guidelines for Americans, 2010



- Executive Summary
- Chapter 1. Introduction
- Chapter 2. Balancing Calories to Manage Weight
- Chapter 3. Foods and Food Components to Reduce
- Chapter 4. Foods and Nutrients to Increase
- Chapter 5. Building Healthy Eating Patterns
- Chapter 6. Helping Americans Make Healthy Choices
- 16 Appendices



What are the 2010 Dietary Guidelines for Americans (DGAs)?

- Science based
- Promote health/reduce chronic disease
- Basis for federal nutrition programs & health care
- Basis for individual healthy eating decisions
- Updated every 5 years
- Published by HHS & USDA



HHS/USDA *Dietary Guidelines* Development Process

Phase 1: Dietary Guidelines Advisory Committee (DGAC)

- 13 member scientific advisory committee
- Systematic evidence-based review methodology
- 6 public meetings/ comments throughout
- 445 page advisory report
- www.dietaryguidelines.gov

Phase 2: Review and comment on DGAC Report

- Public, 1159 comments; 50 organizations
- USDA and HHS agencies

Phase 3: Drafting and review of Dietary Guidelines

- Writing team: USDA and HHS nutritionists
- Independent review and Departmental clearance of Policy document



Science: Evidence Based Library

www.nutritionevidencelibrary.gov

130 Research Questions

- Quality
- Quantity
- Objectivity
- Consistency
- Rigor
- Integrity
- Impact
- Transparency
- Generalizability
- Evidence grades
 - Strong
 - Moderate
 - Limited
 - Expert opinion
 - Grade not assignable



Science Basis For Dietary Guidelines

- Dietary Reference Intakes
- Food Pattern Modeling Analysis (USDA Pyramid System)
- Consumption Data Analysis



Dietary Guidelines for Americans, 2010

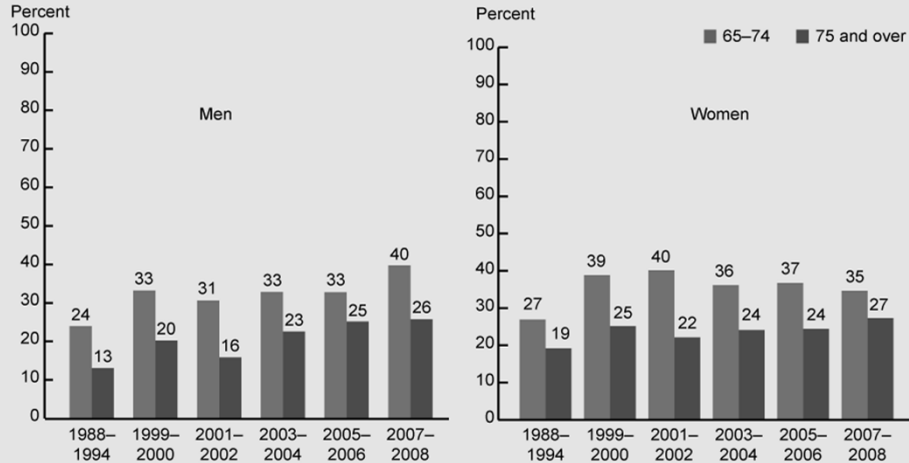
Diet-Related Chronic Diseases and Conditions

- Obesity
- Cardiovascular disease
- Hypertension
- Diabetes
- Cancer
- Osteoporosis



Obesity Prevalence for Older Adults Has Almost Doubled Since 1994

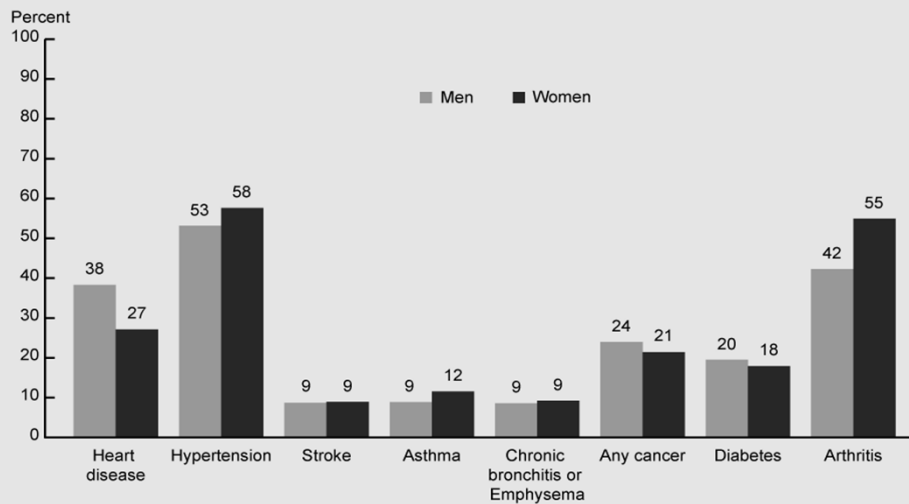
Percentage of population age 65 and over who are obese, by sex and age group, selected years 1988–2008



NOTE: Data are based on measured height and weight. Height was measured without shoes. Obese is defined by a Body Mass Index (BMI) of 30 kilograms/meter² or greater. See Appendix C for the definition of BMI.
Reference population: These data refer to the civilian noninstitutionalized population.
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey.

Nutrition Related Chronic Health Conditions of Older Adults

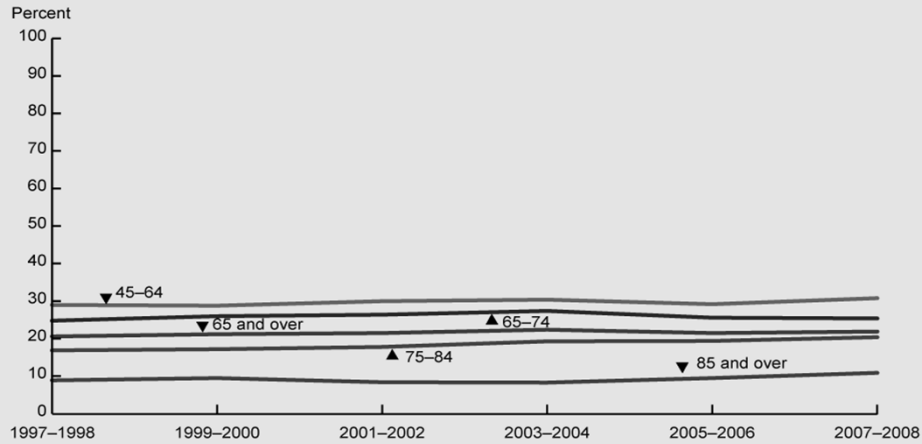
Chronic health conditions among the population age 65 and over, by sex, 2007–2008



NOTE: Data are based on a 2-year average from 2007–2008. See Appendix B for the definition of race and Hispanic origin in the National Health Interview Survey.
Reference population: These data refer to the civilian noninstitutionalized population.
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Physical Activity Declines as People Age

Percentage of population age 45 and over who reported engaging in regular leisure time physical activity, by age group, 1997–2008



NOTE: Data are based on 2-year averages. "Regular leisure time physical activity" is defined as "engaging in light-moderate leisure time physical activity for greater than or equal to 30 minutes at a frequency greater than or equal to five times per week, or engaging in vigorous leisure time physical activity for greater than or equal to 20 minutes at a frequency greater than or equal to three times per week."
Reference population: These data refer to the civilian noninstitutionalized population.
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

OAA Nutrition Program Serves People with Nutrition Related Chronic Disease

Question	Home Delivered Meals % of Respondents	Congregate Meals % of Respondents
Heart Disease	48 (32% nationally)	32 (32% nationally)
Hypertension	73 (48% nationally)	68 (48% nationally)
Diabetes	35 (18% nationally)	26 (18% nationally)
Cancer	19 (22% nationally)	15 (22% nationally)
Osteoporosis	30	21

2009 AoA Survey of OAA Participants, January, 2010



Dietary Guidelines for Americans, 2010 ***Overarching Concepts***

- **Maintain calorie balance over time to achieve and sustain a healthy weight.**
- **Focus on consuming nutrient-dense foods and beverages.**
- **Modify behaviors at all ages to accomplish goal.**



Ch 2: Balancing Calories to Manage Weight ***Key Recommendations***

- **Prevent and/or reduce overweight and obesity through improved eating and physical activity behaviors.**
- **Control total calorie intake to manage body weight. For people who are overweight or obese, this will mean consuming fewer calories from foods and beverages.**
- **There is strong evidence that there is no optimal proportion of macronutrients for weight loss, it is overall caloric intake compared with physical activity.**



Ch. 2: Balancing Calories to Manage Weight

Key Recommendations

- Increase physical activity and reduce time spent in sedentary behaviors.
- Implement recommendations from the 2008 *Physical Activity Guidelines for Americans*, <http://www.health.gov/paguidelines/>
- Older adult minimum: 2.5 hours/moderate intensity aerobic activity/week plus strength training at least 2 times/week and flexibility & balance activity
- Maintain appropriate calorie balance at all ages



Key Recommendations

Physical Activity Guidelines for 65+

- **Older adults should follow the adult guidelines.**
 - They should be as active as their conditions allow.
 - They should maintain/improve balance to prevent falling.
- They should match their activity level with their fitness level.
- They should monitor their safety in relation to their chronic conditions.



Definition: Nutrient Density for Food

- Provide vitamins, minerals, and other beneficial substances and relatively few calories without
 - Solid fats in the food or added to it
 - Added sugars
 - Added refined starches
 - Added sodium
 - SoFAS or solid fats added sugars



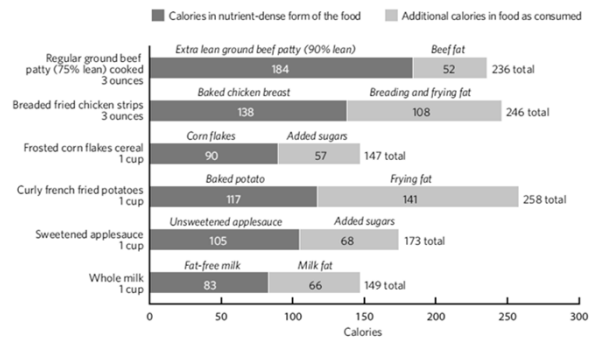
Definition: Nutrient Density for Food

- Retain naturally occurring components, such as dietary fiber
- All vegetables, fruits, whole grains, seafood, eggs, beans and peas, unsalted nuts and seeds, fat-free and low-fat dairy, and lean meats and poultry are nutrient dense when prepared without solid fats or sugars



Nutrient Dense and Non-Nutrient Dense Forms of Sample Foods

FIGURE 5-2. Examples of the Calories in Food Choices That Are Not in Nutrient Dense Forms and the Calories in Nutrient Dense Forms of These Foods



Principles for Promoting Calorie Balance

- Monitor food & beverage intake, physical activity & body weight
- Reduce portion size
- When eating out, make better choices
- Limit screen time



Balancing Calories to Maintain Weight

- **Total calories for a day** (see Table 2-3)
 - Female, 51+ 1600-2200
 - Male, 51+ 2000-2800
- **Physical Activity**
 - Activity ranges, sedentary, moderately active, active
- **Caloric range for Program meals – 1/3**
 - 550 (sedentary female) to 900 (active male)
 - Many programs average 700 calories/meal



Top Sources of Calories Among Americans 2 Years and Older

1. **Grain-based desserts**
 - Cake, cookies, pie, cobbler, sweet rolls, pastries, and donuts
2. **Yeast breads**
 - White bread and rolls, mixed-grain bread, flavored bread, whole-wheat bread, and bagels
3. **Chicken and chicken mixed dishes**
 - Fried and baked chicken parts, chicken strips/patties, stir-fries, casseroles, sandwiches, salads, and other chicken mixed dishes
4. **Soda/energy/sports drinks**
 - Sodas, energy drinks, sports drinks, and sweetened bottled water including vitamin water
5. **Pizza**



Review

Control total caloric intake

Increase physical activity

Maintain appropriate caloric balance



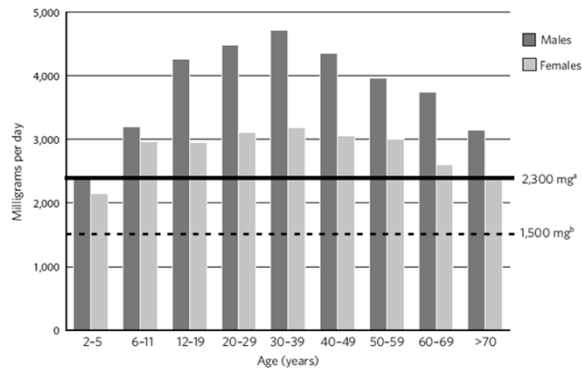
Ch. 3: Foods and Food Components to Reduce *Key Recommendations*

- Reduce daily sodium intake to less than 2300 mg/day
- Further reduce to 1500 mg/day if
 - Age 51+
 - African American
 - Have hypertension, diabetes, chronic kidney disease
- **The 1500 mg recommendation applies to about half of the U.S. population, including children, and the majority of adults.**



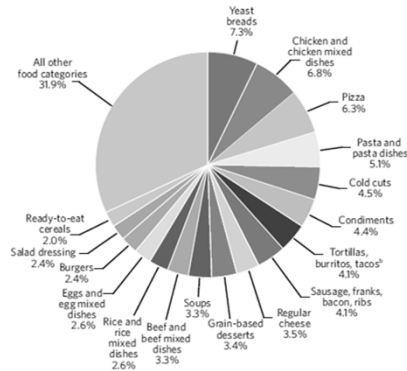
U.S. Sodium Intake

FIGURE 3-1. Estimated Mean Daily Sodium Intake, by Age-Gender Group, NHANES 2005-2006



Food Sources of Sodium

FIGURE 3-2. Sources of Sodium in the Diets of the U.S. Population Ages 2 Years and Older, NHANES 2005-2006^a





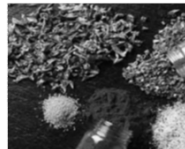
Sodium Issues

IFIC, August, 2009

- **Majority of those 55+ were trying to limit sodium**
- **Concerns linked to hypertension & heart disease**
- **Consumers were not sure how to identify foods higher in sodium**



<http://www.foodinsight.org/about-ific-and-food-safety.aspx>



Sodium Issues

Institute of Medicine, 2010

www.iom.edu

- **Hypertension costs \$73.4 B in 2009, direct & indirect costs**
- **Recommendations:**
 - ↓ sodium
 - 77% sodium from food processing
 - Collaborate with food industry to ↓ sodium
 - ↑ fruits/vegetables
 - ↑ physical activity
 - ↑ attention by public health agencies



Sodium Sources

- **Order the following items from highest to lowest for the amount of sodium**
 - 10 French fries, frozen, oven roasted
 - ½ cup prepared chocolate pudding
 - ½ cup sweetened applesauce
 - 1 slice whole wheat bread
 - 1 slice rye bread
 - ½ cup 1% fat cottage cheese
 - ½ cup tuna salad
 - 1 cup 1% milk



Sodium Sources

Goal: 500 mg/meal Per DGA Recommendations

- **Order the following items from highest to lowest for the amount of sodium**

1. ½ cup 1% fat cottage cheese	459 mg
2. ½ cup tuna salad	412 mg
3. 1 slice rye bread	211 mg
4. 10 french fries, frozen, oven roasted	194 mg
5. ½ cup prepared chocolate pudding	172 mg
6. 1 slice whole wheat bread	132 mg
7. 1 cup 1% milk	107 mg
8. ½ cup sweetened applesauce	2.5 mg



USDA Handbook 23, <http://www.nal.usda.gov/fnic/foodcomp/search/>

Advice to Reduce Sodium Intake

- Read the Nutrition Facts label
- Consume more fresh foods and fewer processed foods high in sodium
- Eat more foods prepared at home
- When eating at restaurants, ask that salt not be added to your food



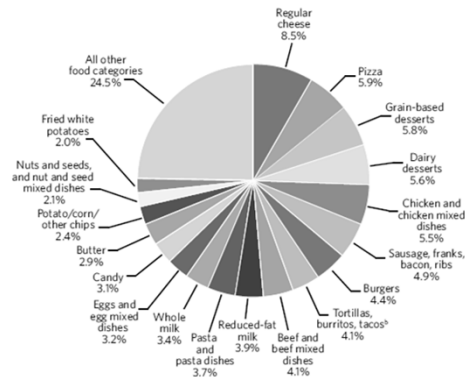
Ch. 3: Foods and Food Components to Reduce *Key Recommendations*

- Consume less than 10 percent of calories from saturated fatty acids by replacing them with monounsaturated and polyunsaturated fatty acids.
- Consume less than 300 mg per day of dietary cholesterol.
 - Up to 1 egg yolk/day
 - Small effect compared to saturated and *trans* fats



Food Sources of Saturated Fats

FIGURE 3-4. Sources of Saturated Fat in the Diets of the U.S. Population Ages 2 Years and Older, NHANES 2005-2006*



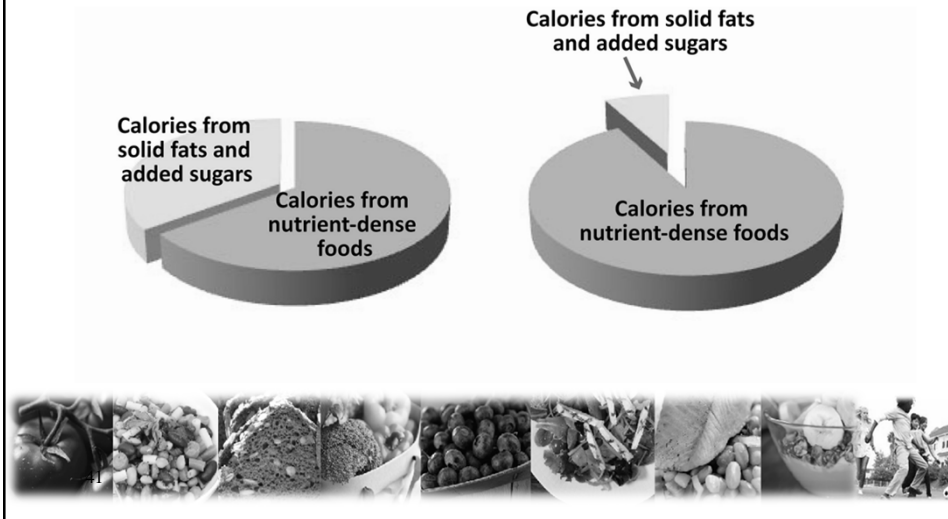
Ch. 3: Foods and Food Components to Reduce Key Recommendations

- Keep *trans* fatty acid consumption as low as possible by limiting foods that contain synthetic sources of *trans* fats, such as partially hydrogenated oils, and by limiting other solid fats.
- Reduce the intake of calories from solid fats and added sugars (SoFAS).



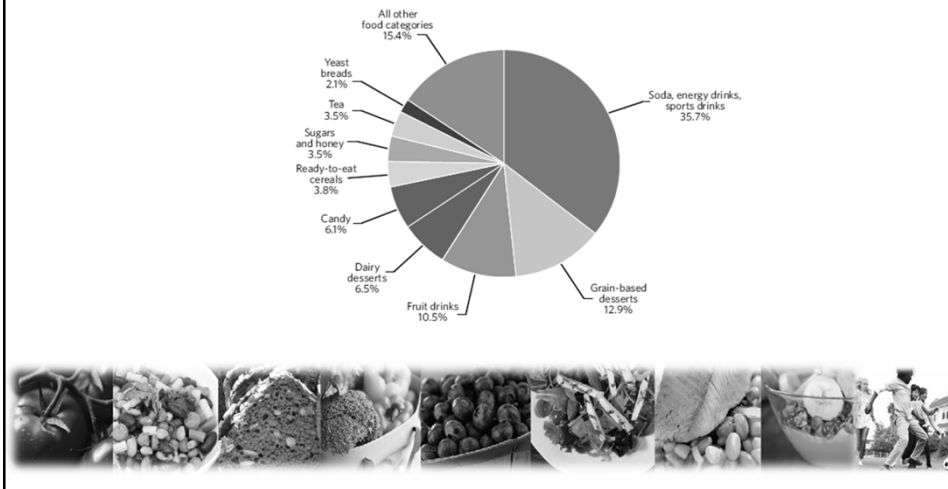
Ch. 3: Foods and Food Components to Reduce What We Eat

Recommended Limits



Food Sources of Added Sugars

FIGURE 3-6. Sources of Added Sugars in the Diets of the U.S. Population Ages 2 Years and Older, NHANES 2005–2006*



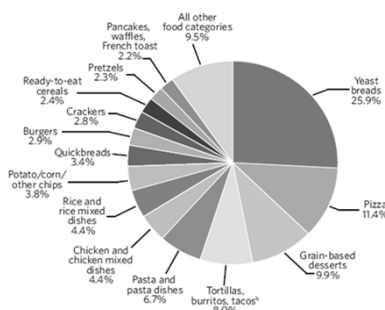
Ch. 3: Foods and Food Components to Reduce *Key Recommendations*

- Limit the consumption of foods that contain refined grains, especially refined grain foods that contain solid fats, added sugars, and sodium.
- If alcohol is consumed, it should be consumed in moderation--up to one drink per day for women and two drinks per day for men--and only by adults of legal drinking age.



Food Sources of Refined Grains

FIGURE 3-7. Sources of Refined Grains in the Diets of the U.S. Population Ages 2 Years and Older, NHANES 2003-2004*



Ch. 3: Foods and Food Components to Reduce

Key Recommendations

Refined grains

- Limit consumption of refined grains, especially those that contain solid fats, added sugars, and sodium
- Enriched refined grain products provide some vitamins and minerals, but not the fiber provided by whole grains
- Replace refined grains with whole grains



Decrease

Reduce sodium intake to 1500 mg per day

Less than 10% of calories from saturated fat

Cholesterol less than 300 mg/day

Trans fat as low as possible

Solid Fats

Added Sugars

Refined Grains

Alcohol



Ch. 4: Foods and Nutrients to Increase *Key Recommendations*

Individuals should meet the following recommendations as part of a healthy eating pattern while staying within their calorie needs.

- **Increase vegetable and fruit intake.**
- **Eat a variety of vegetables, especially dark-green and red and orange vegetables and beans and peas.**



Ch. 4: Foods and Nutrients to Increase *Key Recommendations*

- **Consume at least half of all grains as whole grains.**
Increase whole-grain intake by replacing refined grains with whole grains.
- **Increase intake of fat-free or low-fat milk and milk products,**
such as milk, yogurt, cheese, or fortified soy beverages.
- **Choose a variety of protein foods, which include seafood,**
lean meat and poultry, eggs, beans and peas, soy products,
and unsalted nuts and seeds.



Whole Grain Guidance

FIGURE 4-1. Three Ways to Make at Least Half of Total Grains Whole Grains^a

1. 3 ounces of 100% whole grains and 3 ounces of refined-grain products



2. 2 ounces of 100% whole grains, 2 ounces of partly whole-grain products,^b and 2 ounces of refined-grain products



3. 6 ounces of partly whole-grain products



Ch. 4: Foods and Nutrients to Increase *Key Recommendations*

- Increase the amount and variety of seafood consumed by choosing seafood in place of some meat and poultry.
- Replace protein foods that are higher in solid fats with choices that are lower in solid fats and calories and/ or are sources of oils.



Ch. 4: Foods and Nutrients to Increase *Key Recommendations*

- **Use oils to replace solid fats where possible.**
- **Choose foods that provide more potassium, dietary fiber, calcium, and vitamin D, which are nutrients of concern in American diets. These foods include vegetables, fruits, whole grains, and milk and milk products.**



Ch. 4: Foods and Nutrients to Increase *Key Recommendations for Older Adults*

Individuals ages 50 years and older:

- Consume foods fortified with vitamin B12, such as fortified cereals, or dietary supplements.
- Be food safe, older adults, and individuals with weakened immune systems (such as those living with HIV infection, cancer treatment, organ transplant, or liver disease) are more susceptible to foodborne illness
- Reduce intake to 1,500 mg sodium among persons who are 51 and older and those of any age who are African American, or have hypertension, diabetes, or chronic kidney disease.



Increase

Vegetables & fruits

Variety of vegetables

Whole grain products

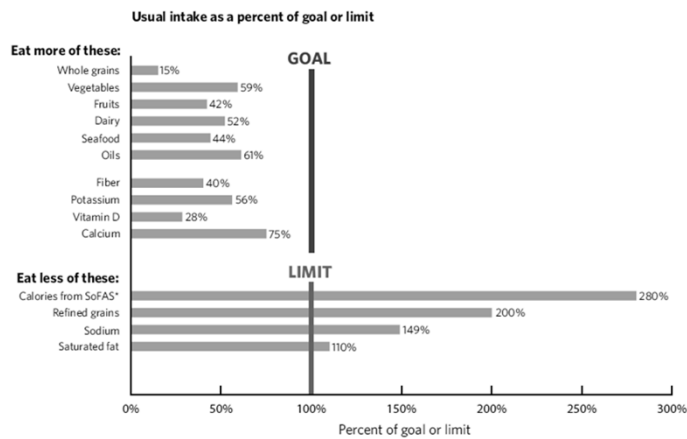
Fat free, low-fat dairy

Variety of protein foods



Comparison of Consumption to Recommendations

FIGURE 5-1. How Do Typical American Diets Compare to Recommended Intake Levels or Limits?



Ch. 5: Building Healthy Eating Patterns

Key Recommendations

- **Select an eating pattern that meets nutrient needs over time at an appropriate calorie level.**
 - USDA Food Patterns
 - DASH Eating Plan
- **Account for all foods and beverages consumed and assess how they fit within a total healthy eating pattern.**
- **Follow food safety recommendations when preparing and eating foods to reduce the risk of foodborne illnesses.**



Recommended Eating Pattern

Dietary Approaches to Stop Hypertension - DASH

- **Based on random controlled, clinical trials by the National Heart, Lung, Blood Institute of the National Institute of Health, also researched internationally**
- **Various studies: original DASH, DASH-Sodium, DASH-Low fat**
- **Emphasis: vegetables, fruits, low-fat milk & dairy products, whole grains, poultry, seafood, nuts**
- **Reduced hypertension, reduced cardiovascular disease, lowered mortality**





DASH Eating Plan

Food Group	550 Calories	700 Calories
Grains	2 servings	2.5 servings
Vegetables	1.5 servings	2 servings
Fruits	1.5 servings	2 servings
Low-fat dairy	1 serving	1.5 serving
Lean meat, poultry, fish	1.33 serving or less	1.75 serving or less
Seeds, nuts, legumes	1/week	1/week
Fats & oils	.5 serving	.5 serving
Sweets	Less than 1/week	Less than 1/week

Recommended Eating Patterns

USDA Food Patterns

- Daily amounts of foods to eat from 5 major food groups
- Meet DRIs and DGAs, not clinically tested
- Similar to the DASH
- Emphasis on selecting a variety of foods from each food group (vegetables, fruits, grains, dairy products, protein foods)
- Vegetarian adaptations





USDA Food Pattern

Food Group	550 Calories	700 Calories
Fruits	½ cup (1 serving)	2/3 cup (1.3 serving)
Vegetables	½ cup (1 serving)	2/3 cup (1.3 serving)
Grains	1.5 oz equiv.	2 oz equivalent
Protein foods	1.1 oz equivalent	1.4 oz equivalent
Dairy	1 cup	1.4 cups
Oils	8.25 grams	10.5 grams
Maximum SoFAS Empty Calories	75 calories	95.9 calories

Embedding Evidence Based Practice in Nutrition Services

Menu planning

Nutrition education

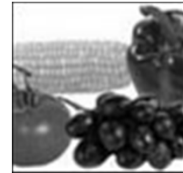
Nutrition counseling



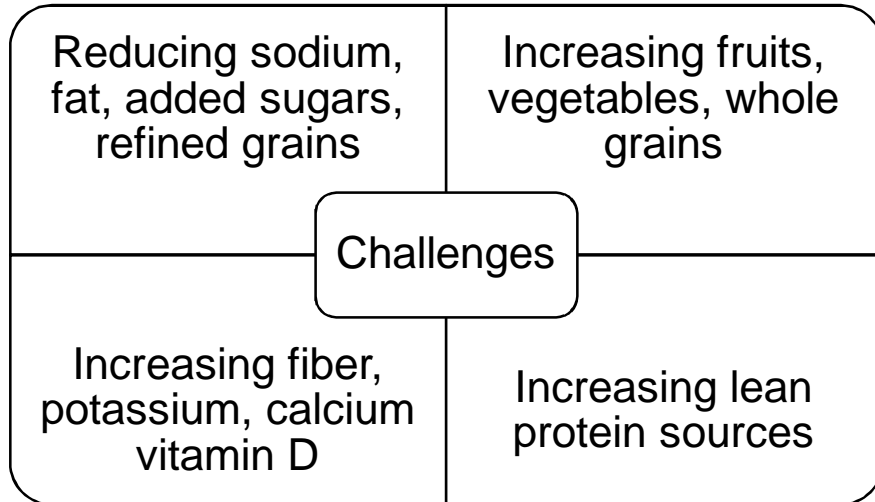
Principles of Menu Planning

Aesthetic appeal:

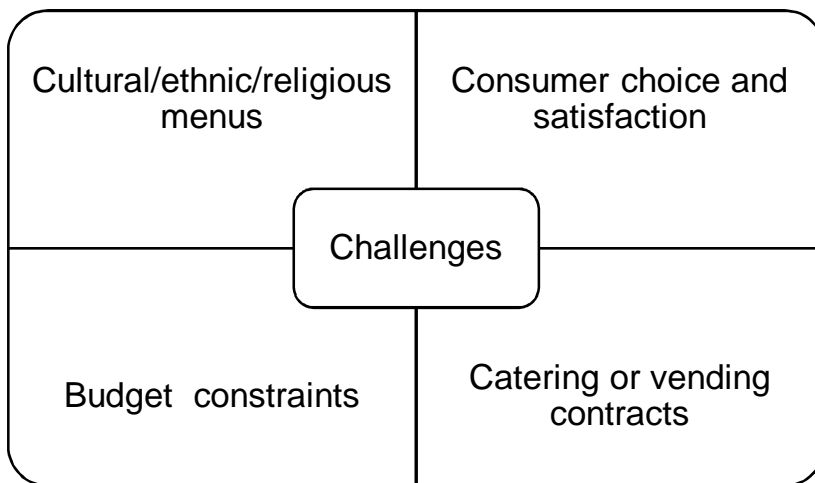
- Enhance taste
- Strive for balance
- Emphasize variety
- Add contrast: texture & temperature
- Think about color
- Consider eye appeal



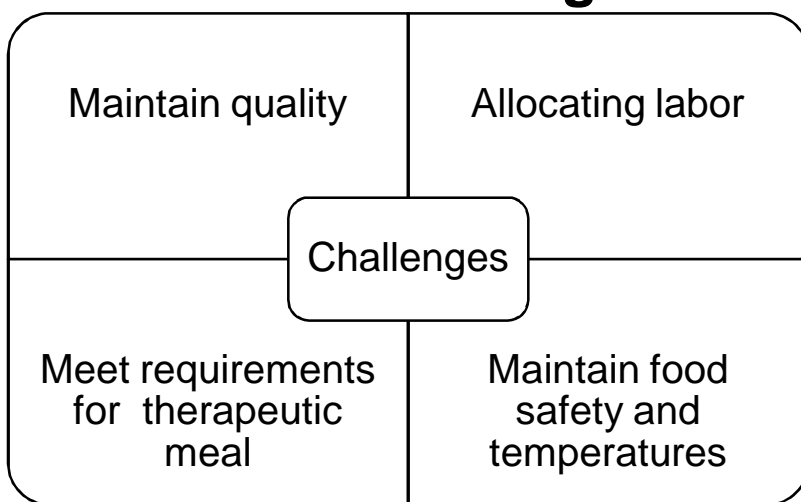
Menu Planning



Menu Planning



Menu Planning



Menu Planning Solutions

Improve
menu
planning

Efficient
use of
labor

Improve
purchasing
practices

Ideas

- **Reduce Sodium**
 - Use low sodium products
 - Decrease prepared sauces
 - Decrease cheese, high sodium meats
 - Work with vendors/caterers
 - Decrease convenience foods
 - Increase “from scratch” cooking
- **Increase fruits and vegetables**
- **Increase lower saturated fat foods**



Ideas

- **Increase use of nuts/seeds/legumes**
- **Use dessert “trade-off’s**
 - Nutrient dense desserts
 - Limit serving size
 - Limit baked or commercial desserts to one per week.



Customer Input

- **Menu committees**
- **Product sampling**
- **Taste panels**
- **Food preference surveys**
- **Satisfaction focus groups**
- **Comment cards**





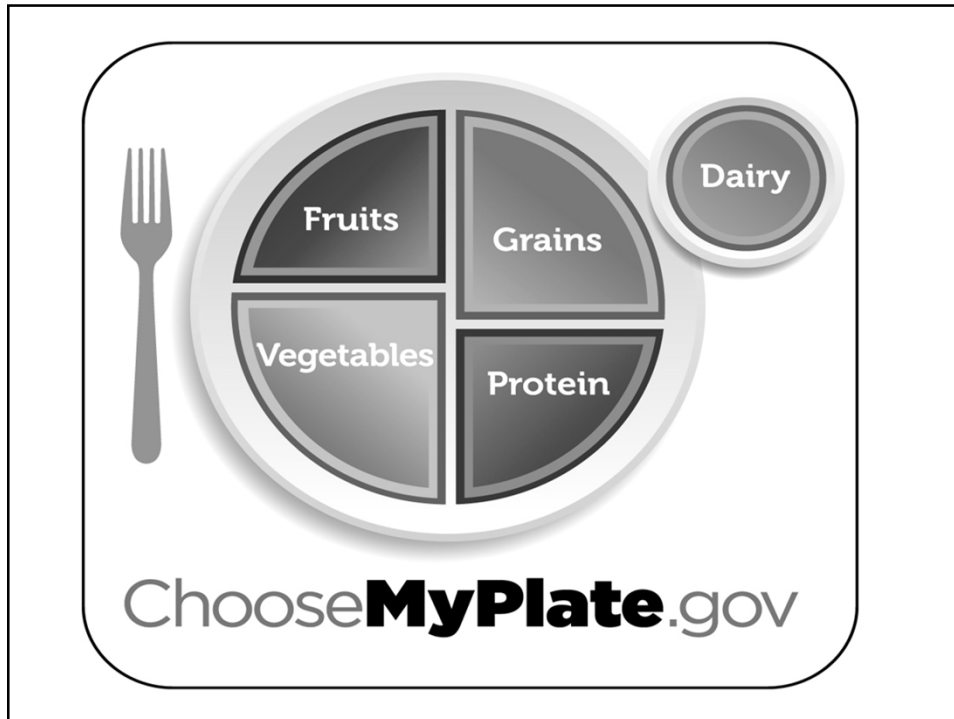
Food Safety

- Retain temperature
- Retain quality, despite holding times
- Select safe foods
- Select foods, dishes that ease safe food handling
- Comply with food code



What's on Your Plate?





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

	Standard	Meal Content
Calories	550-700 kcal	724 kcal
% Fat	30-35%	25 %
Fiber	7 – 8 g	13 g
Calcium	400 mg	630 mg
Potassium	1566 mg	1763 mg
Sodium	500 mg	423 mg



How can we make healthy choices?

- **Calories**
- **Physical activity**
- **Vegetables**
- **Fruits**
- **Dairy & dairy alternates**
- **Protein foods**
- **Grains**



Communicating the Dietary Guidelines: Starter Consumer Messages

- Enjoy your food, but eat less.
- Avoid oversized portions.
- Make half your plate fruits and vegetables.
- Switch to fat-free or low-fat (1%) milk
- Compare sodium in foods like soup, bread, and frozen meals—and choose the foods with lower numbers.
- Read food labels
- Drink water instead of sugary drinks.



Behavior Changes

- **Overall weight management**
 - Calorie intake
 - Physical activity
- **Foods**
 - Vegetables
 - Fruits
 - Dairy products/dairy alternates
 - Protein foods



Behavior Changes

- **Foods**
 - Grains
 - Whole grains
 - Refined grains
- **Food Components**
 - Oils & Fats
 - Oils
 - Solid fats



Behavior Changes

- **Foods Components**
 - Added Sugars
 - Sodium
 - Alcohol
- **Keep Foods Safe**
 - Clean (hands, surfaces, food)
 - Separate foods (when shopping, preparing & serving)
 - Cook & chill (safe temperatures)





Dietary Guidelines Resources



www.health.gov/dietaryguidelines

www.healthfinder.gov

www.dietaryguidelines.gov

www.nutritionevidencelibrary.gov

www.choosemyplate.gov/

www.myfoodapedia.gov/



Other Resources



Administration on Aging <http://www.aoa.gov/>

Fight BAC! <http://www.fightbac.org/>

Be Food Safe

http://www.fsis.usda.gov/Be_FoodSafe/



Is It Done Yet?

http://www.fsis.usda.gov/is_it_done_yet/

Thermy

http://www.fsis.usda.gov/food_safety_education/thermy/index.asp





Other Federal Resources



Reliable, Science Based Information

- www.health.gov/paguidelines
- www.nutrition.gov
- www.dietaryguidelines.gov
- www.cnpp.usda.gov
- <http://fnic.nal.usda.gov>
- <http://odphp.osophs/dhhs.gov>
- www.fda.gov
- www.cdc.gov
- www.nih.gov
- www.physicalactivityplan.org



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Thank You

**Jean L. Lloyd
National Nutritionist
U S Administration on Aging
Jean.Lloyd@aoa.hhs.gov**

