

# Dietary Reference Intake & Dietary Guidelines Implementation



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US Administration on Aging  
June, 2010**

# Objectives



- ▶ **Evidence for Nutrition, Health & Food Security**
- ▶ **Program Data**
- ▶ **Older Americans Act**
- ▶ **Menu Planning**
- ▶ **Resources**

# **Evidence for Nutrition, Health & Food Security**



# Inter-related Factors Affecting the Nutritional Well-Being of Older Adults

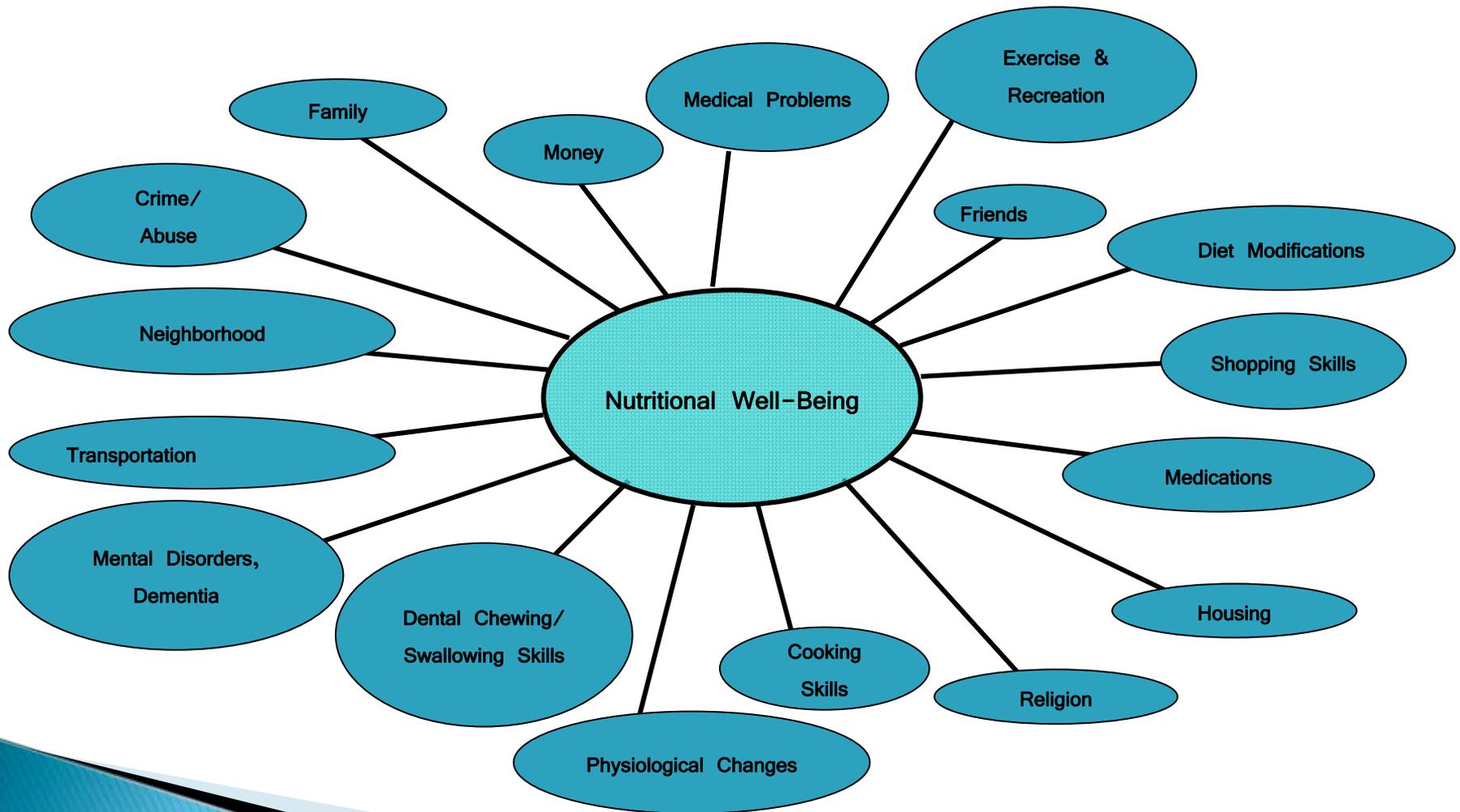
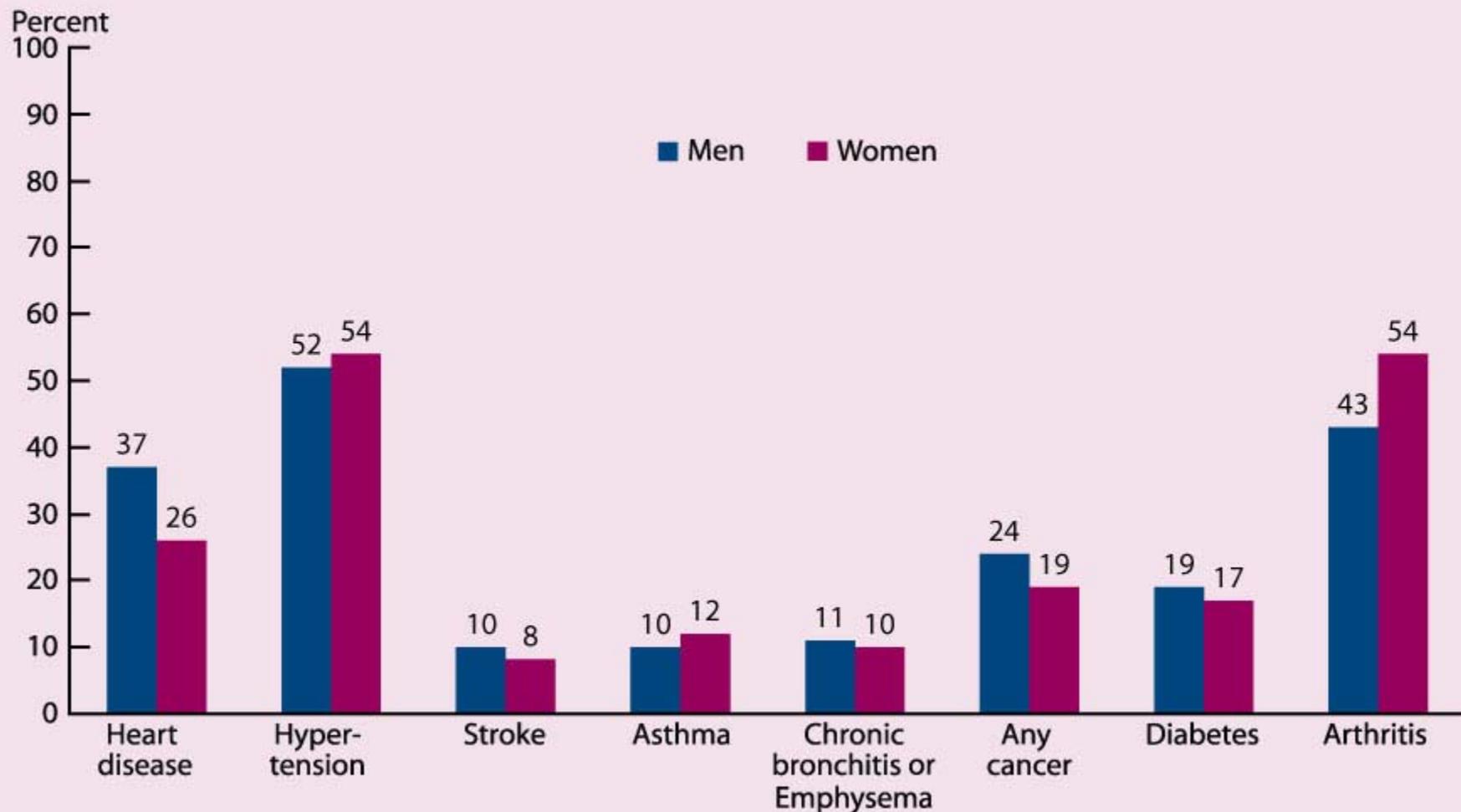


Fig. 2

# Men & Women have Different Rates of Chronic Health Conditions; 7 of 8 Conditions are Nutrition Related

Percentage of people age 65 and over who reported having selected chronic conditions, by sex, 2005–2006



Note: Data are based on a 2-year average from 2005–2006.

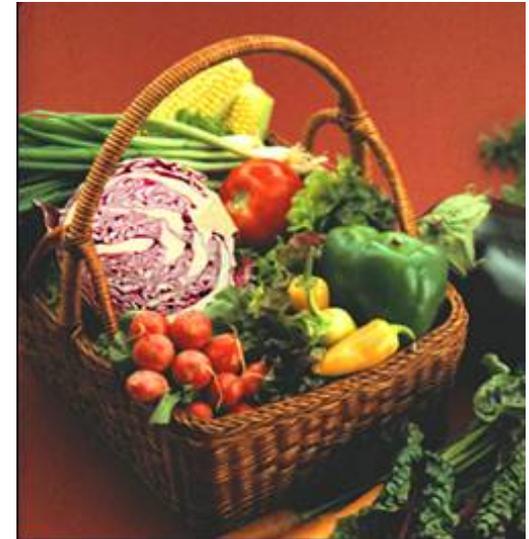
Reference population: These data refer to the civilian noninstitutionalized population.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

# Healthy Eating and Physical Activity Prevent, Decrease Risk of and Manage Chronic Diseases Even in Older Adults

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- ▶ **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**



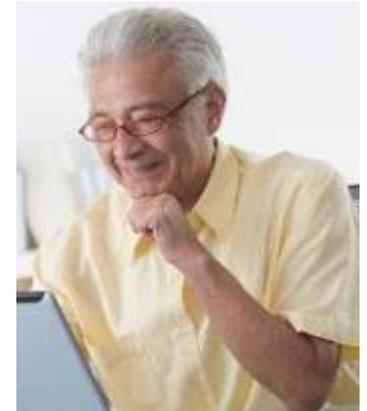
[http://www.never2early.org/images/photo\\_vegi-basket.jpg](http://www.never2early.org/images/photo_vegi-basket.jpg)

# High Fruits and Vegetables, Low Saturated Fat Increases Longevity

## Baltimore Longitudinal Study of Aging

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- ▶ Mean age 60 at start, 501 men, studied 18 yrs
  - 5 or more daily servings fruits and vegetables and < 12% calories from saturated fat
    - 31% decrease in death from any cause
    - 76% decrease in CHD
- ▶ Each daily serving of fruits or vegetables
  - 6% reduction in death from any cause
  - 21% reduction in CHD mortality
- ▶ Each additional gram of saturated fat
  - 7% increase in CHD mortality



# Low Sodium Works Well in Older Adults:

## Dietary Approaches to Stop Hypertension Diet

- ▶ **DASH diet rich in fruits, vegetables, whole grains, and low-fat dairy**



	<b>Decrease in SBP with sodium restriction (mm Hg)</b>	
<b>Age (yrs)</b>	<b>Typical diet</b>	<b>DASH diet</b>
<b>23-41</b>	<b>-4.8</b>	<b>-1.0</b>
<b>42-47</b>	<b>-5.9</b>	<b>-1.8</b>
<b>48-54</b>	<b>-7.5</b>	<b>-4.3</b>
<b>55-76</b>	<b>-8.1</b>	<b>-6.0</b>

# Low Sodium Diet Improves Hypertension

**TONE: Trial of non-pharmacologic interventions in elderly**

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- ▶ 60 to 80 yrs, men, women, 975 people, 3 years
- ▶ SBP < 145 and DBP < 95 with anti-HP meds
- ▶ Obese treatments:
  - Lower sodium, or weight loss, or both; compared to usual care
- ▶ Non-obese treatments:
  - Lower sodium compared to usual care
- ▶ Tried to withdraw meds starting at 3 months



# Healthy Lifestyle Helps Older Adults After Myocardial Infarction

- ▶ 70+ yrs, men, women, Europe
- ▶ 426 people followed 10 yrs after MI
- ▶ Deaths decreased by:
  - 38% in non-smokers
  - 31% in physically active
  - 23% moderate alcohol consumption
  - 25% Mediterranean-type diet
  - 40% with 3 or more healthy behaviors



[http://www.gov.mb.ca/healthyliving/images/nutrition/guide2\\_4.jpg](http://www.gov.mb.ca/healthyliving/images/nutrition/guide2_4.jpg)

Iestra et al., 2006, <http://www.ncbi.nlm.nih.gov/sites/entrez>

# DIABETES: New cases in high risk people after 2.8 years (cases/100 person-yr)

Age, yr	N	Placebo	Metformin (drug)	Lifestyle: 7% wt loss & 150 min exercise/wk
25-44	1,000	11.6	6.7	6.2
45-59	1,586	10.8	7.6	4.7
≥ 60	648	10.8	9.6	<b>3.1 BEST!</b>

# Healthy Diet

*Dietary Guidelines for Americans, 2005*

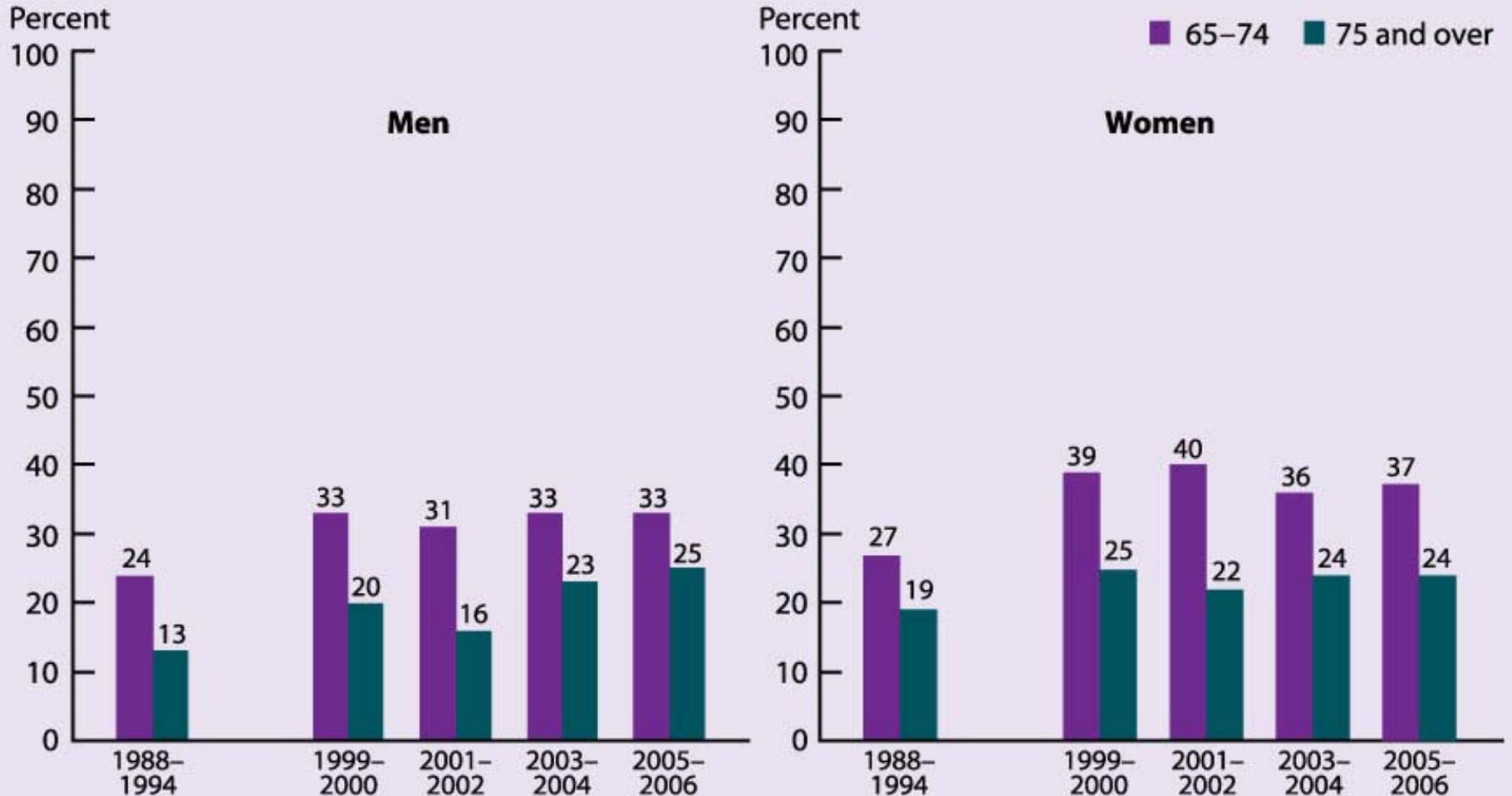


- ▶ **Food Components**
  - **Fruit, vegetables**
  - **Whole grains**
  - **Low fat dairy**
  - **Low fat meat, poultry, fish**
  - **Lower fat, added sugar & salt**
- ▶ **Low income households must spend more time and money to consume palatable, nutritious meals\***

\*<http://www.ers.usda.gov/AmberWaves/November08/Features/AffordHealthyDiet.htm>

# Obesity Rates are Stabilizing

Percentage of people age 65 and over who are obese, by sex and age group, selected years 1988–2006



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.

# Body Mass Index (BMI), Waist Circumference & Associated Disease Risk

## Type 2 Diabetes, Hypertension, CVD

### ▶ Women

- Overweight: 35 in., ↑ risk
- Obesity: > 35 in., high risk

### ▶ Men

- Overweight: 40 in., ↑ risk
- Obesity: > 40 in., high risk

# Waist Circumference & Alzheimer's Disease Risk

- ▶ **Individuals with a parent or sibling with AD: 2 times risk of getting AD**
- ▶ **↑ BMI associated with ↑ risk of AD**
- ▶ **Overweight individuals with ↑ abdominal fat: 2.3 times risk of getting AD**
- ▶ **Obese individuals with ↑ abdominal fat: 3.6 times risk of getting AD**

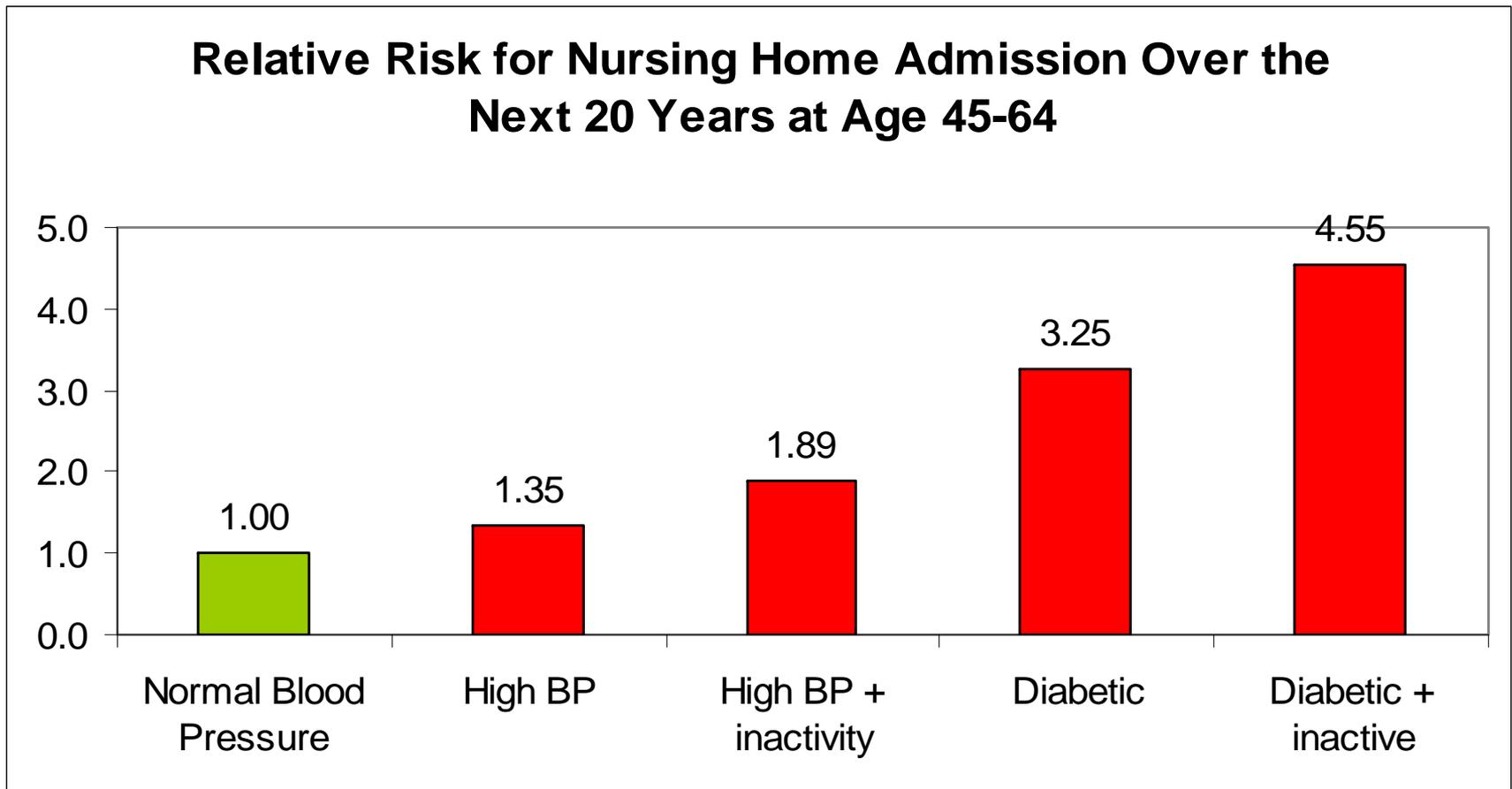
**Whitmer, et al. Central obesity and increased risk of dementia more than three decades later. *Neurology*. 2008 March.**

# Functionality

## Obesity Precedes Functional Decline

- ▶ ↑ Risk of destructive joint disease (knees)
- ▶ ↑ Chronic disease risks
- ▶ ↓ Muscle mass: *sarcopenic obesity*
- ▶ Proxy for sedentary living
- ▶ ↓ Quality of Life as BMI ↑
  - Similar to that of people with arthritis, stroke, ulcers, asthma
- ▶ **No Debate: + value of weight loss in morbid obesity**
- ▶ **Some benefit of weight loss in overweight OAs**
  - Related to degree of overweight, individual situation, diseases, etc.

# Diseases Affected by Diet & Future NH Use



# Food Security



- ▶ **Access** by all members of a household to food sufficient for a healthy life, including at a minimum, the ready **availability** of nutritionally **adequate and safe** foods and the assured ability to acquire acceptable food in **socially acceptable** ways.

Economic Research Service, USDA

# 5+ Million Older Adults Had Some Form Of Food Insecurity 2000-2005

- ▶ **More likely at-risk of hunger relative to representation in overall older population**
  - **those with limited incomes**
  - **under age 70**
  - **African-Americans, Hispanics**
  - **never-married individuals**
  - **renters**
  - **persons living in the South**
- ▶ **11.4% of all seniors experienced some form of food insecurity (were marginally food insecure)**
  - **~2.5 million were at-risk of hunger**
  - **~750,000 suffered from hunger due to financial constraints**

# Food Insecure Older Adults at Risk Of Poorer Health



- ▶ **Food Insecure older adults had:**
  - **Significantly lower intakes: energy, vitamins, minerals**
  - **Significantly more likely in poor or fair health**
  - **Higher rates of chronic conditions:**
    - higher BMI, diabetes, depression
  - **More likely to be socially isolated, hospitalized, have ADL limitations**
- ▶ **Estimated that being food insecure was like being functionally 14 years older.**

# % Household Food Security for Selected Populations, 2008

Household Food Security in the United States, 2008, ERS, USDA

Household	Food Secure%	All- Food Insecure%	Low Food Insecure%	Very Low Food Insecure%
All US	85.4	14.6	8.9	5.7
Household With Children	79.0	21.0	14.4	6.6
With Elderly	91.9	8.1	5.0	3.1
Elderly, live alone	91.2	8.8	5.0	3.8
With Elderly (130% pov)	77.9	22.1	12.3	9.8
With Elderly, live alone (130% pov)	80.0	20.0	9.9	10.1

# Program Data

# US OAA 2009 Participant Survey

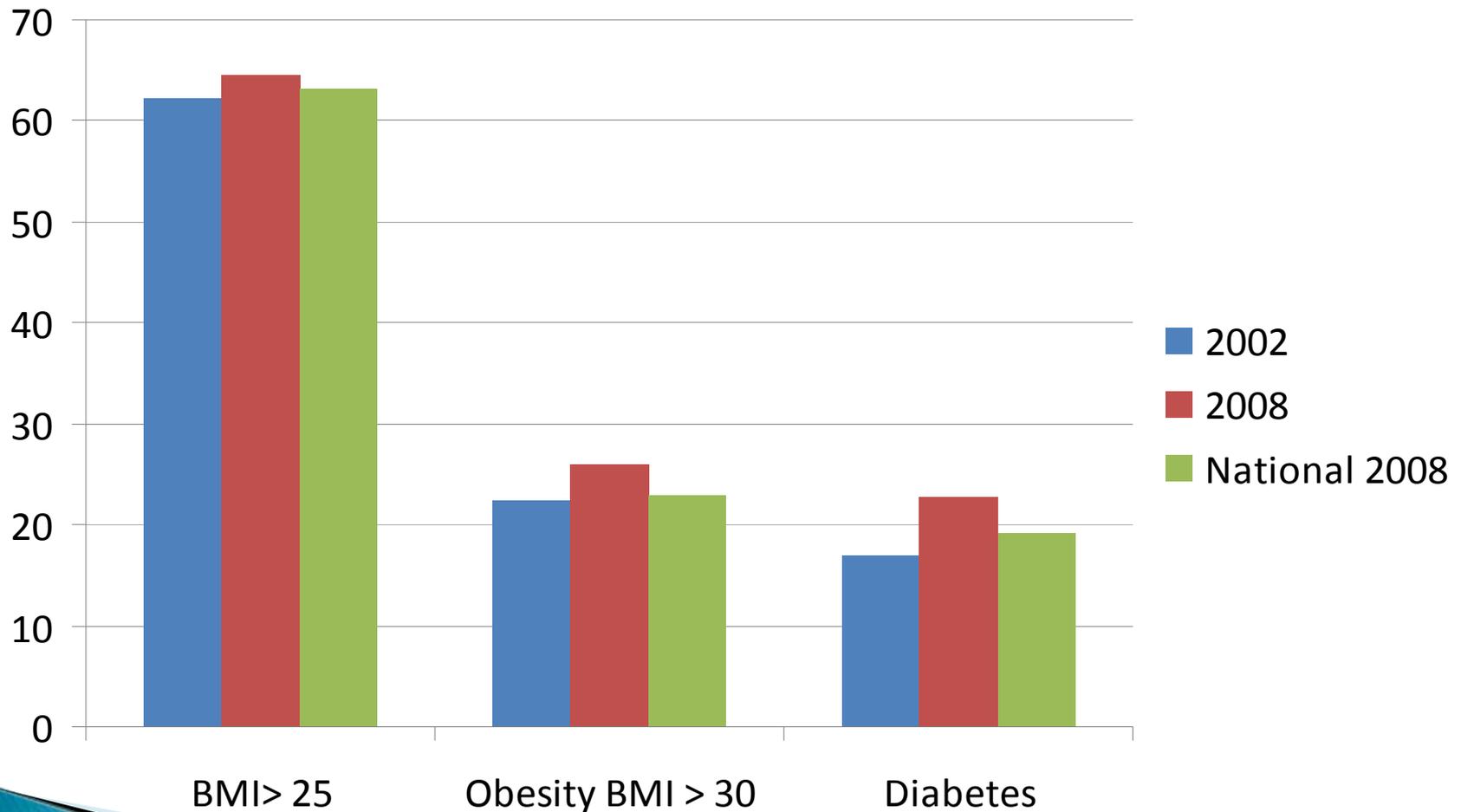
Question	Home Delivered Meals % of Respondents	Congregate Meals % of Respondents
Single Meal Provided $\frac{1}{2}$ or more of total food for day	63	58
Don't always have enough \$ or Food Stamps to buy food	24	13
Choose between food & medication	17	NA
Choose between food & rent or utility	15	NA
Receive food stamps	15	7

2009 AoA Survey of OAA Participants, January 2010

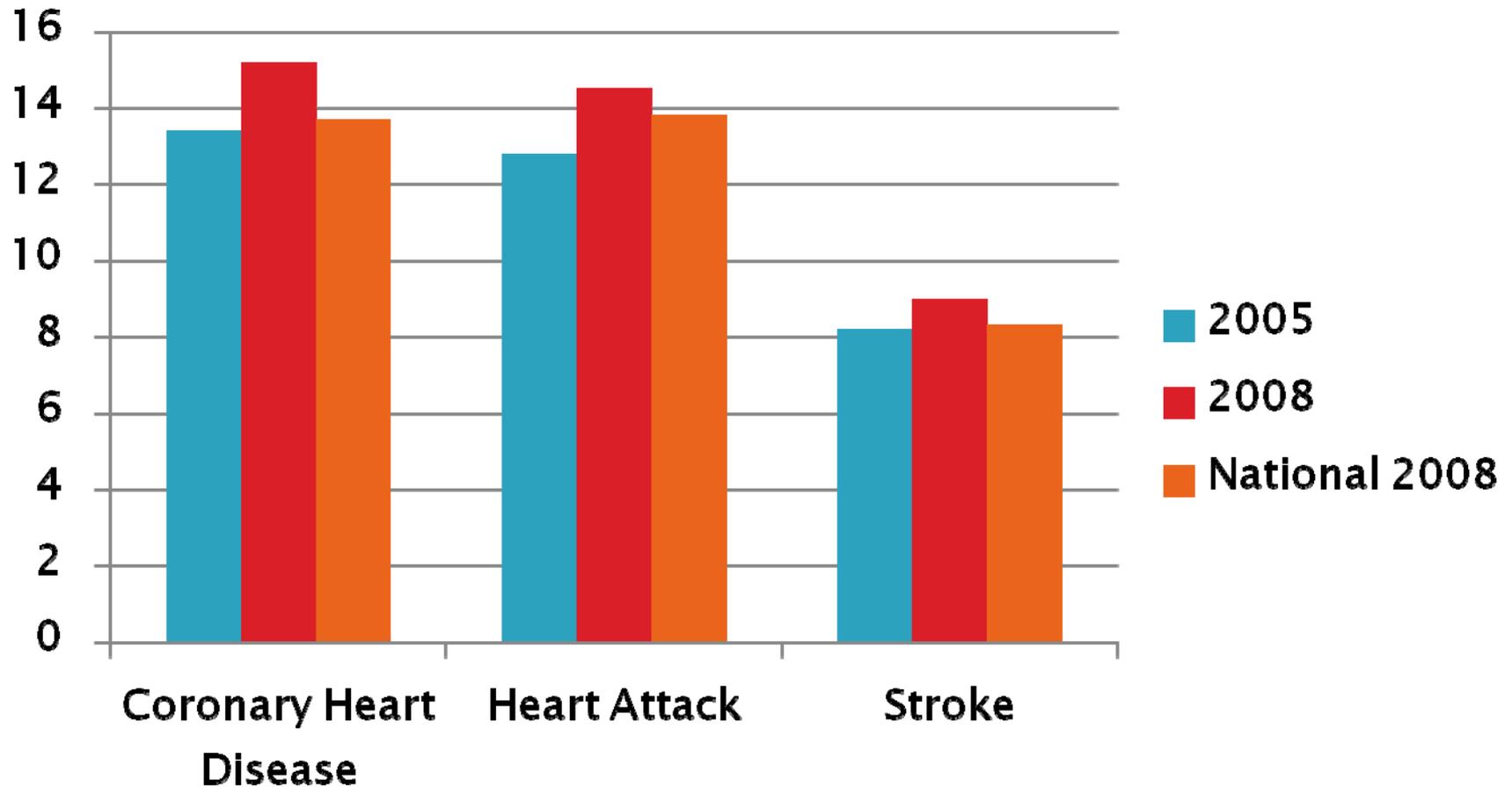
# US OAA 2009 Participant Survey

Question	Home Delivered Meals % of Respondents	Congregate Meals % of Respondents
Fair or Poor Health	56	29
Stayed overnight in hospital in past year	40	20
Stayed overnight in nursing home in past year	12	4
Alzheimer's Disease	12	5
Diabetes	35 (16% nationally)	26 (16% nationally)
Hypertension	73 (48% nationally)	68 (48% nationally)
Heart Disease	48 (32% nationally)	32 (32% nationally)

# Health Profile of Older Texans



# Health Profile of Older Texans



Behavioral Risk Factor Surveillance System  
65+ Age Group

# US OAA 2009 Participant Survey

Question	Home Delivered Meals % of Respondents	Congregate Meals % of Respondents
Meal enabled living at home	93	62
Eat healthier foods as result of the program	86	78
Eating meals improves health	87	80
Meals help feel better	91	87
See friends more often	NA	87
Recommend to a friend	96	97

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Meals help feel better	91	87
See friends more often	NA	87
Recommend to a friend	96	97

# Participant Characteristics Comparison TX & Region VI

TX/Region VI	Congregate	Home Delivered
<b>% in Poverty</b>		
<b>TX</b>	<b>47.7</b>	<b>49.9</b>
<b>Region VI</b>	<b>30.5</b>	<b>45.1</b>
<b>% Minority</b>		
<b>TX</b>	<b>45.6</b>	<b>50.5</b>
<b>Region VI</b>	<b>42.7</b>	<b>43.7</b>

# Participant Characteristics Comparison

## TX & Region VI

TX/Region VI	Congregate %	Home Delivered %
<b>% Rural</b>		
<b>TX</b>	<b>32.7</b>	<b>24.9</b>
<b>Region VI</b>	<b>41.1</b>	<b>33.8</b>
<b>% High Nutritional Risk</b>		
<b>TX</b>	<b>19.4</b>	<b>72.3</b>
<b>Region VI</b>	<b>16.4</b>	<b>63.0</b>

# Participant Characteristics Comparison TX & Region VI

TX/Region VI	Congregate	Home Delivered
<b>% Live Alone</b>		
<b>TX</b>	<b>42.3</b>	<b>37.0</b>
<b>Region VI</b>	<b>37.4</b>	<b>41.1</b>
<b>% 85+</b>		
<b>TX</b>	<b>15.8</b>	<b>25.3</b>
<b>Region VI</b>	<b>14.8</b>	<b>28.1</b>

# Program Data Comparison TX & Region VI

TX/Region VI	Congregate	Home Delivered
<b>% Participants Served</b>		
<b>TX</b>	<b>50.7</b>	<b>49.3</b>
<b>Region VI</b>	<b>58.0</b>	<b>42.0</b>
<b>% Meals Served</b>		
<b>TX</b>	<b>29.0</b>	<b>71.0</b>
<b>Region VI</b>	<b>35.0</b>	<b>65.0</b>

# Participant Characteristics TX & Region VI

TX/Region VI	Congregate	Home Delivered
<b>Meals/Participant /Year</b>		
<b>TX</b>	<b>78.5</b>	<b>197.6</b>
<b>Region VI</b>	<b>69.0</b>	<b>176.0</b>
<b>% Total Expenditures</b>		
<b>TX</b>	<b>41.2</b>	<b>58.8</b>
<b>Region VI</b>	<b>43.2</b>	<b>56.8</b>

# Participant Characteristics

## TX & Region VI

TX/Region VI	Congregate	Home Delivered
<b>Expenditures/ Participant/Year</b>		
<b>TX</b>	<b>\$433.6</b>	<b>\$635.7</b>
<b>Region VI</b>	<b>\$395.4</b>	<b>\$717.9</b>
<b>Expenditures/ Meal</b>		
<b>TX</b>	<b>\$5.52</b>	<b>\$3.22</b>
<b>Region VI</b>	<b>\$5.73</b>	<b>\$4.08</b>

# **Older Americans Act**

# Older Americans Act

## Program Authority Section 305

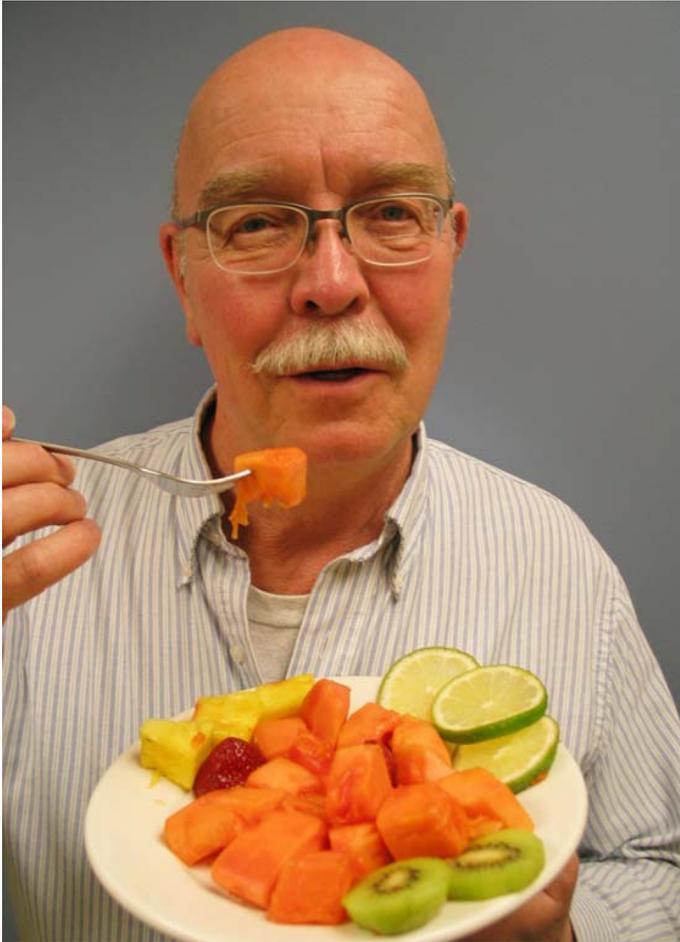
- ▶ **“the State shall, ..., designate a State agency as the sole State agency to—**
    - **(C) be primarily responsible for the planning, policy development, administration, coordination, priority setting, and evaluation of all State activities related to the objectives of this Act”...**
- 

# Older Americans Act

## Program Authority Section 339

- ▶ **“A State that establishes and operates a nutrition project under this chapter shall—**
  - **(1) Solicit the expertise of a dietitian or other individual with equivalent education and training in nutrition science, or if such an individual is not available, an individual with comparable expertise in the planning of nutritional services**
  - **(2) ensure that the project—**
    - **(A) provides meals that—**
    - **(G) ensures that meal providers solicit the advice and expertise of (i) a dietitian or other individual describe in paragraph (1)...**

# OAA NUTRITION PROGRAM PURPOSE: Section 330

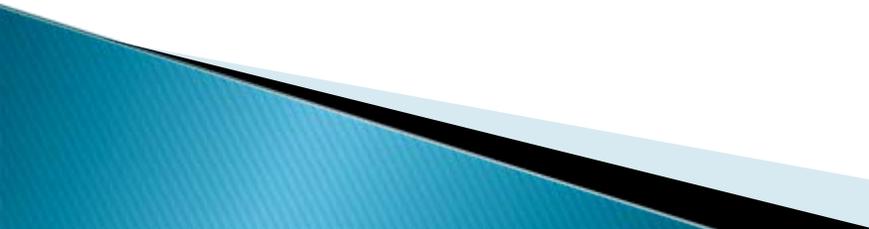


- ▶ **The purposes of this part are to**
  - **Reduce** hunger and food insecurity
  - **Promote** socialization of older individuals
  - **Promote** the health and well-being of older individuals

# Older Americans Act

## Section 339 Requirements

### Meals

- ▶ **1/3 Dietary Reference Intakes; Dietary Guidelines for Americans, 2005; state & local foodservice law**
  - ▶ **Design meals to meet special dietary needs (cultural/ethnic preferences, health, religious needs)**
  - ▶ **Design “appealing” meals, i.e. food/menu choice, include participant input, flexibility**
- 

# Dietary Reference Intakes (DRIs)

## Section 339(2)(A)(i)



By defining recommended intake levels for nutrients, the DRI system helps consumers, health care providers, and food and drug regulators make informed choices about their diets.

INSTITUTE OF MEDICINE  
OF THE NATIONAL ACADEMIES OF SCIENCES

- ▶ Published by the Food & Nutrition Board of the Institute of Medicine of the National Academy of Sciences
- ▶ Purpose:
  - Maintain nutritional adequacy
  - Promote health
  - Reduce risk of chronic disease
  - Provide a measure of excess

# What values make up the DRIs?

- ▶ **Estimated Average Requirement** **EAR**
  - ▶ **Recommended Dietary Allowances** **RDA**
  - ▶ **Adequate Intake** **AI**
  - ▶ **Tolerable Upper Intake Level** **UL**
  - ▶ **Acceptable Macronutrient Distribution Ranges** **AMDR**
- 

# How do DRIs differ from 1989 RDAs?

- ▶ **Consider amounts needed to decrease risk of chronic diseases in addition preventing deficiency**
  - **Osteoporosis, heart disease, some cancers**
    - **when such data exist for a nutrient**
- ▶ **Rationale:**
  - **Scientific evidence of nutrient roles in promoting health & preventing diet-related diseases increased since 1989**

# How do DRIs differ from 1989 RDAs?

- ▶ **Upper Levels were established for the first time**
- ▶ **Rationale**
  - **Concerns of nutrient excess due to increased use of fortified foods & dietary supplements**

# How do DRIs differ from 1989 RDAs?

- ▶ **Separation of over 50 age group**
  - **51 - 70 y**
  - **> 70 y**
- ▶ **Rationale:**
  - **Increased data on nutrient requirements of older adults**

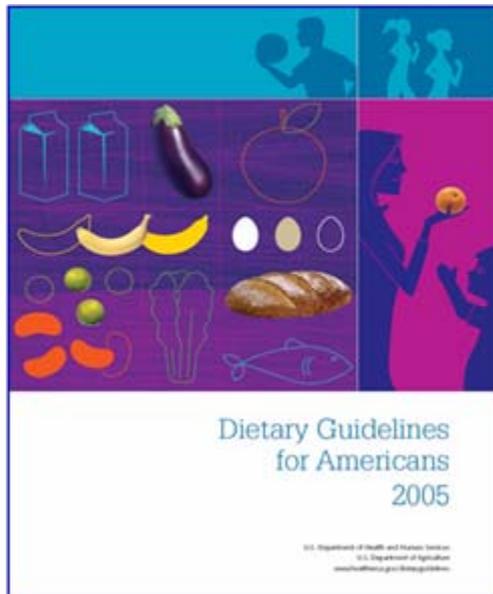
# 1989 RDA vs New RDA/AI

	1989 RDA	New RDA/AI
Vitamin A (mcg)	333	300
Vitamin C (mg)	20	<u>30</u>
Vitamin B <sub>6</sub> (mg)	0.67	0.57
Vitamin B <sub>12</sub> (mcg)	0.67	<u>0.8</u>
Calcium (mg)	267	<u>400</u>
Magnesium (mg)	117	<u>140</u>
Potassium (mg)*	667	<u>1500</u>
Zinc (mg)	5	3.7

\*1989 - Est Min Requirement = Adults 2,000 mg; Desirable intake = 3,500 mg.

# Dietary Guidelines for Americans (DGAs)

## Section 339(2)(A)(ii)



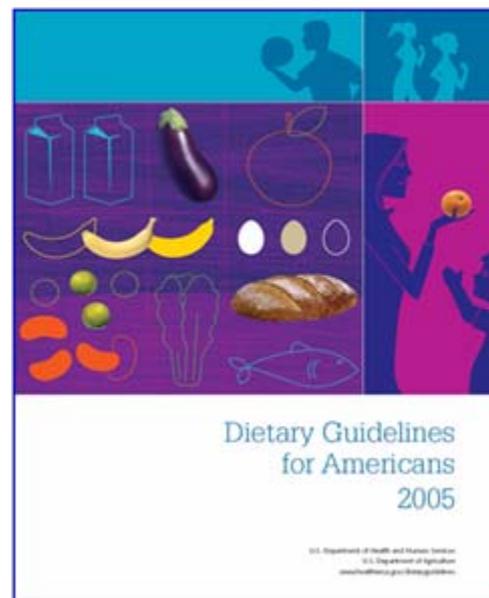
- ▶ Brief science based statements on food, nutrients, physical activity & food safety for healthy people, age 2+
- ▶ Published every 5 years by the Secretaries of Health & Human Services & Agriculture
- ▶ Will be updated 2010
- ▶ Primary source of health & nutrition information for health care professionals & educators

<http://www.health.gov/dietaryguidelines/>

<http://www.cnpp.usda.gov/DietaryGuidelines.htm>

# Dietary Guidelines for Americans 2005

- ▶ 41 Key Recommendations
- ▶ 9 Focus Areas
  - Adequate nutrients within calorie needs
  - Weight management
  - Physical activity
  - Food groups to encourage
  - Fats
  - Carbohydrate
  - Sodium & potassium
  - Alcoholic beverages
  - Food safety



# Materials for Implementation

<http://www.health.gov/dietaryguidelines/dga2005/toolkit/default.htm>

- Targeted Consumer Brochure
- Nutrition Service Providers Guide
  - Menu Planning, Food Prep and Service
- Dietary Reference Intake information
- Health Fact Sheets for Older Adults



Getting older.  
Living healthier.  
Feeling better.

Start today with the Dietary Guidelines for Americans

U.S. Department of Health and Human Services  
[www.health.gov/dietaryguidelines](http://www.health.gov/dietaryguidelines)



Dietary Guidelines for  
Americans, 2005  
Nutrition Service Providers Guide

www.health.gov/dietaryguidelines  
<http://www.health.gov/dietaryguidelines>

April 6, 2006

Department of Health and Human Services  
Administration on Aging

# DGA Nutrient Recommendations for Older Adults

- ▶ **Nutrients to target:**
  - **Necessary for health:**
    - Adequate calories, protein, carbohydrate, fat
  - **Indicator of quality diet:**
    - Example: protein from meat sources, indicator for iron, zinc
  - **Nutrients that are low in diets, increase:**
    - Calcium, potassium, fiber, magnesium, vitamins A, B-12, C, D, E
  - **Nutrients that are high in diets, decrease:**
    - Calories, saturated fat, *trans* fat, cholesterol, sodium, added sugars

# 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)**

# Recommendations for Older Adults

- ▶ **Sodium – Limit to 1,500 mg/day**
- ▶ **Potassium – Meet 4,700 mg/day with food**



# Sodium Issues

Mintel Research, August, 2009



- ▶ **Mintel – international consumer research company, targeted to food industry**
  - **Consumers-52% monitoring the amount of sodium in their diets**
  - **Increased 115% from 2005 to 2008**
  - **Might be the new “trans” fat for the food industry**

# 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/>

# Sodium Issues

Institute of Medicine, 2010



- ▶ **Institute of Medicine**
  - **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**

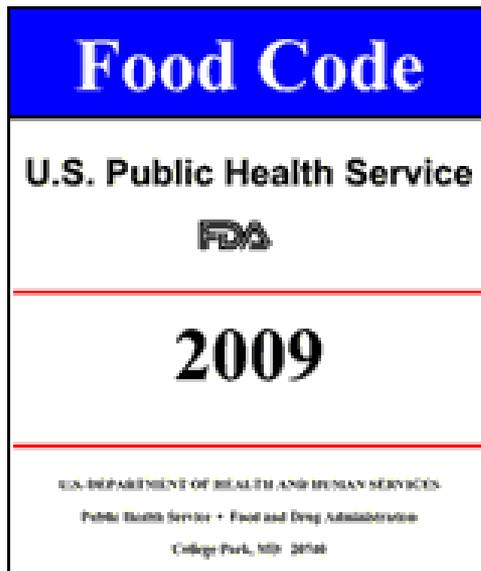
# Recommendations for Older Adults

- ▶ **Fiber**
  - 21- 30 gm
- ▶ **Calcium**
  - 1200 mg
- ▶ **Vitamin C**
  - 70-90 mg
- ▶ **Vitamin A**
  - 700-900 mcg



# State/Local Food Code

## Section 339(2)(F)



- ▶ **State/local Food Code based on Model Food Code from FDA**
- ▶ **Updated about every 4 years**
- ▶ **2009 code designates populations that we serve as “highly susceptible populations” similar to populations in nursing homes and hospitals**

<http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/default.htm>

# Menu

- ▶ Plan in accordance with DRIs and DGAs
  - ▶ Assure compliance with either of 2 methods
    - Computer assisted menu analysis
    - Menu pattern with target nutrients
  - ▶ Offer ethnic, cultural or regionally preferred foods, choice
  - ▶ Use cycle menus
  - ▶ Include new dishes weekly
  - ▶ Use seasonal, traditional foods
- 

# Consider Meal Service Flexibility

- ▶ **Incorporate** provide vs served
  - ▶ **Utilize** consumer feedback mechanisms (satisfaction/value surveys, comment/complaint boxes)
  - ▶ **Test** food items before service
  - ▶ **Utilize** computer assisted menu analysis to manipulate foods, nutrients, costs, forecasting
- 

# Consider Meal Service Flexibility

- ▶ **Offer menu choices:**
  - Hot meal/cold plates
  - Soup & salad
  - Soup & sandwich
  - Therapeutic menus
  - Ethnic/cultural preferences
  - Meals to meet religious dietary needs
- ▶ **Offer food item choice:**
  - Entrée, vegetables, desserts
- ▶ **Use menu/recipe banks**
- ▶ **Use voluntary chefs and/or hire chefs to plan better menus/better recipes**

# Consider Service Flexibility

- ▶ **Offer** meals at different locations, i.e. restaurant voucher programs, intergenerational locations, picnics, events
- ▶ **Offer** meals at different times, i.e. breakfast, dinner
- ▶ **Offer** meal packages, more than one meal per day
- ▶ **Offer** meals on weekends, holidays, emergencies
- ▶ **Offer** fee for service or private pay options
- ▶ **Offer** meals to other populations, i.e. adult disabled, individuals with chronic diseases/conditions, private pay or Medicaid Waiver
- ▶ **Educate** case managers, service brokers, clients, caregivers

# Accommodating Consumer Choice

- ▶ **Choice** categorized by
  - 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 of Menu Planning

## Aesthetic appeal:

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



# 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

# 2009 Functional Foods/Foods for Health Consumer Trending Survey

International Food Information Council



- ▶ **Top health concerns**
  - **48% Cardiovascular disease (heart disease, high blood pressure, cholesterol, stroke)**
  - **31% Weight**
  - **24% Cancer**
  - **17% Diabetes**
  - **16% Nutrition/diet**
  - **14% Exercise**

# 2009 Functional Foods/Foods for Health Consumer Trending Survey

International Food Information Council

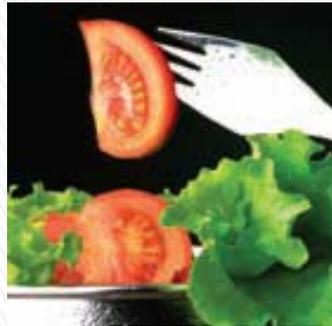


- ▶ **Majority of Americans believe**
  - **Food & nutrition play a role in health & wellness**
  - **Certain foods have benefits beyond basic nutrition**
  - **These benefits include:**
    - **Heart, bone, eye, circulatory, digestive health**
    - **Contribute to healthy body weight**

<http://www.foodinsight.org/>

# 2009 Functional Foods/Foods for Health Consumer Trending Survey

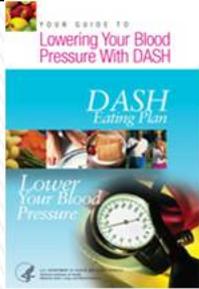
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## ▶ Top Functional Foods

- Fruits & vegetables
- Fish/seafood
- Dairy (milk & yogurt)
- Meat & poultry
- Herbs & spices
- Fiber
- Tea & green tea
- Nuts
- Whole grains
- Water
- Cereal
- Oats/oat bran
- Vitamins/supplements

<http://www.foodinsight.org/>



# DASH Eating Plan

<b>Food Group</b>	<b>550 Calories</b>	<b>700 Calories</b>
<b>Grains</b>	<b>2 servings</b>	<b>2-3 servings</b>
<b>Vegetables</b>	<b>1-1 1/3 servings</b>	<b>1-2 servings</b>
<b>Fruits</b>	<b>1- 1 1/3 servings</b>	<b>1 1/3 – 1 3/4 serv</b>
<b>Low-fat dairy</b>	<b>2/3 – 1 serving</b>	<b>2/3 – 1 serving</b>
<b>Meat, poultry, fish</b>	<b>1/3 – 2/3 serving</b>	<b>2/3 serving</b>
<b>Seeds, nuts, legumes</b>	<b>1 – 1 1/3 servings</b>	<b>1 1/2 2 servings</b>
<b>Fats &amp; oils</b>	<b>2/3 serving/week</b>	<b>2/3 –servings/wk</b>
<b>Sweets</b>	<b>0</b>	<b>1 2/3 servings/wk</b>



# USDA Food Guide

<b>Food Group</b>	<b>550 Calories</b>	<b>700 Calories</b>
<b>Fruits</b>	<b>½ cup (1 serv)</b>	<b>2/3 cup (1.3 serv)</b>
<b>Vegetables</b>	<b>2/3 cup (1.3 serv)</b>	<b>¾ cup (1.5 serv)</b>
<b>Grains</b>	<b>1.7 oz equiv.</b>	<b>2 oz equivalent</b>
<b>Lean meat &amp; beans</b>	<b>1.7 oz equivalent</b>	<b>1.8 oz equivalent</b>
<b>Milk</b>	<b>1 cup</b>	<b>1 cup</b>
<b>Oils</b>	<b>7 grams</b>	<b>9 grams</b>
<b>Discretionary calories</b>	<b>44 calories</b>	<b>89 calories</b>

# Principles of Menu Planning

- ▶ **Consider special needs of participants**
  - **Special Dietary Needs**
  - **Culturally/ethnically appropriate**
  - **Religious preferences**
  - **Therapeutic or modified meals**
  - **Modification of texture**



# Customer Input

- ▶ **Menu committees**
- ▶ **Product sampling**
- ▶ **Food preference surveys**
- ▶ **Satisfaction Focus Groups**
- ▶ **“Secret” diner**
- ▶ **Comment Cards**



# US OAA 2009 Participant Survey

<b>Demographic</b>	<b>Home Delivered Meals % of Respondents</b>	<b>Congregate Meals % of Respondents</b>
<b>Overall Program Rating Good – Excellent</b>	<b>89</b>	<b>93</b>
<b>Meal Rating Good – Excellent</b>	<b>88</b>	<b>93</b>
<b>Satisfied with Taste Usually – Always</b>	<b>71</b>	<b>82</b>
<b>Satisfied with Food Variety Usually – Always</b>	<b>77</b>	<b>81</b>
<b>Recommend to Friend</b>	<b>96</b>	<b>97</b>

2009 AoA Survey of OAA Participants,  
January 2010

# Food Service Factors to Consider



## ▶ Production

- Self preparation
  - Small kitchen
  - Central kitchen, satellite out
- Cook/chill, frozen, shelf stable
- Caterer/vendor/food service management company
- Restaurant
- Restaurant voucher programs

# Food Service Factors to Consider

- ▶ **Food purchasing**
  - Sodium concerns
  - Convenience, prepared foods vs from scratch
- ▶ **Size of operation**
- ▶ **Number of meals/day**
- ▶ **Congregate or home delivered or both**
- ▶ **Type & frequency of meal service**
  - 5 day/ 7 day
  - 1 meal/day, 2 meals/day, 3 meals/day
- ▶ **Type of delivery system**
  - Hot
  - Cold
  - Frozen
  - Shelf-stable

# Food Service Factors to Consider

## Food Choice Options

- ▶ **Selective or non-selective**
  - **Food Choice Example:**  
Choice of entrees or side dishes
  - **Menu Choice Example:**  
Soup & Example: Soup and Salad Bar or hot meal
  - **Different sites in same city/county offer different menus**
- ▶ **Breakfast, lunch, dinner**
- ▶ **Offer versus provided or served**



# Food Service Factors to Consider

- ▶ **Labor considerations**
    - Number of employees
    - Skill of Staff
    - Chef, registered dietitian
  - ▶ **Facility size and layout/design**
  - ▶ **Equipment**
    - Production
    - Delivery
  - ▶ **Packaging/Meal service delivery**
- 

# Food Service Factors to Consider

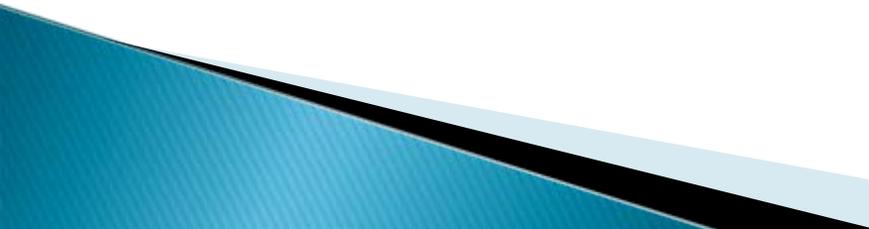
- ▶ **Food safety & sanitation**
  - Retains temperature
  - Retains quality, despite holding times
  - Selection of safe foods
  - Ease of safe food handling
  - Compliance with state and local food code



# 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**

# Summary Menu Planning

- ▶ **Plan in accordance with DRIs & DGAs**
  - ▶ **Assure compliance with either of 2 methods**
    - **Computer assisted menu analysis**
    - **Menu pattern or component system with target nutrients**
  - ▶ **Offer ethnic, cultural or regionally preferred foods**
  - ▶ **Offer meals to meet special dietary, health, or religious needs**
- 

# Summary Menu Planning

- ▶ **Use cycle menus**
  - ▶ **Include new dishes weekly**
  - ▶ **Use seasonal, traditional foods**
  - ▶ **Purchase foods carefully**
  - ▶ **Avoid repetition during a week**
  - ▶ **Consider temperature: salads when its hot & soups or casseroles when its cold**
  - ▶ **State & local health food code**
  - ▶ **Hire a chef, other foodservice professionals**
  - ▶ **Use registered & licensed dietitian, RD**
- 

# Santa Clara County California Senior Nutrition Program

- ▶ **Partnership: Social Services Agency & Council on Aging of Santa Clara County, government entity**
- ▶ **Emphasis on customer service**
- ▶ **35 congregate nutrition sites that cook on site, use a caterer & restaurants; home delivered are all frozen, delivered 1 time/week, 14 meals**
- ▶ **Offers ethnic meals, different populations: continental American, Chinese, Mexican, Indian, Portuguese, Japanese, and Korean**
- ▶ **Some sites may offer ethnic meals on some days and alternate with continental American**
- ▶ **Costs vary: American catered - \$4.02/meal; Mexican/Chinese \$4.58/meal; on site production - \$2.24**

# Santa Clara County California Senior Nutrition Program

## ▶ **Menu Challenges/Solutions**

- **Nutrient issue – higher sodium, especially for Asian (Chinese, Korean, some Portuguese) meals**
- **Meals average 770 mg/sodium/meal; 1 time/week meal may have 1,000 mg/sodium or more; these are marked with a salt shaker icon**
- **In preparation, it is recommended to dilute the high sodium sauce**
- **Meals also contain many vegetables which are a source of potassium to balance the sodium**

# Santa Clara County California

## Senior Nutrition Program

### Chinese Menu

Day	Monday 	Tuesday
Date	6/1, 7/6, 8/10, 9/14	6/2, 7/7, 8/11, 9/15
Meat/Alternate 2 oz min. or 14g protein	Fish, chicken & tofu 2 oz fish & chicken 豆腐魚片雞	Soybean Spareribs (2.5oz pork) ¼ c soybeans毛豆排骨
Bread/Grain 1-2 servings; 60% whole grain for week	Mixed <i>brown</i> & <b>white rice</b>	<i>Brown rice</i>
Vegetables 1-2 servings; 1/2c cooked/1 c raw	Bean sprout & onions (1 cup)	<u>Mustard greens</u> , 3/4 cup ¼ c soybeans
Fruit, 1 serving ½ c/serving	<u>Orange</u>	Fruit
Milk, 8 oz serving, non or low fat or buttermilk	Daily	Daily
Dessert, 2 x/week	X	X

# Santa Clara County California

## Senior Nutrition Program

### Mexican Menu

Day	Monday	Tuesday 
Date	5/25 (H) 6/29, 8/39/7 (H), 10/12(H)	5/26, 6/30, 8/4,9/8,10/13
<b>Meat/Alternate</b> 2 oz min. or 14g protein	Chicken posole 2.5 oz chicken Garnish: cabbage & onions	Beef enchilada (1.5 oz beef, 1 oz cheese)
<b>Bread/Grain</b> 1-2 servings; 60% whole grain for week	Crisp corn tortilla	Spanish rice
<b>Vegetables</b> 1-2 servings; 1/2c cooked/1 c raw	Hominy in entrée (1/4 c) Tomatoes, celery, cucumber ½ c Dressing on the side	Refried beans (1/2 c) Shredded lettuce, tomatoes, purple cabbage, carrots, 1 c
<b>Fruit</b> , 1 serving ½ c/serving	<u>Orange</u>	Fortified juice, ½ c
<b>Milk</b> , 8 oz serving, non or low fat or buttermilk	Daily	Daily
<b>Dessert</b> , 2 x/week	X	Ice cream

# Santa Clara County California Senior Nutrition Program Indian (Vegetarian) Menu

Day	Thursday	Friday
Date	8/27	8/28
<b>Meat/Alternate</b> 2 oz min. or 14g protein	Punjabi Kadhi (Garbanzo dumplings in yogurt) 1.5 c or 12 oz Offer 8 oz or 12 oz	Sprouted green moong dal 1.5 c or 12 oz Offer 8 oz or 12 oz
<b>Bread/Grain</b> 1-2 servings; 60% whole grain for week	Rice Pulav/Khichadi, rice w/ veg 1/2c Whole wheat rotis, 1 large	Vegetable rice pulav ½ c Whole wheat rotis, 1 large
<b>Vegetables</b> 1-2 servings; 1/2c cooked/1 c raw	Mixed veg masala with carrots ½ c	Seasonal vegetables with carrots
<b>Fruit,</b> 1 serving ½ c/serving 1 vitamin C source	Fresh or frozen, ½ c <u>½ orange juice</u>	Fresh or frozen, ½ c <u>½ orange juice</u>
<b>Milk,</b> 8 oz serving, non or low fat or buttermilk	Daily	Daily

# Summary



# Summary

- ▶ Adequate food, nutrition and food security is necessary for health and functionality.
- ▶ The Older Americans Act Nutrition Program is an essential component of a home and community based long term care system.
- ▶ The Older Americans Act provides the State Unit on Aging with the authority to provide the rules/guidance/technical assistance to implement the Nutrition Program.
- ▶ The Older Americans Act Nutrition Program serves older adults at risk for poor nutrition and health, and decreased independence.



# Summary

- ▶ The Older Americans Act includes science based standards to help ensure that older adults receive nutritious, safe, appealing food.
- ▶ The standards, the Dietary Reference Intakes and Dietary Guidelines for Americans, provide the science or evidence basis for the Older Americans Act Nutrition Program.
- ▶ These standards can be implemented through menu planning that can meet the needs of both healthy and less healthy older adults.
- ▶ Meals that meet the standards can be both appealing and nutritious.

# Resources

# Resources

- ▶ Administration on Aging <http://www.aoa.gov/>
- ▶ AGing Integrated Database <http://www.agidnet.org/>
- ▶ Dietary Reference Intakes  
[http://fnic.nal.usda.gov/nal\\_display/index.php?info\\_center=4&tax\\_level=2&tax\\_subject=256&topic\\_id=1342](http://fnic.nal.usda.gov/nal_display/index.php?info_center=4&tax_level=2&tax_subject=256&topic_id=1342)

# 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](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**

# Resources

- ▶ **Santa Clara County Nutrition Program,  
CA: [Celine.Chan@ssa.co.santa-clara.ca.us](mailto:Celine.Chan@ssa.co.santa-clara.ca.us)**
- ▶ **Mintel Market Research**

<http://www.marketresearch.com/vendors/viewVendor.asp?VendorID=614>

# Thank You

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