Public Health and Nutrition in Older Adults

Patricia P. Barry, MD, MPH
Merck Institute of Aging & Health
and
George Washington University

Public Health and Nutrition in Older Adults

- Overview of nutrition in older adults
- The importance of diet and exercise: the SENECA Study
- The increasing problem of obesity
- Aging and nutrition in Latin America
- Nutritional assessment
- Food-based dietary guidelines

Nutrition in Older Adults

WHO/Tufts, *Keep Fit for Life*, 2002

- Limited information is available
- Most studies have been conducted in industrialized countries
- Most studies in developing countries have been in institutional settings
- Simple, easy assessment tools are lacking

Nutrition in Older Adults

WHO/Tufts, *Keep Fit for Life*, 2002

- Countries undergoing nutrition transition must address both nutritional deficiencies and over-nutrition
- Malnutrition in low-income countries is related to transitory and chronic food insecurity
  - Erratic weather, natural disasters
  - High food prices, low incomes
  - Changing eating habits and agricultural practices

Nutrition in Older Adults

WHO/Tufts, *Keep Fit for Life*, 2002

- Food insecurity
  - Poor distribution and marketing systems
  - Low purchasing power
  - Lack of support for indigenous crops
  - Poor food production and processing
  - Lack of means to deal with emergency food situations
  - Protracted drought

SENECA Study

Haveman-Nies, et al, *Age & Ageing*, 2003

- 10-year community cohort study
  - 1091 men and 1109 women ages 70-75
  - 9 European countries
- Risk factors
  - Diet
  - Physical activity
  - Smoking
- Outcomes
  - Vital status (mortality)
  - Functional status
  - Self-rated health

SENECA Study

Haveman-Nies, et al, *Age & Ageing*, 2003

- Mortality
  - Low-quality diet, HR (95% CI)
    - Men 1.2 (0.9-1.7) Women 1.3 (0.9-1.8)
  - Low physical activity, HR (95% CI)
    - Men 1.4 (1.1–1.7) Women 1.8 (1.3-2.4)
  - Smoking, HR (95% CI)
    - Men 2.1 (1.6-2.6), Women 1.8 (1.1-2.7)

SENECA Study

Haveman-Nies, et al, *Age & Ageing*, 2003

- Self-rated health
  - Low-quality diet, OR (90% CI)
    - Men 1.1 (0.5-2.3) Women 1.4 (0.7-2.8)
  - Low physical activity, OR (90% CI)
    - Men 2.8 (1.3–6.2) Women 0.8 (0.3-1.7)
- Functional status
  - Low-quality diet, OR (90% CI)
    - Men 1.0 (0.5-2.2) Women 1.4 (0.7-2.8)
  - Low physical activity, OR (90% CI)
    - Men 1.9 (0.9–3.9) Women 2.6 (1.4-4.9)

SENECA Study: Conclusions

Haveman-Nies, et al, *Age & Ageing*, 2003

- A healthy lifestyle at older ages is positively associated with reduced mortality and delayed deterioration in health status
- A non-smoking, physically active, high-quality diet lifestyle contributes to healthy aging

Nutrition in Older Adults

WHO/Tufts, *Keep Fit for Life*, 2002

- Under-nutrition
  - Usually due to lack of food or limited range of foods
  - Inadequate amounts of specific nutrients such as proteins (protein-energy malnutrition) in rural populations
  - Decreased access to prepared food
  - Lack of interest or difficulty eating
  - Malabsorption
  - Traditional habits or beliefs

MaInutrition in Older Adults

(Active Ageing: a policy framework. WHO, 2002)

- Under- or over-nutrition results from
  - Limited access to food
  - Socioeconomic hardships
  - Lack of knowledge and information
  - Poor food choices
  - Disease and medications
  - Tooth loss
  - Social isolation
  - Cognitive or physical disabilities

Over-Nutrition in Older Adults

(Active Ageing: a policy framework. WHO, 2002)

- Energy expenditure declines with age, so less needs to be consumed
- High nutritional quality foods are needed - no “empty calories”
- Excess energy intake
  - Sedentary lifestyles
  - Diets high in (saturated) fat, salt
  - Diets low in fruits, vegetables, fiber and vitamins

Over-Nutrition in Older Adults

(Active Ageing: a policy framework. WHO, 2002)

- Major risk factor for
  - Obesity
  - Chronic diseases
    - Cardiovascular disease
    - Diabetes
    - Hypertension
    - Arthritis
    - Some cancers
    - Osteoporosis

Obesity and Overweight

WHO, 2003

- Body Mass Index (kg/m^2)
  - Overweight – BMI >25
  - Obese – BMI >30
  - Underweight – BMI <18.5
- Global epidemic
  - 1 billion overweight
  - Includes 300 million obese
  - Major contributor to burden of chronic disease and disability

Obesity and Overweight
WHO, 2003

- Increased consumption of foods:
  - Energy-dense
  - Nutrient-poor
  - High in sugars and fats
- Deceased physical activity
- Co-exists with under-nutrition in developing countries

Obesity and Overweight
WHO, 2003

- Adult mean BMI
  - 22-23 in Africa and Asia
  - 25-27 in North America, Europe, and some Latin American countries
  - BMI distribution shifting upwards
  - BMI often increases among middle-aged older people at greatest risk of complications

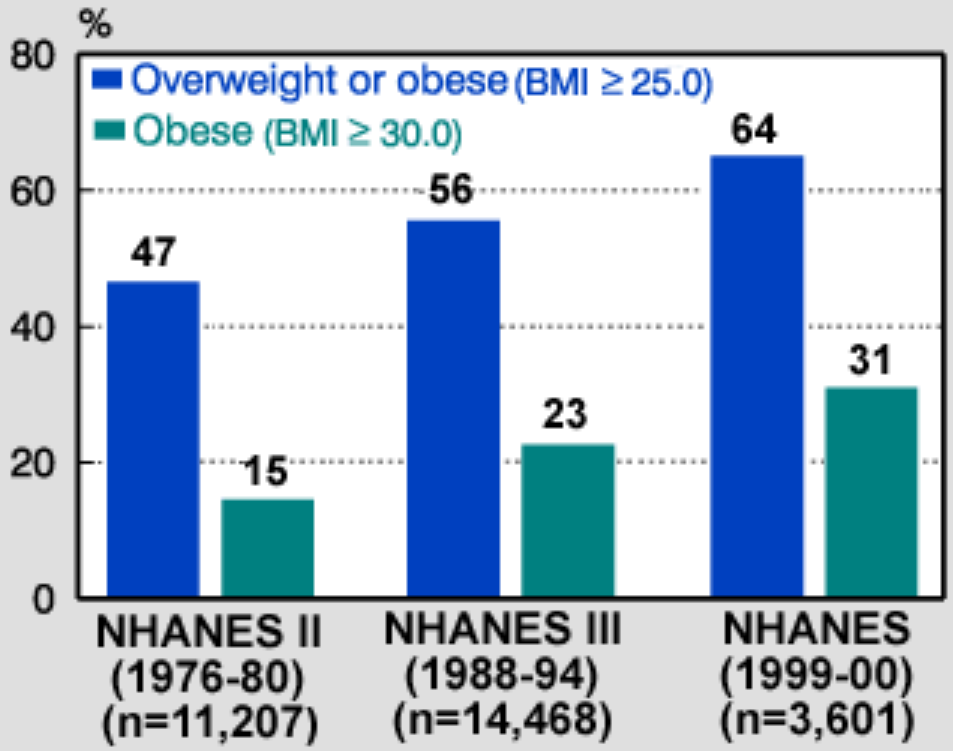
Childhood Overweight

WHO, 2003

- 17.6 million overweight worldwide
- Overweight in US since 1980s
  - Children 2X
  - Adolescents 3X
- Obesity in US from 1960s to 1990s
  - Children (ages 6-11) 2X
  - Adolescent girls from 5% to 9%
  - Adolescent boys from 5% to 13%

NHANES: Prevalence of Overweight and Obesity in US

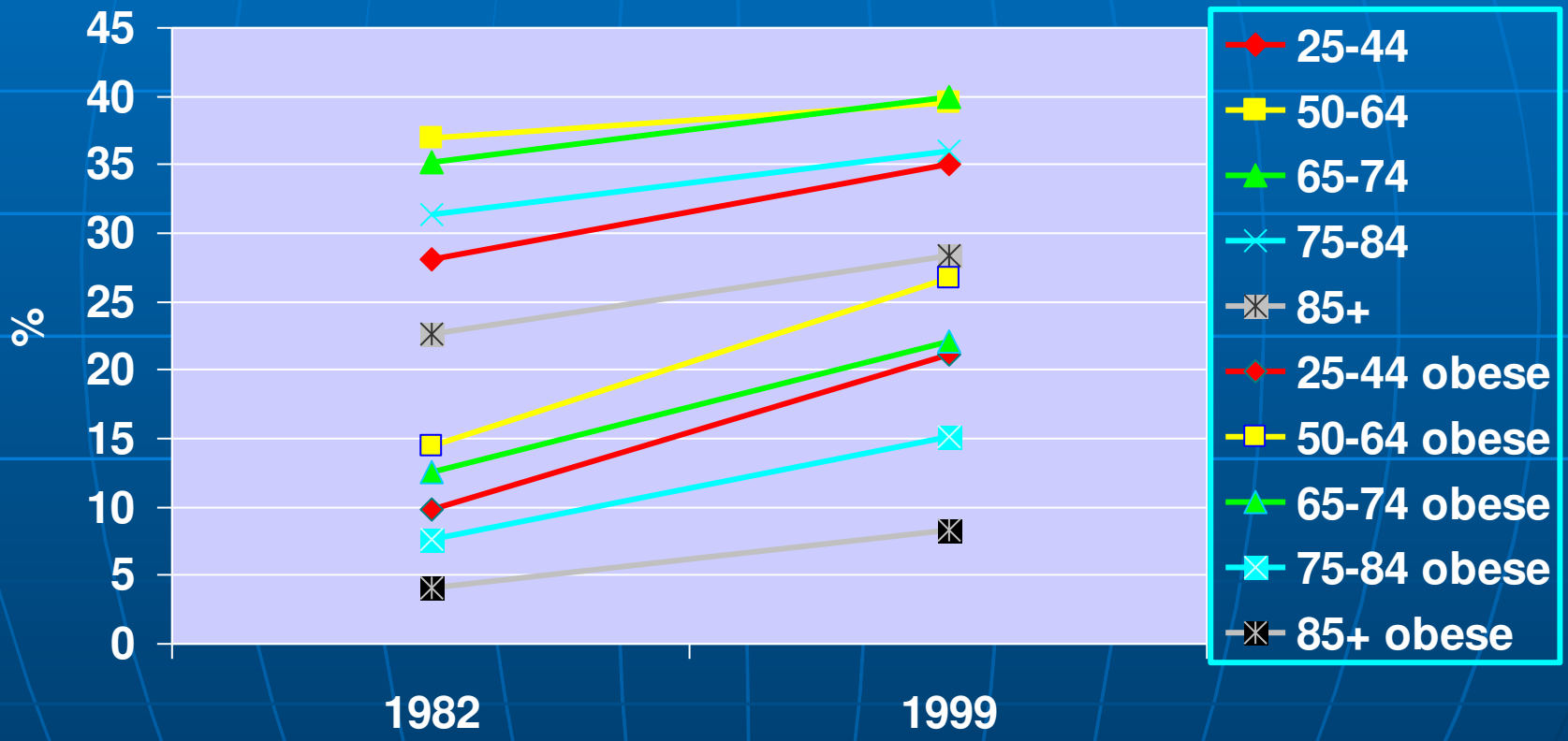
Figure 2. Age-adjusted* prevalence of overweight and obesity among U.S. adults, age 20-74 years

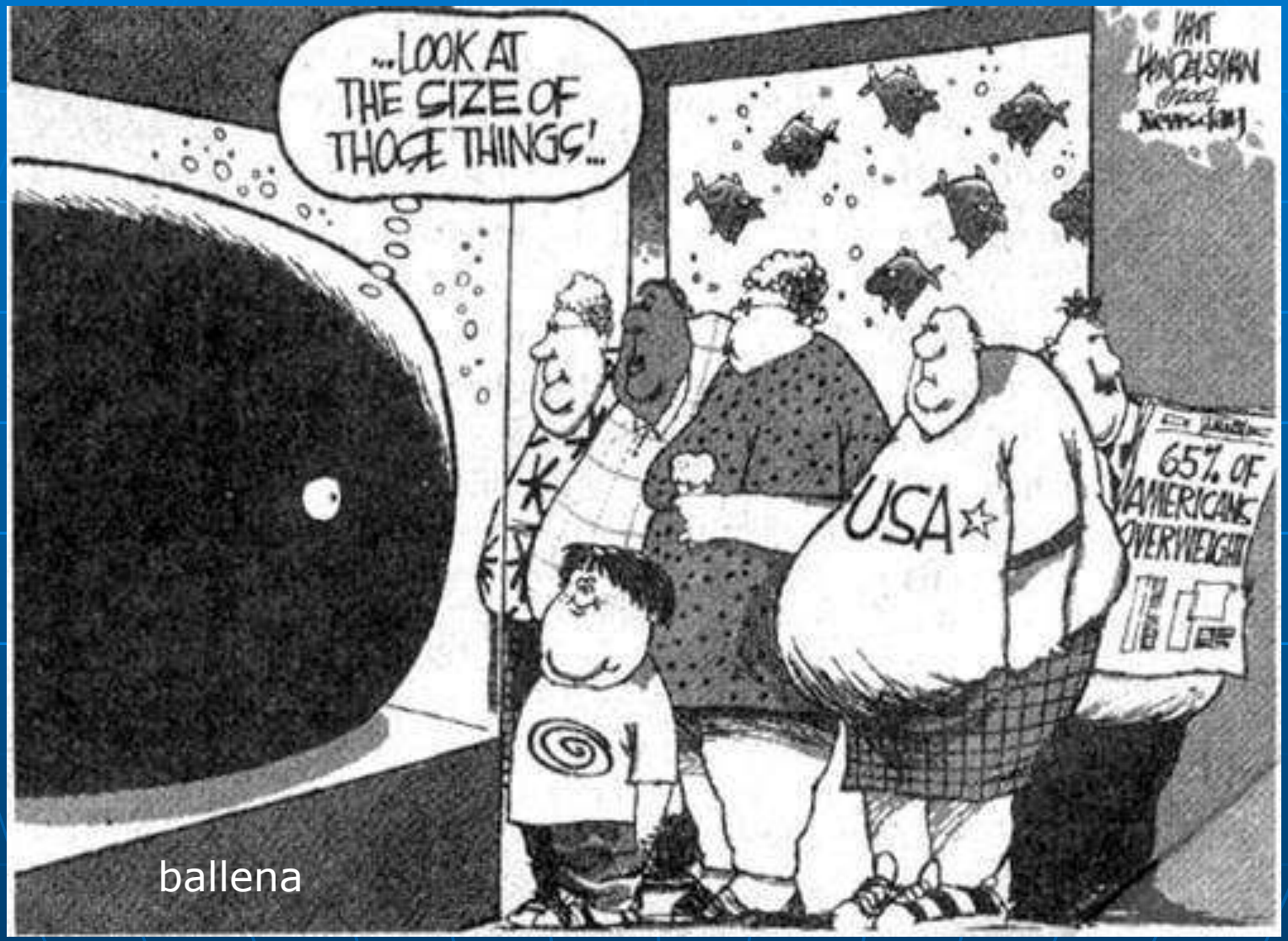


*Age-adjusted by the direct method to the year 2000 U.S. Bureau of the Census estimates using the age groups 20-39, 40-59, and 60-74 years.

Prevalence of Overweight and Obesity in US by Age Group

(NHIS)




...LOOK AT THE SIZE OF THOSE THINGS!..
USA
65% OF AMERICANS OVERWEIGHT
ballena


Pan American Health Organization
MIAH
MIAH
www.miahonline.org
El estado de envejecimiento y salud
en América Latina y el Caribe

Nutrición

- Mantener un peso corporal saludable es importante para la salud de las personas mayores. El sobrepeso o la obesidad están asociados con un mayor riesgo de enfermedades, tales como enfermedad cardiovascular y diabetes, y pueden empeorar las condiciones existentes, como la artritis. Del mismo modo, tener bajo peso y una mala nutrición también constituye un factor de riesgo de muerte y pérdida funcional.
- La mayoría de las personas mayores de las ciudades seleccionadas de América Latina y el Caribe son obesos o tienen bajo peso. Por obesidad se entiende un valor de 30 o más en el Índice de Masa Corporal, mientras que por bajo peso se entiende un valor inferior a 19. Ambas condiciones pueden relacionarse con déficits severos que afectan el sistema inmunológico de las personas, lo que las hace más vulnerables a las enfermedades.

Chronic Health Conditions

State of Aging & Health in Latin America, 2003

- Prevalence of chronic health conditions in LA-C is higher than in the US and Canada
- The proportion of persons 60+ in LA-C with hypertension, arthritis, diabetes, stroke, and heart disease is comparable to persons 70+ in the US and Canada

Percentage of people over 60 years of age by Body Mass Index categories and sex according to cities

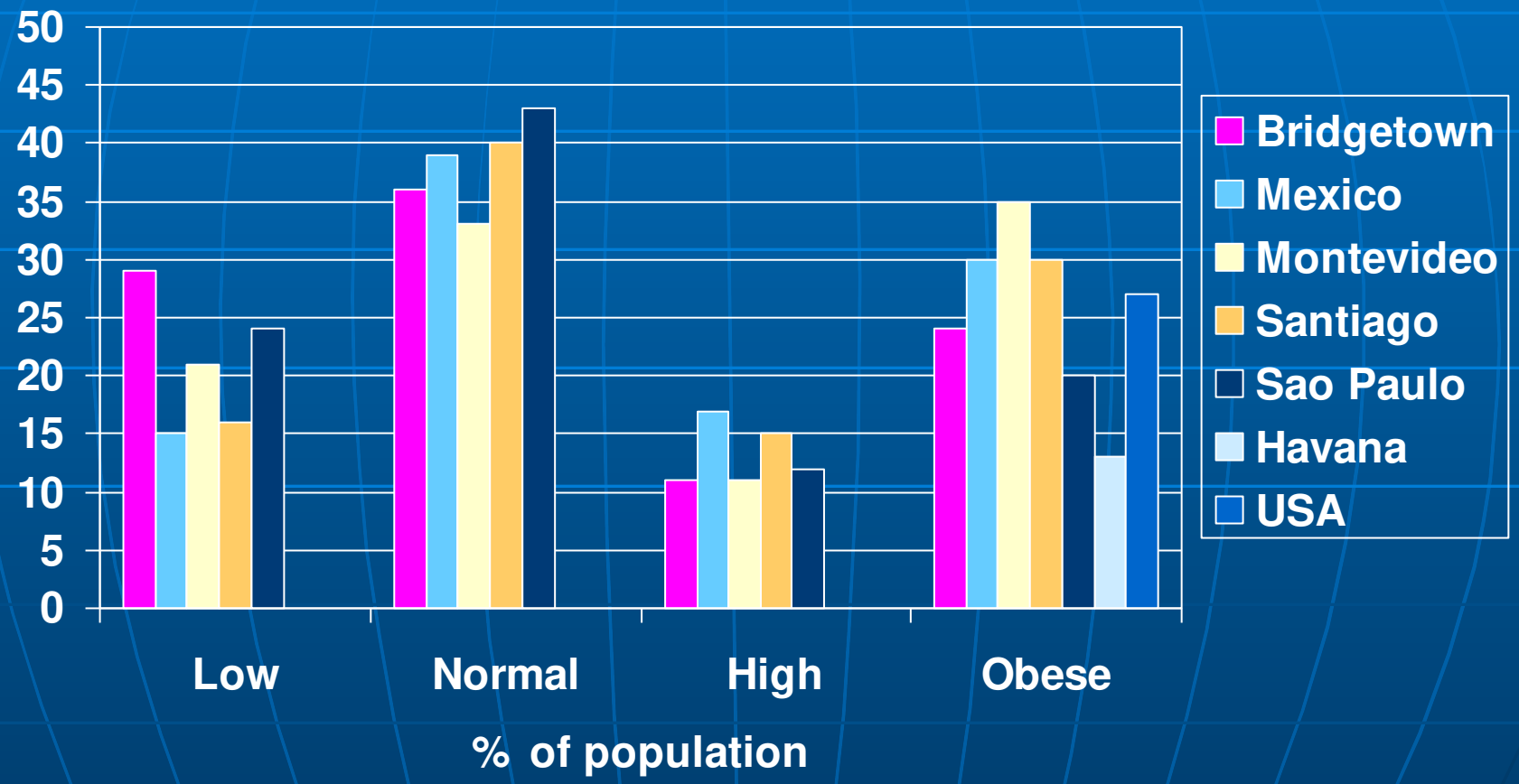
Cities	Low			Normal			High			Obese		
	T	W	M	T	W	M	T	W	M	T	W	M
Bridgetown	29	22	40	36	33	40	11	12	9	24	32	11
Mexico	15	14	15	39	34	47	17	16	18	30	36	20
Montevideo	21	15	32	33	29	40	11	12	10	35	44	19
Santiago	16	15	18	40	37	45	15	15	15	30	34	23
Sao Paulo	24	20	30	43	40	49	12	12	12	20	28	9

W: Women, M: Men

Source: PAHO. SABE Survey, 2001

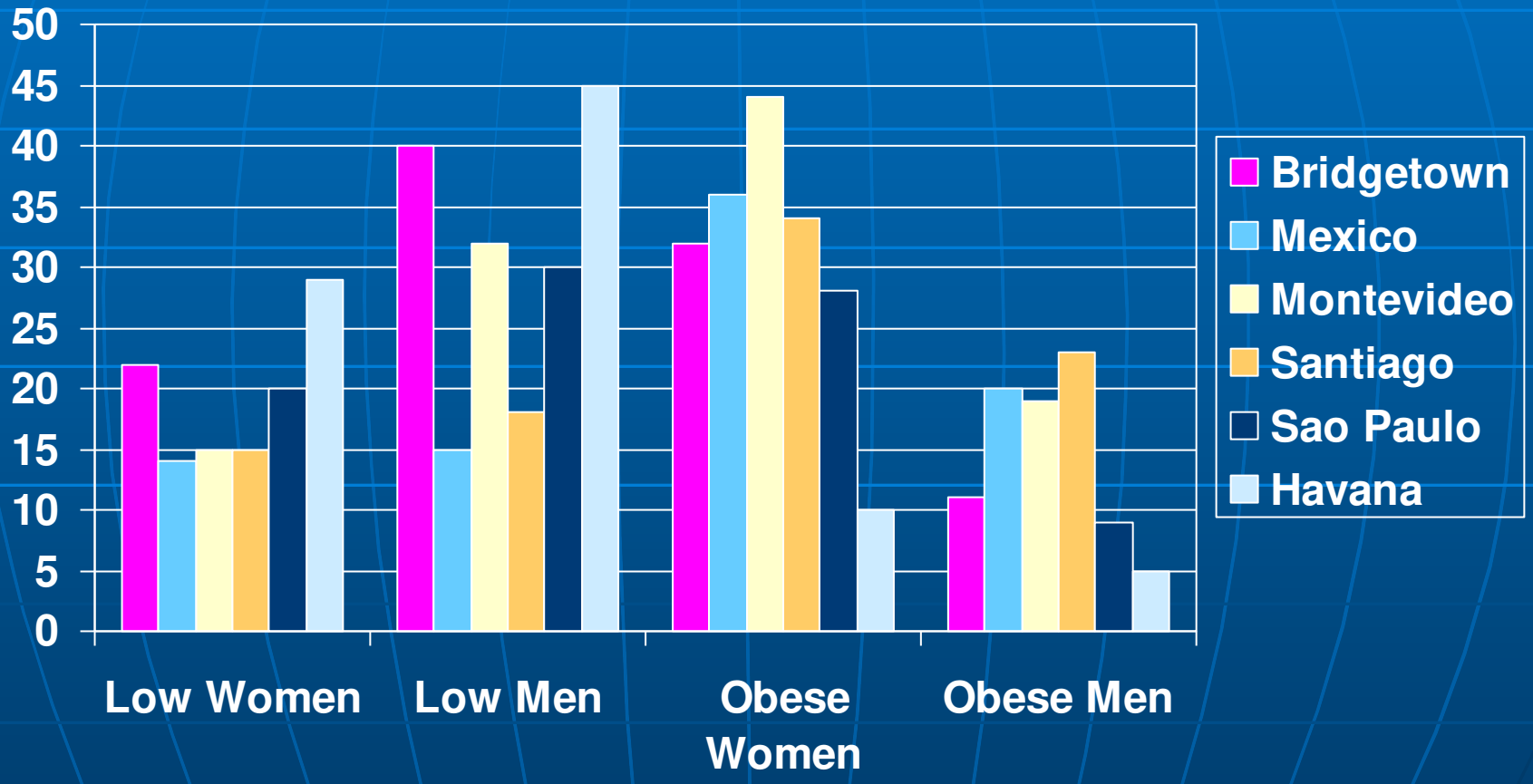
BMI over age 60

PAHO, SABE, 2001



BMI in Women and Men >60

PAHO, SABE, 2001



SABE Study: Nutrition > age 60

PAHO, Health in the Americas, 2002

- Persons age 75+ are less likely to be obese than persons 60-74, and are more likely to have low BMI
- Women are more likely to be obese than men
- Men are more likely to be underweight than women

UN LLAMADO A LA ACCIÓN: PROMOCIÓN DE UNA CULTURA DE SALUD EN LAS PERSONAS MAYORES

Existen cada vez más pruebas de la importancia de la actividad física y la nutrición adecuada para ayudar a prevenir enfermedades y condiciones crónicas, impulsar los efectos positivos de la rehabilitación, reducir las posibles caídas y lesiones, ayudar a manejar los factores de riesgo y desempeñar un papel positivo general para mantener las funciones y prevenir la discapacidad. *(OPS: Guía Regional para la Promoción de la Actividad Física, 2002)*

Durante la 26a Conferencia Sanitaria Panamericana, llevada a cabo en la Organización Panamericana de la Salud, los Ministros de Salud acordaron desarrollar objetivos específicos por sexo y monitorear estrategias en las áreas de salud nutricional y actividad física.

A fin de desarrollar estos objetivos y estrategias es necesario:

- Desarrollar programas de tamizaje de la comunidad a fin de identificar casos de desnutrición en personas mayores y asegurar que haya un sistema para hacer el seguimiento de los exámenes de detección de desnutrición con diagnósticos y tratamientos precisos.
- Coordinar el trabajo del organismo para asegurar una variedad de intervenciones de las comunidades, como programas de comida para los adultos mayores, programas de suplementos nutricionales o subsidios de alimentos para las personas mayores en condiciones de extrema pobreza, que viven solas o están discapacitadas.
- Capacitar a médicos de atención primaria de salud para promover conductas saludables entre las personas mayores. Las intervenciones de los médicos ejercen una influencia muy importante sobre las personas mayores. Por ejemplo, algunos estudios han demostrado que el consejo de un médico para que una persona deje de fumar cumple una función clave para que esta persona abandone el hábito.
- Planificar intervenciones educativas con médicos de atención primaria de salud y personal de enfermería, y proporcionarles materiales de apoyo para alentarlos a preguntar a las personas mayores, en forma rutinaria, sobre su dieta, la actividad física, el hábito de fumar y otras conductas relacionadas con la salud.
- Realizar campañas de información pública para promover que las personas mayores hablen con sus médicos sobre los beneficios que pueden obtener al realizar cambios saludables en su estilo de vida.

Health Promotion Targets for Older Persons

(Health and Aging. PAHO, 2002)

- Screen for malnutrition
- Community interventions
  - Senior meal programs
  - Nutritional supplementation programs
  - Food subsidies

Nutritional Assessment of Older Adults

WHO/Tufts *Keep Fit for Life*, 2002

- Minimum nutrition and function data
  - Dietary information
  - Weight
  - Height
  - Waist circumference
  - Mid-arm circumference
  - Subcutaneous skinfold
  - Functional status questionnaire
  - Infection episodes questionnaire

Dietary Guidelines

WHO/Tufts, *Keep Fit for Life*, 2002

- Nutrient-based guidelines
  - Use amounts of energy (calories), protein, fats, minerals, vitamins, and micro-nutrients to make dietary recommendations
  - Do not consider the environmental, socioeconomic, cultural and lifestyle contexts of eating

Dietary Guidelines

WHO/Tufts, *Keep Fit for Life*, 2002

- Food-based guidelines
  - Provide consumers culturally-sensitive, practical, user-friendly ways to make healthy food choices
  - Include food
    - Production (agriculture)
    - Preparation (cuisine)
    - Processing (food industry)
    - Development (novel/functional foods)
  - Include traditional foods and cuisines
  - Can address specific health priorities and nutrient needs for targeted groups

Dietary Guidelines

WHO/Tufts, *Keep Fit for Life*, 2002

- Current guidelines focus on specific chronic non-communicable diseases
- Future guidelines will also need to address:
  - Age-associated frailty
  - Cognitive impairment and dementia
  - Prolonged post-menopausal years
  - Behavioral and psychological disorders
  - Environmental effects

Food-based Dietary Guidelines for Older Adults

WHO/Tufts, *Keep Fit for Life*, 2002

- Healthy traditional vegetable and legume-based dishes
- Nutrient-dense foods such as fish, lean meats, eggs, low-fat dairy products, fruits and vegetables, whole-grain cereals, nuts and seeds
- Fat from whole foods – nuts, seeds, beans, olives, fatty fish – not fatty spreads

Food-based Dietary Guidelines for Older Adults

WHO/Tufts, *Keep Fit for Life*, 2002

- No regular use of celebratory foods – ice cream, cakes, candy
- Several small non-fatty meals/day
- Physical activity on a regular basis
- Fluids and foods with high water content

Take Home Messages: Nutrition and Aging in Latin America

- Data is limited – but sufficient to identify needs and priorities
- Diet and exercise appear to influence mortality and quality of life
- Obesity is a significant, common problem in older adults
- Nutritional assessment is necessary for additional data and patient care

Take Home Messages: Nutrition and Aging in Latin America

- Food-based guidelines provide a useful approach for public education
- Community screening and intervention programs must be developed
- Training and education for primary care providers is necessary to identify malnutrition, make appropriate referrals, and influence patient behavior