



Healthy Aging

Assistant Professor Cindy Gross

Professor Margaret Huang- Saddleback College

Aging

- ▶ Aging is not a disease
- ▶ “The best treatment of disease is its prevention.”
- ▶ Most causes of death and disability in older people are partially to fully preventable.

Prevention

- ▶ Primary Prevention:
 - ▶ Preventing occurrence of disease, e.g. nutrition, exercise, stress management, immunization, injury prevention.
- ▶ Secondary Prevention:
 - ▶ Early diagnosis and treatment to prevent complications, e.g. screening for hypertension, diabetes, cancer.
- ▶ Tertiary Prevention:
 - ▶ Focuses on rehabilitation, control of pain, caretaker support.

Goal of Prevention

**To maintain active
healthy
and
independent lives**

Illness

- ▶ *Acute illnesses*
 - ▶ *has been in control with the development of immunizations and antibiotics*
- ▶ *Chronic illnesses*
 - ▶ *Majority of 65+ year olds have chronic illness defined by 'a condition where there is no cure and the patient is alive.'*

Risk Factors for Disease

- ▶ Poor Nutrition
- ▶ Lack of Exercise
- ▶ Poor Stress Management
- ▶ Smoking
- ▶ Alcohol

**Healthy Aging
is
a personal
responsibility**

Nutrition and Aging

- ▶ Follow the food pyramid
- ▶ Need less calories - more nutrient dense food in less calories
- ▶ Need more Calcium, Vitamin D, Vitamin B-12, C, E, Fiber, Folate, Zinc

Nutrients for Optimum Health

- ▶ **Protein**
- ▶ **Fat**
- ▶ **Carbohydrates**
- ▶ **Vitamins**
- ▶ **Minerals**
- ▶ **Water**

Food Sources

- ▶ Protein Intake 15%
- ▶ Fat Intake 30%
- ▶ Carbohydrate Intake 55-60%

Protein Requirement

Young adults - 0.8 gram/kg of body weight

Older adults - 1 gram/kg of body weight

Robnett, Regula, and Chop, Walter, Gerontology for Health Care Professional 2nd ed., 2010.

Nutrition

The kind of nourishment we provide our bodies throughout life can trigger or delay the onset of the diseases of old age and may help slow down the aging process.

10 Recommendations to Reduce Cancer Risk

- ▶ Be lean - within the range of normal body weight
- ▶ Be physically active everyday
- ▶ Limit intake of red meat and avoid processed meat
- ▶ Eat mostly foods of plant origin
- ▶ Limit alcoholic drinks
- ▶ Limit intake of energy dense foods
- ▶ Limit consumption of salt, avoid moldy cereals (grains) or legumes
- ▶ Aim to meet nutritional needs through diet alone
- ▶ Mothers to breastfeed; children to be breastfed
- ▶ For cancer survivors, follow the recommendations for cancer prevention

Food, Nutrition, Physical Activity and the Prevention of Cancer: A global Perspective,”

www.dietandcancerreport.org. Tufts University Health and Nutrition Letter, 2/08

Risk Factors

- ▶ **Family History**
- ▶ **Being Thin/Small Frame**
- ▶ **Alcohol/Smoking**
- ▶ **Low Calcium intake**
- ▶ **Low Sun Exposure**
- ▶ **Lack of Exercise**
- ▶ **Menopause**

Prevention

- ▶ **Diet Rich in Calcium and Vitamin D**
- ▶ **Weight-Bearing Exercise**
- ▶ **No Smoking or Excess Alcohol**
- ▶ **Bone Density Testing**

Daily Calcium Recommendation

Stage	Age	RDA (milligrams)
Infants	Birth to 6 months	360
Children	1 to 10 years	1,000
Adolescents	11-18 years	1,200
Adults	10 and older	1,000
Pregnant or Breastfeeding	Under 19 years	1,600
	Over 19 years	1,200
Post-Menopausal	Age varies	1,500

Calcium

- ▶ Yogurt, low fat / fat free / plain or fruit
- ▶ Fat free milk
- ▶ Fortified juice
- ▶ Canned sardines
- ▶ Oatmeal, instant
- ▶ Calcium fortified product; cereal, rice, bread, others
- ▶ Tofu, process with calcium
- ▶ Soy milk
- ▶ Green vegetables such as broccoli

Nellie G. Hedstrom, M.S., R.D., “Good Nutrition From Maine”. University of Main. June 9, 2003.

Sarcopenia

- ▶ Loss of skeletal muscle mass and strength, leads to muscle weakness
- ▶ It is associated with normal aging
- ▶ A loss of 1% to 2% per year after age 50
- ▶ By age 50, an average of 15 pounds lost and 30 pounds of fat gained

Risk Factors

- ▶ Malnutrition
- ▶ Sedentary lifestyle
- ▶ Hormonal secretion declines
 - ▶ Estrogen
 - ▶ Testosterone
 - ▶ Growth hormone
- ▶ Medications
 - ▶ Steroids
 - ▶ Statins
 - ▶ muscle relaxants
- ▶ Medical Conditions
 - ▶ Hypothyroidism
 - ▶ osteoarthritis

Prevention

▶ Exercise

- ▶ Resistance training
- ▶ Strength training

▶ Nutrition

- ▶ RDA recommendation for protein

Obesity

- ▶ Approximately 108 million adults are overweight or obese
- ▶ Increase risk of:
 - ▶ Hypertension
 - ▶ Type 2 Diabetes
 - ▶ Coronary Heart Disease
 - ▶ Gallbladder Disease
 - ▶ Certain Cancers
 - ▶ Dyslipidemia
 - ▶ Stroke
 - ▶ Osteoarthritis
 - ▶ Sleep apnea

How can diets of older adults be improved?

- ▶ **The Federal Older Americans Act of 1973**
 - ▶ Provides funding thru the California Office on Aging for Project TLC (Transportation, Lunch, Counseling)
 - ▶ A hot lunch, 5 days per week, at community centers
- ▶ **Meals on Wheels**
 - ▶ A nonprofit, volunteer organization, customer pay program in which a hot lunch and a cold dinner are delivered 5 days a week by a volunteer driver.
 - ▶ Physician authorization is required for special diets
- ▶ **Exercise**

Exercise

- ▶ Exercise is important as eating properly
- ▶ Maintaining physical conditioning is imperative with aging
- ▶ “If exercise could be packed into a pill, it would be the single most widely prescribed and beneficial medicine in the nation.”

Dr. Robert N. Butler

Types of Exercise

- ▶ Endurance
- ▶ Strength
- ▶ Balance
- ▶ Stretch

Exercise for Older Adults

- ▶ Walking
- ▶ Dancing
- ▶ Gardening and yard work
- ▶ Swimming
- ▶ Weight lifting
- ▶ Tai chi

Benefits of Exercise in Aging

- ▶ Tufts University Study
 - ▶ People in their 70's, 80's, and 90's can benefit from lifting weights. Average age was 87.
 - ▶ They exercised every other day for 10 weeks, resulting in:
 - ▶ Increased strength 113%
 - ▶ Improved walking speed 12%
 - ▶ Improved balance and health
 - ▶ Preventing falls
 - ▶ “You get old because you don’t move.”

New England Journal of Medicine, June 1994

Successful Aging

(MacArthur Foundation)

- ▶ Avoidance of disease and disability
- ▶ Maintenance of high physical and cognitive function
- ▶ Engagement in social and productive activities

7 Keys to Healthy Aging

(Harvard Medical School)

- ▶ Not smoking
- ▶ The ability to take life's ups and downs
- ▶ Absence of alcohol abuse
- ▶ Healthy weight
- ▶ A solid marriage
- ▶ Physical activity
- ▶ Years of education

How to Live a Long Healthy Life

(Dr. R. Butler, 10/22/04)

- ▶ A real sense of purpose- do something to make a difference
- ▶ Not to be impulsive- sensible behavior
- ▶ Close intimate relationship-giving to each other
- ▶ Be a high earner-better access to health care, vacation- less stress
- ▶ Eat sweet-dark chocolate (antioxidant)
- ▶ Make friends of all ages-good for the mind
- ▶ Make the mind engaged

Trends in Health Maintenance

- ▶ Holistic concepts of health: mental and physical health are equally important.
- ▶ Community senior centers
- ▶ Adult day health centers
- ▶ Senior housing projects
- ▶ Community health fairs
- ▶ Hospitals and clinics

Housing Alternatives for Older Adults

- ▶ Private home or apartment
- ▶ Mobile home parks
- ▶ Subsidized low-rent apartment
- ▶ Share a house
- ▶ Retirement center, e.g. Laguna Woods
- ▶ Single room occupancy (SRO) Hotel (room and meals)
- ▶ Echo home (home or apartment close to an adult child's home)
- ▶ Board and care homes (some assistance provided)
- ▶ Adult foster care home (live with a nonrelated family or person)
- ▶ Assisted living facility (ALF)
- ▶ Continuing care retirement community (CCRC)-independent living to skilled care
- ▶ Institutional living (nursing home)

Housing Trends in the New Retirement

Aging in Place

Strong Preference for Aging in Place

- ▶ Why?
 - ▶ Psychological
 - ▶ Familiarity
 - ▶ Ties to neighborhood
 - ▶ Avoid placing burden on family

Jon Pynoos, Prof. of Gerontology @ USC, 2009

Aging

90% of older Americans 60 years and older prefer to remain in their own home and never move.

Source: AARP (2006)

“We know we can’t stop aging, but we can prevent injury and increase safety.”

J.L. Mueller, adapted Jon Pynoos, Prof. of Gerontology @ USC, 2009

Environment Needs Modifications

- ▶ To increase independence and safety
- ▶ To reduce falls
 - ▶ Over 50% in homes
 - ▶ Over 20% in the community

Top Risk Factors for Falls

- ▶ Depression
- ▶ Balance problems
- ▶ Polypharmacy

Dr. Lawrence Katz, Univ. of N. Carolina at Chapel Hill, March 9, ASA/NCOA conference

Accident-Proofing Checklist

- ▶ Stairs- dangerous for elderly
 - ▶ Adequate illumination on stairs and landings
 - ▶ Need light switches, top and bottom of stairs
 - ▶ Non-skid treads or carpet
 - ▶ Staircase handrails on both sides of stairs
 - ▶ Staircase handrails with end of rail shaped to signify bottom of stairway
 - ▶ Wide steps - 18 inches
 - ▶ Rails and steps need clear color contrast markings

Accident-Proofing Checklist

- ▶ Carpets
 - ▶ Edges tacked down completely
 - ▶ Wall-to-wall with pads
 - ▶ Medium to short pile
 - ▶ No throw rugs

Accident-Proofing Checklist

▶ Floors

- ▶ No highly polished floor surfaces
- ▶ Non-skid wax
- ▶ Thresholds removed
- ▶ No extension cords or wiring
- ▶ Access pathways free of low-lying furniture or clutter
- ▶ No level changes
- ▶ Free of wet areas

Accident-Proofing Checklist

▶ Bathroom

- ▶ Non-skid rubber mat in shower or bath
- ▶ Handrails in bath and by commode
- ▶ Adequate lighting in bath and night light on access path
- ▶ Water temperature regulated at 100 degrees Fahrenheit or less
- ▶ Clear markings hot and cold faucets
- ▶ Easy to reach and manipulate faucet handles
- ▶ Seat in tub or shower
- ▶ Easy access to toilet paper

Accident-Proofing Checklist

- ▶ Kitchen
 - ▶ Adequate illumination
 - ▶ Stove controls large and clearly marked
 - ▶ Pots and pans with large, easily grasped, protected handles
 - ▶ Lightweight pots and pans
 - ▶ Pocket magnifier for small prints on labels
 - ▶ Large numbers on telephone
 - ▶ Timer
 - ▶ Smoke detector
 - ▶ Avoid kitchen stool

Accident-Proofing Checklist

- ▶ Bedroom
 - ▶ Guard-rail on side of bed to aid in rising
 - ▶ Light source beside bed- for reading
 - ▶ Night light
 - ▶ Bed low enough to roll in and out with ease

Accident-Proofing Checklist

▶ Other

- ▶ Furniture or chairs need to be stationary
- ▶ Sturdy furniture of proper height for ease in getting up and down
- ▶ Shelving designed low enough so use of stools is minimized-especially kitchen
- ▶ Telephone jacks placed to allow easy moving of telephones-telephone amplifier
- ▶ Smoke alarms with sound or light emergency system
- ▶ Adequate access and escape doors and windows
- ▶ Long handle dust pans or shoehorn to prevent falls
- ▶ Microwave or toaster ovens are better than stoves
- ▶ Wear proper clothing (loose, easily removed) and shoes, slippers (low-heeled, rubber sole, no shoe laces, no open back) to prevent fall or slip