Optimal Aging

Kenneth Brummel-Smith, MD

Charlotte Edwards Maguire Professor of Geriatrics
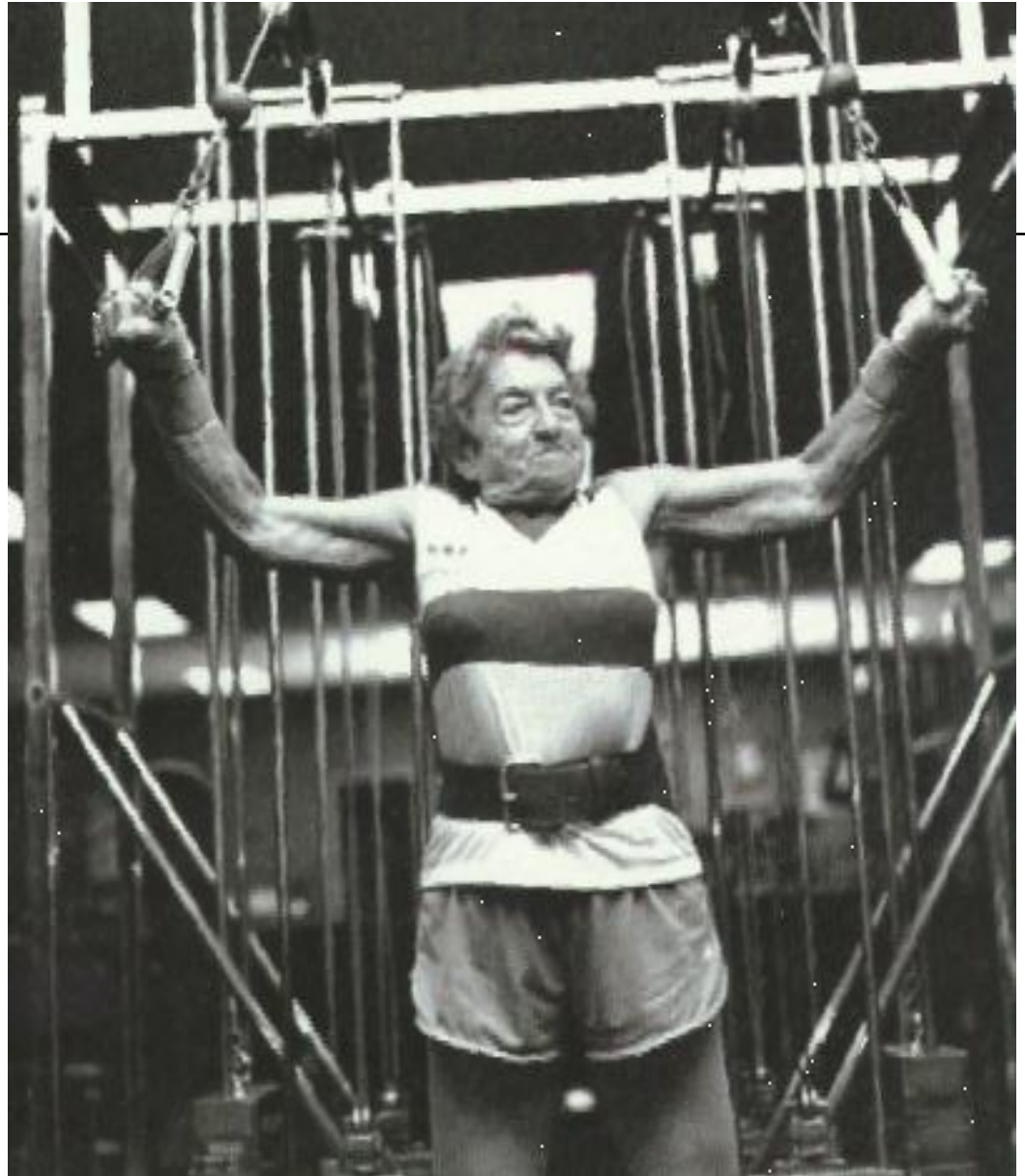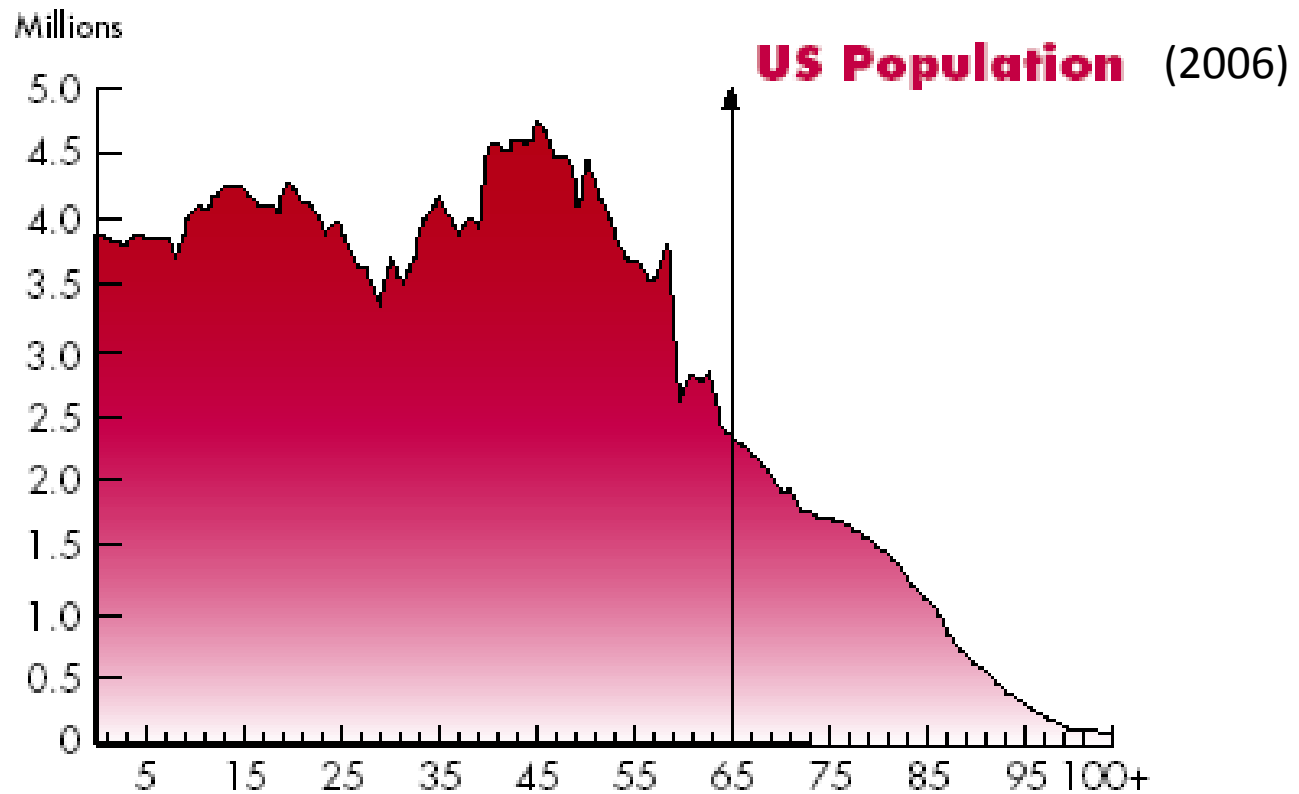
Florida State University College of Medicine

Objectives

- Distinguish optimal aging from successful aging
- Describe the determinants of optimal aging
- Discuss the components of optimal aging in these domains:
  - Nutrition
  - Cognition
  - Psychosocial
  - Functional
  - Societal

www.bumc.bu.edu/centenarian/the-living-to-100-life-expectancy-calculator/

Helen Zechmeister, 81 y/o
Deadlift 245 lbs
She once competed in a men's 35-yrs and older bracket because there were no other women. She won.

"Silver Tsunami"

Older Americans
born 1939 and earlier

A Growing Population

- 13% above age 65
- >85 fastest growing segment
- More 85 year olds alive today than all up to today
- Florida is 1st on % of older people
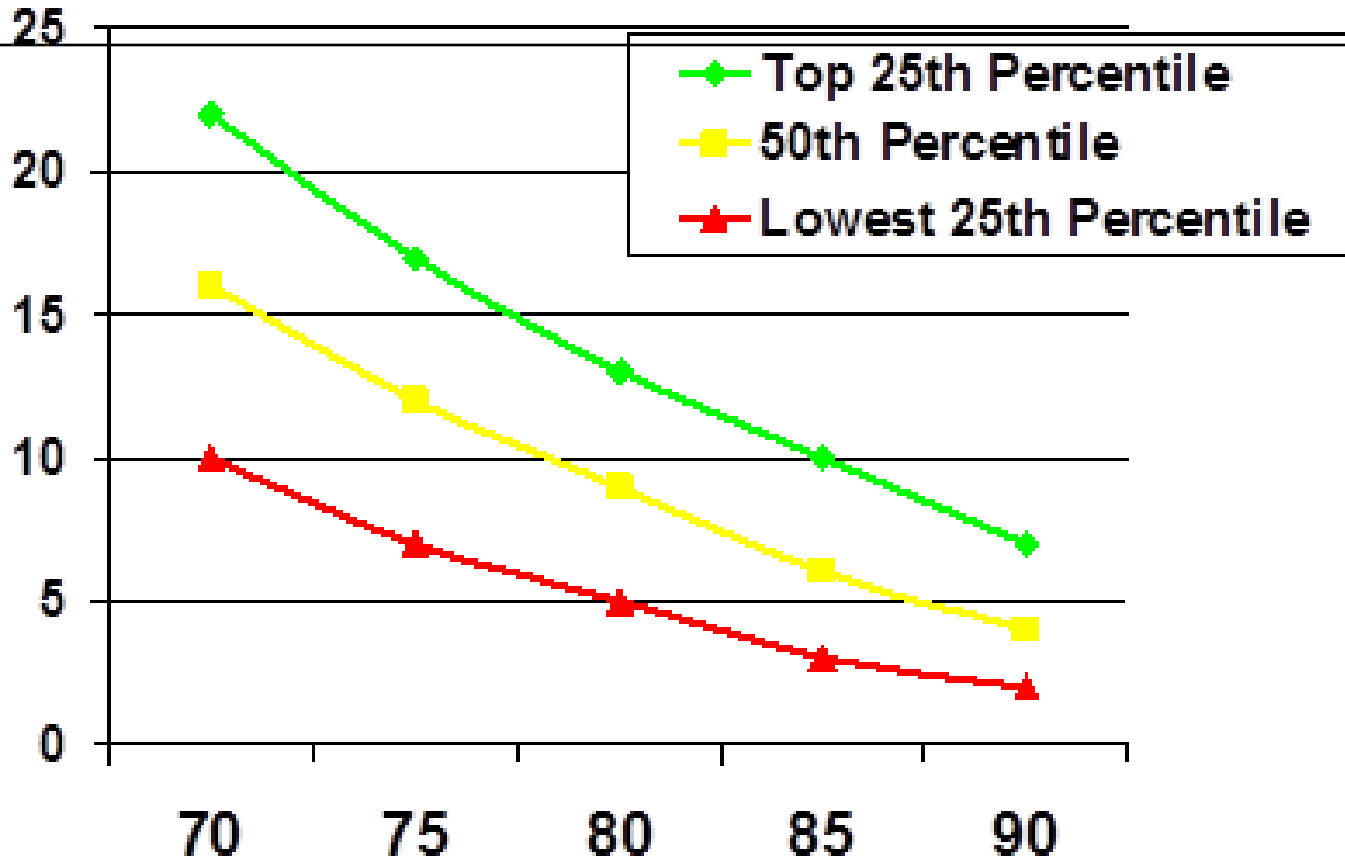- Happening all over the world
- Peak in 2050

Definitions

- Life expectancy - how long an "average" person can expect to life, at any age

- Life span - the "absolute" longest a human is capable of living

Oldest Twins in the World China,

104 years old

Daoqiao's 73-year-old son Liu Bao said, "A cool temperament might be one of their secrets of longevity."

Carey EC et al. JAGS 2008; 56:68–75.

Ada Thomas
Age 72

Started jogging
at age 65
First marathon
at age 68.
"When I look
 in the mirror
 I like what I see."

Definitions

- Optimal aging - The capacity to function across many domains—physical, functional, cognitive, emotional, social, and spiritual – to one's satisfaction and in spite of one's medical conditions [1, 2]

- Successful aging - Absence of disease and disability; high cognitive and physical functioning; and active engagement with life [3]

Evidence for "Optimal Aging"

- Self-ratings of health (Montross)

- Agreement with "successful" attributes – only 30%-60%

- Alameda County study

- Yale Medical School Class of 1939

Luella Tyra

Age 92

1984 Nationals
Swam 4 races
  Backstroke
  Breaststroke
  Butterfly
  Freestyle

Roots of Optimal Aging

- The capacity to adapt across various domains of life
  - Physical, functional, cognitive, emotional, social, and spiritual
- Adaptation
  - Selection
  - Optimization
  - Compensation
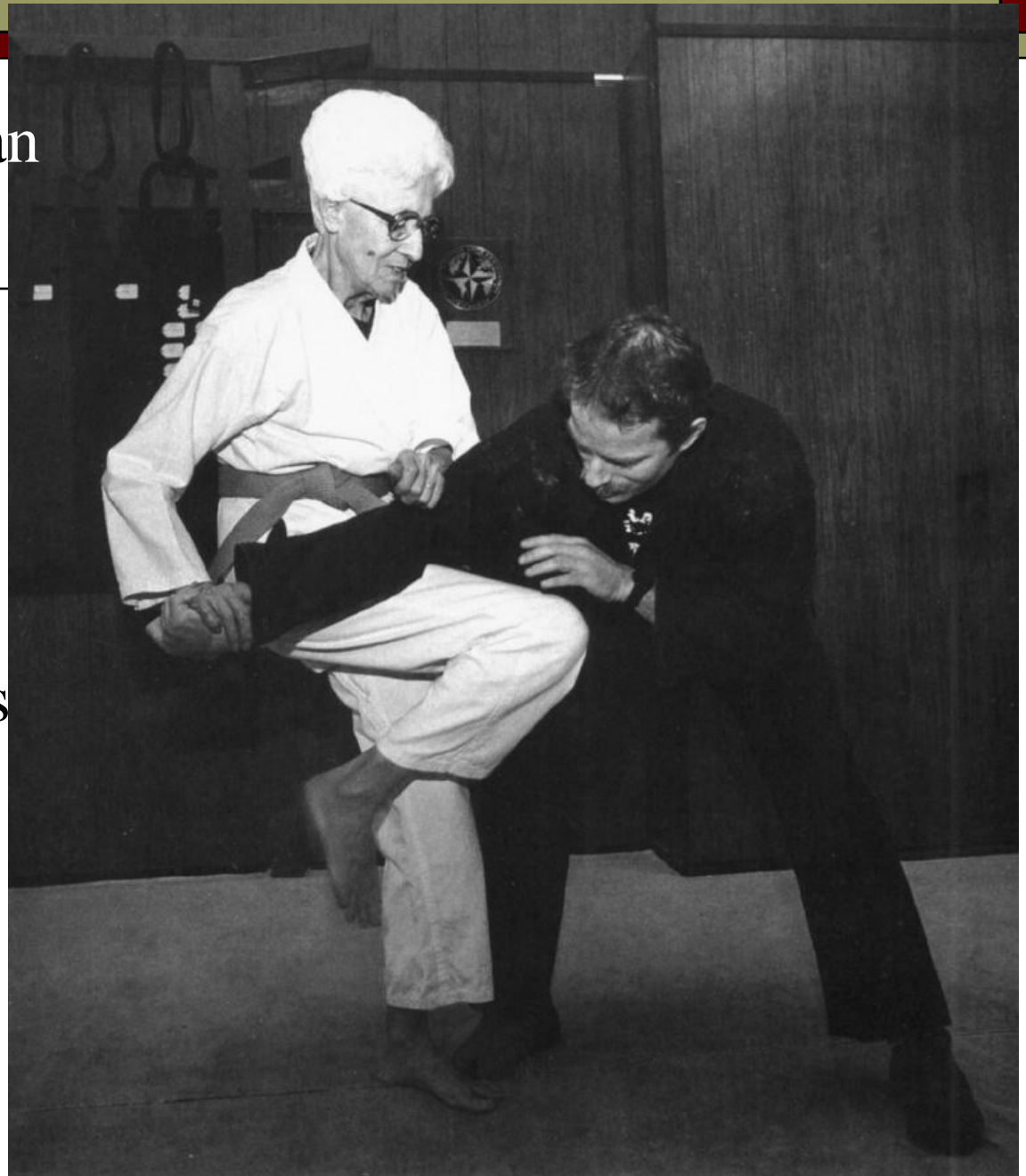
Determinants of Health[4]

- ☐ Function
- ☐ Disease
- ☐ Social environment and support system
- ☐ Physical environment
- ☐ Genetic endowment
- ☐ Individual responses – behavior & perspective
- ☐ Healthcare system

Eleanor Hyndman
Age 80

Started karate at
age 78.

Says it gives her
mental sharpness

Recently won a
gold medal.
Purple belt.

Approaches to Optimal Aging

- Biological
  - Exercise, nutrition, sleep, avoidance of disease-causing agents, practicing preventive medicine, early treatment of diseases and medical conditions, cognitive stimulation, avoidance of iatrogenic complications

- Psychological
  - Attitude, viewpoint, stress management, resilience

Approaches to Optimal Aging

- Social
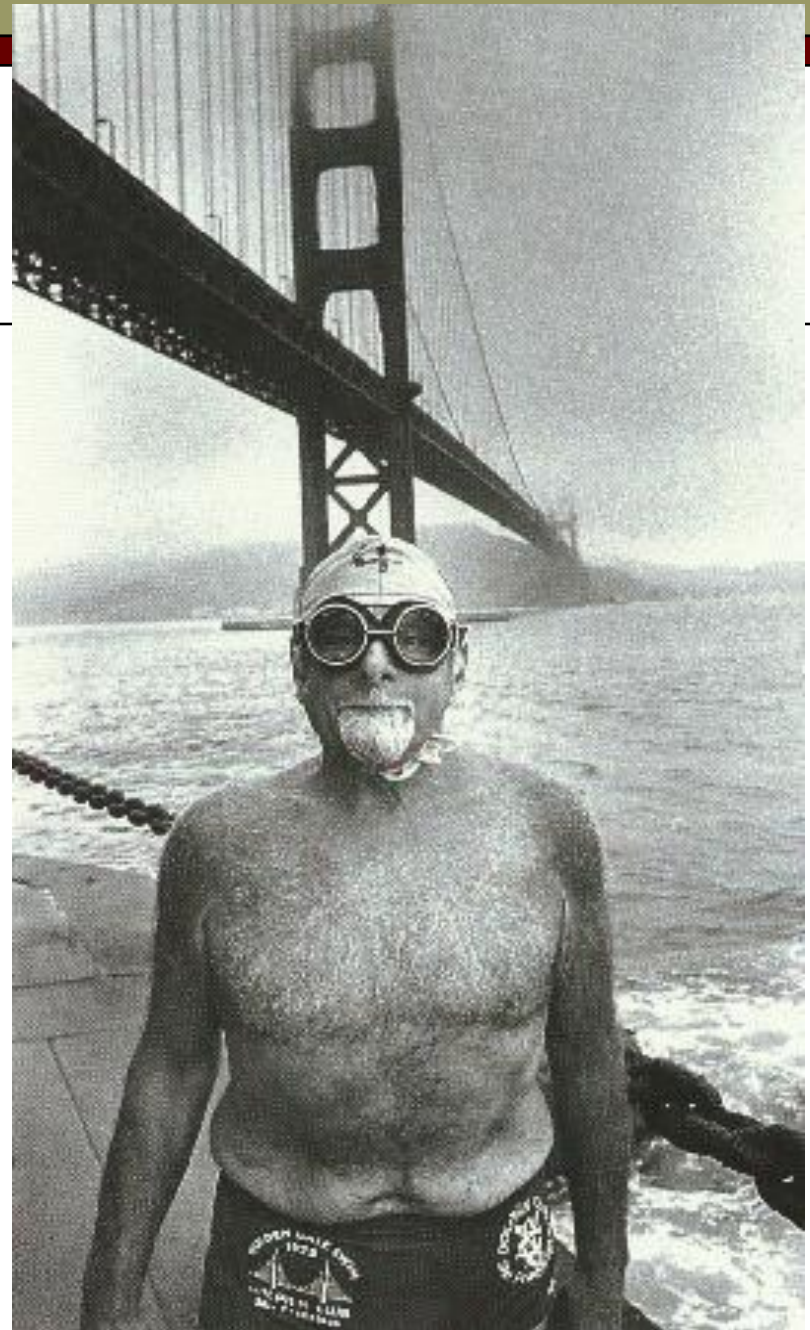 - Support, activities, work, volunteerism, sexuality, religion, spirituality, "other-orientation"
- Functional
  - Strength, balance, flexibility, conditioning
- Societal
  - Health education, chronic disease self management training, access to information, community services, environmental design, health policies and insurance

Joe Bruno
71 y/o
Has swum the
Golden Gate
Bridge 53 times.

Habits of 100 Yr Olds

- Regular exercise
- Eat breakfast
- Moderate weight
- Not smoking
- Not snacking
- Limit alcohol
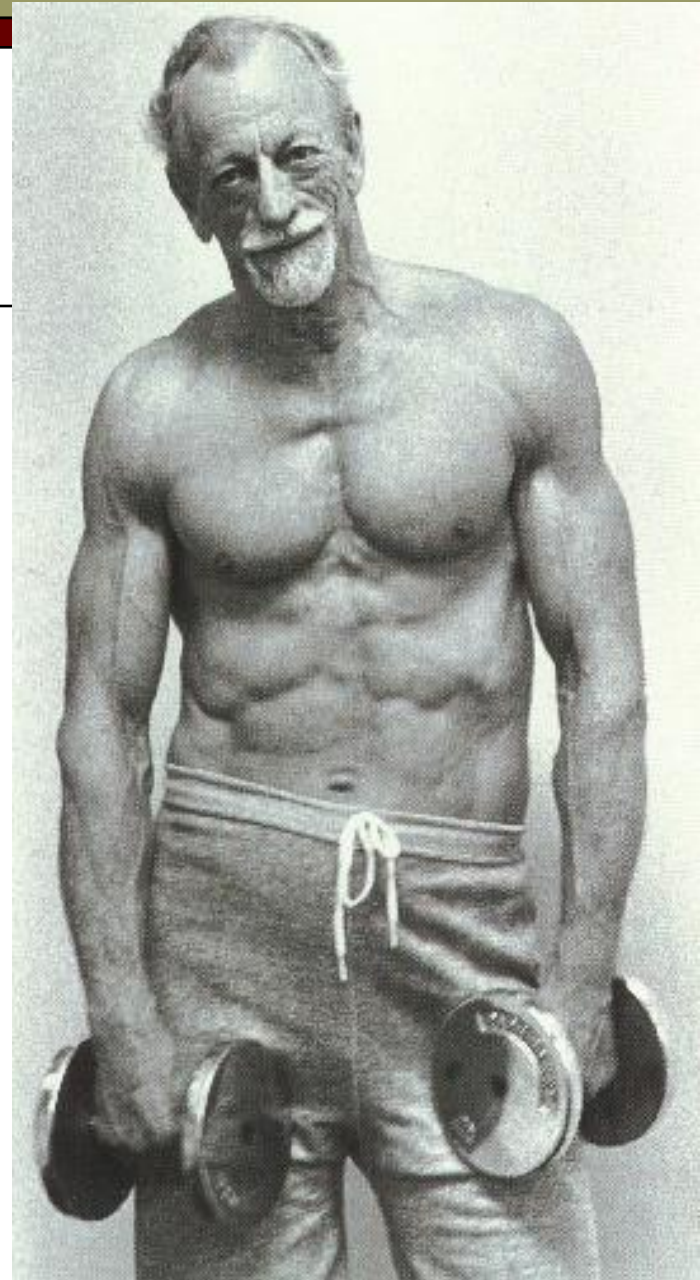- Sleep seven hours

John Turner, MD
67 y/o
"I think physicians have a
responsibility to sell health
at least as much as they
sell pills."

Growing Old is Not for Sissies
Etta Clark
Pomegrante Books
Petaluma, CA 1990

Societal Approaches

- Health education
- Chronic disease self management training
- Access to information
- Community services
- Environmental design
- Health policies and insurance

Environmental Design

- ☐ Promote community connections
  - ■ Sidewalks/trails
  - ■ Building design
  - ■ Rest areas
  - ■ Garages in back
- ☐ Street construction
  - ■ Turns
  - ■ Lighting
  - ■ Sidewalks
  - ■ Building style and set-back

Societal

- "Addiction" to medication approaches
  - Lipids
  - Hypertension
  - Diabetes
  - Depression
  - Sleep

"Anti-Aging Medicine"

- American Academy of Anti-aging Medicine
  - "We the leaders of the Anti-Aging movement will help to usher in a new modern age for humanity: The Ageless Society. There is a remedy for this apocalypse of aging, and this remedy comes just in time to save America." R. Klatz, DO

- Hormones, antioxidants, diet, exercise

- Anti-aging medicine and regenerative biomedical technology - $97 billion industry

Anti-Aging "Treatments"

- Human growth hormone (HGH)
  - 2007 Annals of Internal Medicine review – 31 studies – no benefit, many harms – do not use
- DHEA
  - Not effective – probably not dangerous at low doses, cancer effects
- Antioxidants
  - Questionable effectiveness – probably not harmful
- Caveat emptor – if an expert advocates for it, and they make $ from selling it, avoid it

John Turner, MD
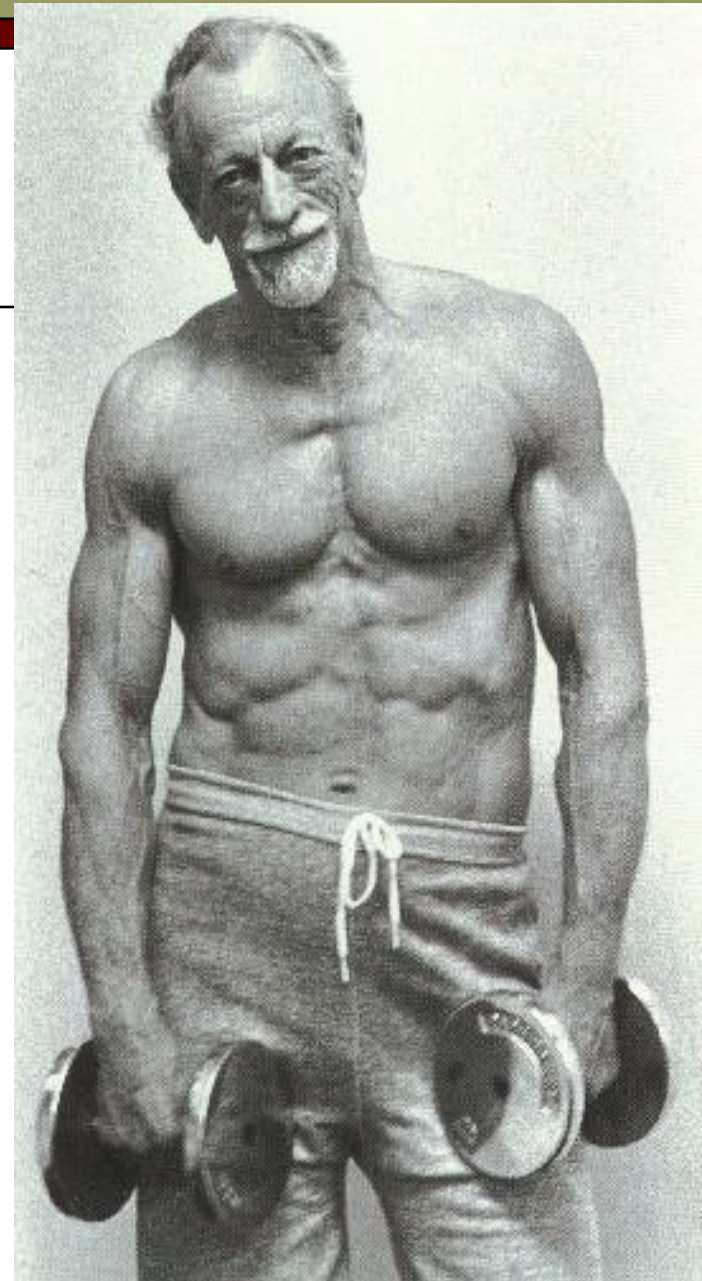**67 y/o**
"I think physicians have a responsibility to sell health at least as much as they sell pills."

Growing Old is Not for Sissies
Etta Clark
Pomegrante Books
Petaluma, CA 1990

Course Outline

- Lecture/discussion
- Open to suggestions for content
- 2/15 – Optimal nutrition
- 2/22 – Optimal cognition
- 2/29 – Optimal psycho-social health
- 3/14 – Optimal functional health
- 3/21 – Optimal transitions

Details

- Ken.brummel-smith@med.fsu.edu

- www.med.fsu.edu/geriatrics

- Handouts emailed before class

- Questions can be emailed before or after class

- Dropbox?

References

1. Baltes PB, Baltes MM. Psychological perspectives on successful aging: The model of selective optimization with compensation. In: Baltes PB, Baltes MM, eds. *Successful Aging: Perspectives from the Behavioral Sciences*. Cambridge, UK: Press Syndicate of the University of Cambridge; 1990:1-34.Walsh

2. Brummel-Smith K, Optimal Aging, Part I: Demographics and Definitions, Annals of Long-Term Care, 2007; 15: 26 – 28

3. Rowe JW, Kahn RL. Successful aging. *Gerontologist* 1997;37:433-440

4. Evans RG, Barer ML, Marmor TR, eds. *Why are Some People Healthy and Others Not? The Determinants of Health of Populations*. Hawthorne, NY: Aldine de Gruyter; 1994

5. Sarkisian CA, Hays RD, Mangione CM. Do older adults expect to age successfully? The association between expectations regarding aging and beliefs regarding healthcare seeking among older adults. J Am Geriatr Soc 2002;50:1837-1843.

References

5. Almeida OP, Norman P, Hankey G, et al. Successful mental health aging: Results from a longitudinal study of older Australian men. Am J Geriatr Psychiatry 2006;14(1):27-35.

6. Loucks EB, Berkman LF, Gruenewald TL, Seeman TE. Relation of social integration to inflammatory marker concentration in men and women 70 to 79 years. Am J Cardiol 2006;97:1010-1016. Epub 2006 Feb 20.