Healthy Aging: Is “common sense” wrong?
Carolyn Aldwin
Director
Gerontology Program
Oregon State University
Healthy Aging:

- Lots of common sense to healthy aging –
  - good nutrition
  - exercise
  - social support
  - positive attitude
  - resources

But picture may be more complicated...
Healthy Aging Myths

- Modernization is “bad” for the elderly
- Abstinence is healthier

- We will examine what does work. . .
- Review OSU’s contribution to the field
Myth #1: Modernization is Bad for Older Adults

- Modern societies favor the young
  - In traditional cultures, elders were respected
  - Modern cultures rife with ageism
    - Retired adults are “rejected”
    - Older adults can’t handle technology
    - We “throw away” elders into nursing homes
Modernization is Good for Older Adults!

❖ We’re getting healthier!

❖ Hans Rosling, 200 Countries, 200 Years, 4 Minutes

Consequence: Silver Tsunami

We are in the midst of an unprecedented demographic revolution!
(Just a few facts.)
Population Pyramids

Afghanistan: 2000

Source: U.S. Census Bureau, International Data Base.
US Population Pyramid 1950-2050

Source: U.S. Census Bureau, International Data Base.

http://www.census.gov/cgi-bin/ipc/idbpyrs.pl?cty=US&out=d&ymax=250
PROJECTED CHANGES IN BRAZIL’S POPULATION

Source: U.S. Census Bureau, International Data Base.
Population Pyramids -- Afghanistan

Source: U.S. Census Bureau, International Data Base.
World Population 60 and Over: 2000-2050

Source: U.S. Census Bureau, International Data Base.
Which Countries have the Most Adults 65+?

(1) China
(2) India
(3) U.S.
(4) Europe & Japan have highest percentage of elders
World Population Projections

Elders will be more diverse!

Population Projections by Race and Hispanic Origin for Persons 65 and older: 2000 to 2050

- Total - All Persons 65 and older
- Hispanic Persons 65 and older
- Non-Hispanic White Persons 65 and older
- Non-Hispanic Black Persons 65 and older
- American Indians and Alaskan Native Persons 65 and older
- Asian Persons 65 and older

Year
Population age 65 and over, by race and Hispanic origin, 2003 and projected 2050

Note: The term "non-Hispanic white alone" is used to refer to people who reported being white and no other race and who are not Hispanic. The term "black alone" is used to refer to people who reported being black or African American and no other race, and the term "Asian alone" is used to refer to people who reported only Asian as their race. The use of single-race populations in this report does not imply that this is the preferred method of presenting or analyzing data. The U.S. Census Bureau uses a variety of approaches. The race group "All other races alone or in combination" includes American Indian and Alaska Native, alone; Native Hawaiian and Other Pacific Islander, alone; and all people who reported two or more races.

Reference population: These data refer to the resident population.

Now, much more positive attitudes exist in the media.
Modernization is good for older adults!

- In traditional cultures, elders were respected – only if you had money/status
- Modern cultures rife with ageism
  - Retired adults are “rejected” – Most retirees are very happy
  - Older adults can’t handle technology – Fastest growing segment of new internet users are 65+
- We “throw away” elders into nursing homes – only about 4% in SNFs
Healthy Aging is Absolutely Necessary

- To decrease burden on economic systems
- Increase quality of life
Successful Aging

- Rowe & Kahn
- Good physical health
- Absence of disability
- Cognitively intact
- Good social integration
- "Zest" for living
Optimal Aging

Avoiding Disease & Disability

Engagement with Life

Successful Aging

High Cognitive & Physical Function

(adapted from Rowe & Kahn)
Myth #2: Abstinence is healthier
Overweight Is Major Risk Factor For Morbidity & Mortality

- Heart disease, diabetes, cancer, dementia

- Losing weight:
  - Decreases cholesterol
  - Decreases blood pressure
  - Increases insulin sensitivity
Skinnier is better – in mice!
In people: A little weight promotes longevity!
Low Blood Pressure may increase risk of CHD!
Low Cholesterol may also Increase Mortality risk

![Graph showing the relationship between cholesterol levels and total mortality. The graph indicates a trend where low cholesterol levels are associated with higher total mortality compared to higher cholesterol levels.](image-url)
But Varies By Type Of Mortality

- Total Cardiovascular Mortality
  - 45% of Total Mortality

- Respiratory Mortality
  - 5% of Total Mortality

- Digestive Mortality
  - 4% of Total Mortality

- Traumatic Mortality
  - 6% of Total Mortality
Moderation may be better!

- Jean Louise Calment (122)
- Attributed her longevity to
  - Chocolate (2 lbs/week)
  - Olive Oil
  - Laughing
Pearl’s carefully collected scientific data was presented in life tables in his book but the information clearly validates the now well-known **J-shaped curve** relationship between daily alcohol intake and total mortality. Pearl, himself, never published or described the J-shaped curve, but I have transferred to a graph the age-specific death rate tables above for 62-year-old males and females.
Is Exercise the Fountain of Youth?

Ponce de Leon decides not to drink from the Fountain of Youth after all.
Individuals Who Exercise Live Longer!
Even if you are already sick!
Exercise & Cognition

- **Attention**
- **Episodic Memory Learning Score**
- **Episodic Memory Recognition Score**

Comparison of attention and episodic memory scores across different conditions: Cycling, Stretching, Control.
Summary

- Modern societies extremely good for older adults
- Moderation may be key to healthy aging
Rationale

- Oregon projected to be 4th in the nation in proportion of older adults by 2025

- Future cohorts will be different than current older adults and will demand new health care, housing, and social options

- Institutions of higher education should lead the way in providing research base and human capital to serve the needs of an aging society
Center for Healthy Aging Research

Innovative research, education, and outreach to enhance the quality of life for older adults, their families, and society.
OSU Center for Healthy Aging Research

Innovative research, education, and outreach to enhance the quality of life for older adults, their families, and society.

Social & Ethical Issues in Technologies for Healthy Aging

Psychosocial Factors & Optimal Aging

Bone Health, Exercise & Function in Aging

Diet, Genes & Aging

Tory Hagen
Russ Turner
Mike Pavol
Viktor Bovbjerg
Ron Metoyer
Carmen Steggell
Overarching CHAR Goals

1. Increase Interdisciplinary Research in Aging
2. Enhance Collaborative Opportunities
3. Establish Identity and Recognition of OSU Aging Center

CHAR “Trademarks”
- Transdisciplinary
  - emphasis on health rather than disease
- Lifespan orientation
- Industry and community partnerships
- Translational work seamless due to collaborators (e.g. Extension)
Funded CHAR Multidisciplinary Collaborative Research, years 1-5

External dollars awarded up 365% from 2005
LIFE Registry

- Purpose is to provide Center researchers with resource to serve as a recruiting base for human participants
- Adults age 50 and over who are residents of Oregon are eligible to sign up for this registry (via web or by mail)
- 500+ people in the registry from all parts of the state (25% rural)
- 21 research projects have utilized the Registry to date
- Described as a key university resource in grant applications
Integrative Graduate Education and Research Traineeship (IGERT) Program: LIFE* in an Aging Society

- Establishing innovative new models for graduate education and training
- Educating U.S. Ph.D. scientists and engineers who will pursue careers in research and education, with the interdisciplinary backgrounds and become leaders
- Facilitate diversity in student participation and preparation, and to contribute to a globally engaged science and engineering workforce.

http://health.oregonstate.edu/igert/
LIFE Scholars: Undergraduates collaborating with CHAR faculty

2006-2011 LIFE Scholars
37 students
- Diet and Genes: 11
- Musculoskeletal: 13
- Psychosocial: 7
- Gerontechnology: 6

59% women
19% underrepresented minority
2011 LIFE Scholars
Join the OSU Gerontology Student Association

Join the growing field of gerontology!

The growth of our older population has created a high demand for professionals in this field.

Health facilities
Social service agencies
Corporations
Universities
Retirement communities
Community agencies
State and federal government agencies
Rehabilitation agencies
Job placement agencies

Plan for your future!

Earn a Gerontology Certificate
Experience a gerontology internship
Conduct undergraduate research in gerontology
Join Sigma Phi Omega, National honor society

Professional Development
Networking
Community Service
Outreach

Oregon State University OSU College of Health and Human Sciences
New OSU online modules designed to inform older adults and their family members

- Memory Difficulties: Should I be Worried?
- Depression in Later Life
- Medication Jeopardy
- Food as Medicine
- Physical Activity and Exercise in Later Life
Optimal Aging

- Positive adaptation in the face of loss
- Growth in wisdom & spirituality
- Preparation for the transition to death
- Ars moriendi (the art of dying well)
Thank You!