

**The Canadian
Longitudinal Study on Aging
(CLSA): Understanding the
complexity of aging and
health through
interdisciplinary research**

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CLSA



Hamilton



Why Study Aging in Canada?

Why Study Aging in Canada?

- Canadians are living longer and older people are making up a larger share of the population.
- Between 1980 and 1999, the average Canadian's life expectancy increased to 79 years from 75 years.
- By 2025, 1 out of every 5 Canadians (20%) will be 65 or older, compared to 1 in 8 (12%) in 2000.

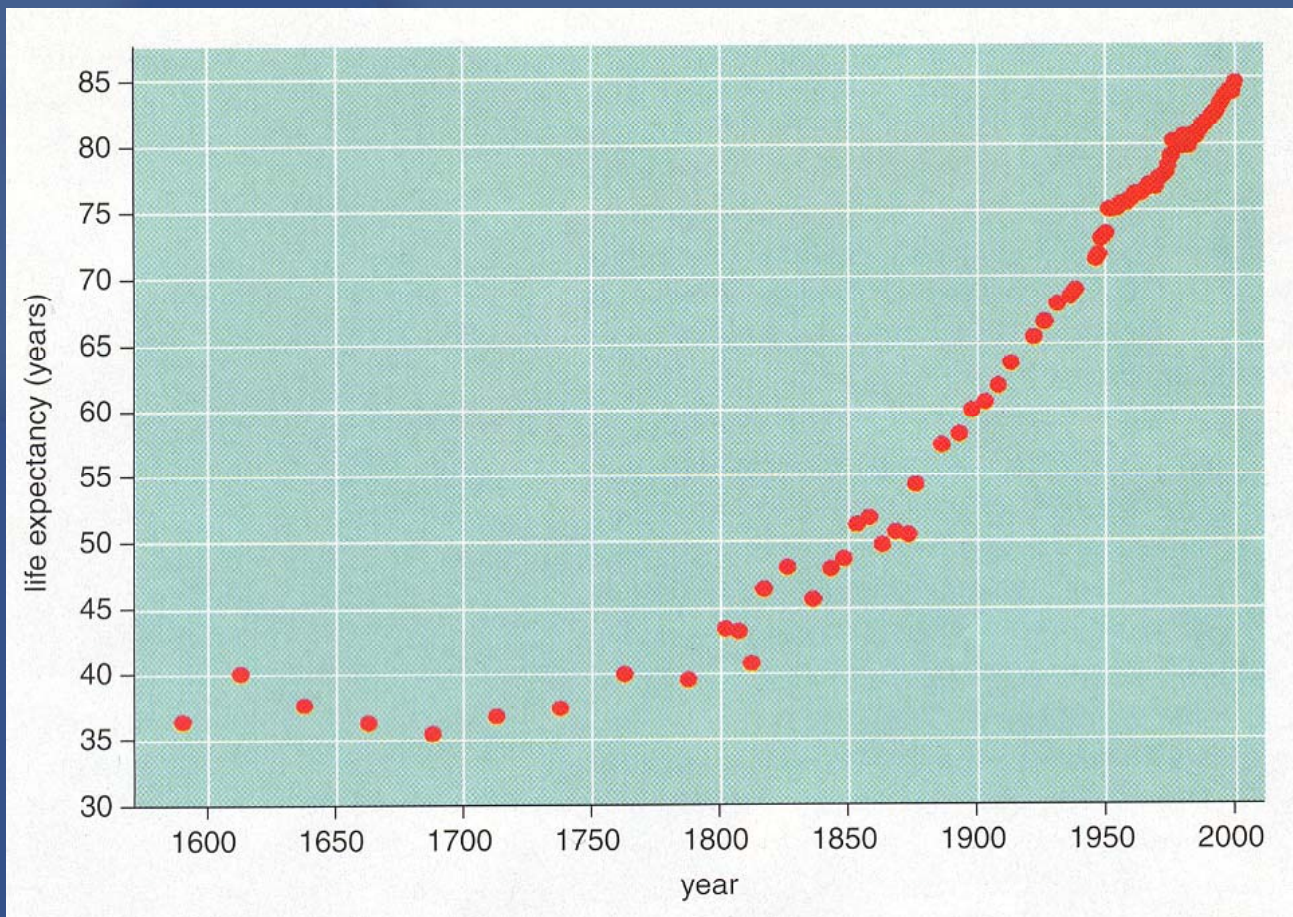
Why Study Aging in Canada?

- Baby boomers begin turning 65 in 2011
- Different needs, expectations
- Implications for health care system, social programs
- Need for evidence based decision making
- Generation of new knowledge



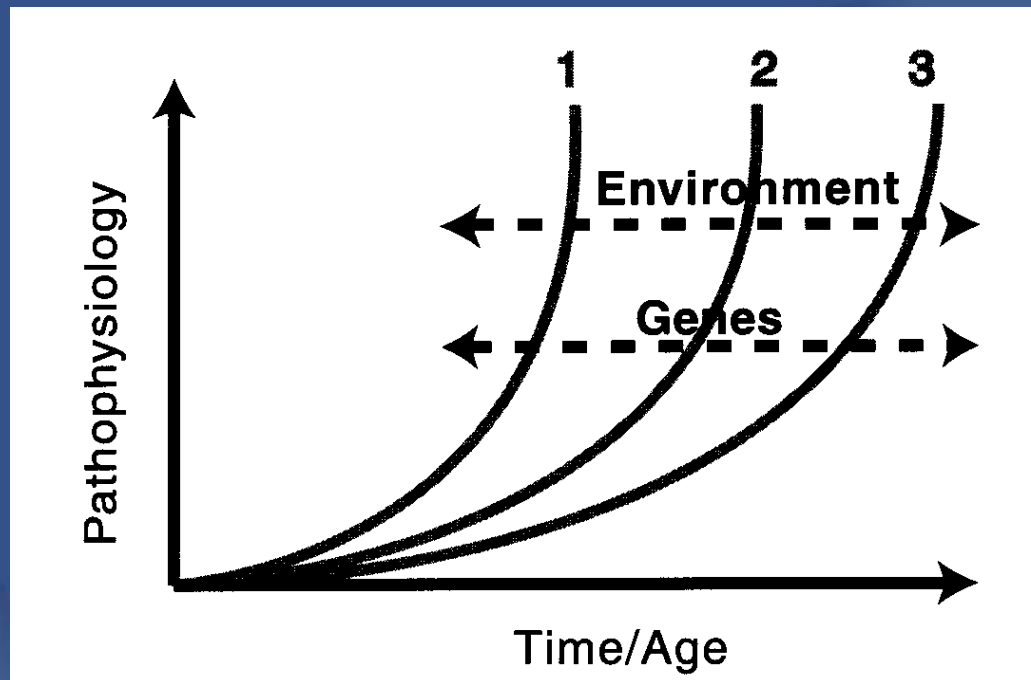
Boomers International™

World Wide Community for the Baby Boomer Generation



Why does Aging happen?

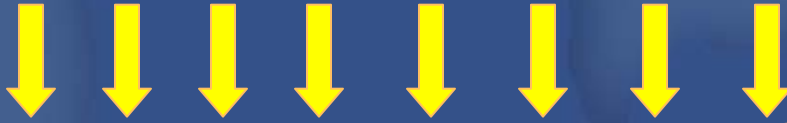
- What is “normal” in the aging process - primary aging
- More susceptibility to disease - secondary aging
- More heterogeneity in the elderly population
- Onset indeterminable and progression varied
- Genetic and environmental factors



Why does Aging Happen?

- Genes
- Nutrition
- Lifestyle
- Environment
- Chance

Environmental influences
(e.g., rural, socio-economic, exercise, nutrition)



Chronic diseases
diabetes, cancer, dementia
arthritis, cardio



Genetics

A yellow arrow that starts at the 'Genetics' box, curves upwards and then to the right, pointing towards the 'Aging' process.

infections

Four yellow starburst symbols arranged horizontally, pointing upwards towards the 'Aging' process.

Health Services Utilization



Future of Research on Aging

- Age-related changes---“complexity”
 - INDIVIDUAL LEVEL
 - SOCIETAL AND CONTEXTUAL LEVEL
- Innovative study design that advance science of aging and health as well as inform health and social policy
- Need for interdisciplinary long-term longitudinal studies

What is Canadian Longitudinal Study on Aging (CLSA)?

The Canadian Longitudinal Study on Aging (CLSA)

- One component of the Canadian Lifelong Health Initiative, a strategic initiative of CIHR
 - The Canadian National Birth Cohort
 - The Canadian Longitudinal Study on Aging (CLSA)

CLSA Conceptual Framework

- Characterize aging beyond the absence of disease: Healthy/successful aging
- Aging not aged
- Life course approach
- Determinants of health
- Continuum of micro to macro levels
- Complex interplay of bio-psycho-social
- Gene-environment interactions
- Adaptation

Overall Aims of the CLSA

- To examine aging as a dynamic process.
- To investigate the inter-relationship among intrinsic and extrinsic factors from mid life to older age.
- To capture the transitions, trajectories and profiles of aging: healthy/successful aging.
- To provide infrastructure and build capacity for sustained high quality research on aging in Canada.

Who will Participate in the CLSA?

- Longitudinal study
- Women and men aged 40 and over
- 50,000 individuals
- 20 year follow-up
- Repeated measurement (every 3 years)
- Linkage to existing databases
- Eventual public access data

What Issues is CLSA Trying to Address?

PHYSICAL HEALTH

- Activities of daily living/disability
- Frailty/co-morbidities
- Chronic diseases
 - Cardio/cerebrovascular, diabetes, hypertension, PD, cognitive impairment, osteoporosis, Injuries, arthritis, cancer
- Health conditions, states
 - Oral health, communication, vision, hearing

PSYCHOLOGICAL HEALTH

- Cognitive functioning
- Values and meaning
- Everyday competence, adaptive functioning, coping
- Personality, emotion, psychopathology
- Psychological distress

SOCIAL HEALTH

- Social networks and social support
- Work to retirement transitions
- Structural inequalities
- Matters of place and mobility
- Basic social characteristics

BIOLOGY

- Biochemical, physiological, metabolic markers of aging
- Genetics of aging
 - Disease susceptibility
 - Longevity

BEHAVIOURS

- Nutrition/diet
- Obesity
- Physical activity
- Alcohol/Tobacco
- Sleep

HEALTH SERVICES

- Medications
- Assistive devices
- Institutional care
- Homecare

Quality of Life

Pain

What kind of Information will the CLSA collect?

Active data collection (with consent)

- **Telephone Interviews**
- **Face-to-face Interviews**
 - **Psychological, social, economics, nutrition**
- **Clinical examination**
 - **Neuropsychological, medical, physical measures**
- **Blood, and urine samples**

Passive Data Collection

- **Data linkage at the individual level (with consent) to existing databases:**
 - **Administrative databases: physician services, hospitalizations, medications**
 - **Homecare, community services, mental health**
 - **Mortality**

Passive data collection contd..

- **Pollution: air, water, noise**
- **Climate: temperature, precipitation**
- **Distribution of industry, toxic chemical compounds**
- **Motor vehicle density**
- **Neighbourhood characteristics (census): Income, education, proportion lone parents**
- **Neighbourhood characteristics (municipality): Crime, proportion involved in voluntary sectors, newspaper readership**

What are Ethical, Privacy and Confidentiality Issues in the CLSA?

- Informed consent
 - Capacity to consent
 - Cognitive versus other factors that impact capacity to consent
 - Proxy consent
 - Full consent versus staged consent
 - 20 year duration
 - For biological samples, clinical assessment, questionnaire based information
 - Genetic and biochemical testing
 - Products from biological samples: cell lines
 - For unspecified research projects in the future
 - Blanket consent versus issues related to re-consent

- Informing participants/family physicians
- Risks and benefits
- Linkage with existing healthcare and other data bases
 - Privacy and confidentiality
 - Data ownership issues
- Facilitating the Public access of CLSA data
 - protecting confidentiality and privacy
 - Timely use of the data
 - Promoting innovative research

How will Canadians benefit from the CLSA?

- New knowledge on the factors that affects health and aging.
- Identification of ways to prevent disease and disability, and promote healthy aging and improved services.
- A rapid adoption of sound research into practice, programs and policies.

- Building Capacity and providing opportunities for existing and new Canadian and international researchers.
- Platform for future research.
- Recognition of Canada's position as a leader in cutting edge health and health care research.
- Stimulation of the economy through discovery and innovation.

**Do we have to wait 20 years
for the results?**

Who is Working Behind the Scenes on the CLSA?

Principal Investigator Triumvirate

Susan Kirkland - Dalhousie University

Parminder Raina - McMaster University

Christina Wolfson - McGill University



The CLSA Research Team

- 180 Co-Investigators
 - Representing 26 Universities across Canada
 - Investigators in all 10 provinces
- A special committee set by CIHR to address ethical and legal issues associated with the CLSA
 - Ethical, Legal and Societal Implications (ELSI)

Ethical, Legal, Societal Issues (ELSI)

- Lawyers
- Ethicists
- Philosophers
- Geneticists
- Epidemiologists
- Social scientists
- Privacy commissioner
- Community representative

Canadian Institutes of Health Research

- Institute of Aging (Dr. Anne Martin-Mathews)
- Other Institutes of CIHR
- Dr. Alan Bernstein (President of the CIHR)
- Governing Council (CIHR)

**Where is the CLSA Train now
and
where is it going next?**

CLSA TRAIN



CLSA Developmental Phase

- Phase I: April 1, 2004 to December 2005
 - Refine the study content
 - Conduct methodological feasibility studies
- Phase II: January 2005 to December 2006
 - Content related feasibility studies
 - Validity, reliability testing and translation of selected measures
- Phase III: January 2007 to March 2008
 - Pilot full protocol

Proposed CLSA Launch 2008!

Thank you!

For more information please visit our
website

www.clsa-elcv.ca

OR

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