

The CIHR Institute

It's time for research on aging. The CIHR Institute of Aging is helping older Canadians of today and tomorrow enjoy good health and quality of life by focusing on a wide range of conditions associated with aging. Led by Scientific Director Dr. Anne Martin-Matthews, the Institute and its stakeholders have identified cognitive impairment in aging, healthy and successful aging, biological mechanisms of aging, maintenance of functional autonomy and health services and policy relating to older people as its priority areas for research. The Institute, with its partners, is focusing on translating knowledge gained through research into better prevention and treatment. Through its Seniors' Workshops on Research, it is facilitating knowledge exchange and networking among seniors, seniors' organizations, service providers and the Institute, while gathering input on priorities for research on aging in different Canadian regions.

About the Canadian Institutes of Health Research

The Canadian Institutes of Health Research is the Government of Canada's agency for health research. Its objective is to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system. Composed of 13 institutes, CIHR provides leadership and support to close to 10,000 researchers and trainees in every province of Canada. For more information visit www.cihr-irsc.gc.ca

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's agency for health research. Through CIHR, the Government of Canada invested more than \$55 million in 2004-05 in aging-related research across Canada.

The facts

- By 2031, 23-25% of the population will be 65 and older, more than double their current proportion of 11% (based on 2005 estimates). By 2056, people 65 and over would represent 25-30% of the population.
- By 2056, an estimated one in ten Canadians would be 80 years or over, compared with about one in 30 in 2005.
- Life expectancy in 2003 hit a record high of 79.9 years—82.4 for women and 77.4 for men.
- In 2003, 73% of seniors reported that their health was excellent, very good or good.
- Income and education can affect health. Healthy Canadians over the age of 50 with higher incomes and higher levels of education are less likely to see their health deteriorate over a two-year period, compared to those with similar health status but lower incomes or less education.

Research finding solutions for healthy aging

- Researchers at the Brain Research Centre at the University of British Columbia, working under the direction of Dr. Max Cynader, are investigating The Aging Brain. The team members, many of whom are funded by CIHR, have found that running and other forms of physical exercise can triple the number of new brain cells in aged animals. They have also found that animals fed a restricted diet of 25-40% less than their free-feeding counterparts are living 30-40% longer and their vulnerability to age-related neurodegenerative diseases is similarly delayed.
- Nine of 14 seniors (aged 62-90) who took tango lessons dramatically reduced their risk of a severe fall, compared to only three of the ten seniors who walked twice a week, in a study by CIHR-funded researcher Patricia McKinley from McGill University. All of the volunteers in the study had suffered a fall within the past year and had developed a fear of falling—one of the biggest factors inhibiting seniors' autonomy. Dancing led to better coordination and balance and to improvements in "working" memory—tasks such as reordering random letters and numbers in a logical sequence. The memory improvements were significant and lasted for weeks after the end of lessons; less significant improvements in the walking group didn't last past the end of the walking.
- The ability to measure frailty in older adults is useful both for health care policy and for clinical care. CIHR-funded researcher Dr. Kenneth Rockwood of Dalhousie University has devised the Clinical Frailty Scale to measure frailty, something that, to date, has proved elusive. The seven-category scale is easy to use in a clinical setting and is a good predictor of death or the need for entry into an institutional facility. The scale also permits clinicians to exercise flexibility in response to specific factors.
- Older adults can learn to multitask if given the time to do so, according to research by CIHR-funded investigator Allison Sekuler of McMaster University. Her research provides evidence that deterioration is not inevitable in the aging brain. She has also found that older adults do

The researchers ... Professor François Béland, Ph.D.: Facilitating seniors' access to healthcare

just as well as young adults on visual, short-term memory tests—but use a different part of the brain to do so. And, when it comes to grasping the big picture, older adults' brains are quicker and better, suggesting that young people are better at focusing on finer detail, while older people see larger patterns more easily.

In the pipeline ... The Canadian Longitudinal Study on Aging

Canada's population is aging. But while life expectancy has increased, life without disability has not increased to the same extent. A growing number of older Canadians will face the combined effects of a decline in physical function, medical problems and the development of chronic diseases. Improving the health of older Canadians requires a better understanding of the processes of aging.

The Canadian Longitudinal Study on Aging (CLSA) is a large, national, long-term study that will follow 50,000 Canadians aged 40 and over for a period of at least 20 years. The study will collect information on the biological, medical, psychological, social and economic aspects of their lives to better understand how these factors have an impact on aging. The study will examine health patterns and trends and identify ways to reduce disability and suffering among aging Canadians.

The study builds upon previous efforts such as the Aging in Manitoba Longitudinal Study, the longest and most comprehensive study of aging in Canada to date, which has followed almost 9,000 older Manitobans over the 30-year study period.

After completing his doctoral studies, Professor François Béland's first job was to evaluate the first home care service policy in Quebec—three-quarters of the users of this service were seniors. Since then, he has focused his research on social gerontology, in particular access to health services, the health of elderly populations and methods of integrating health and social services for seniors.

In 1983, he entered the Health Administration department of the Université de Montréal's Faculty of Medicine as a researcher and is now a full professor there. He is a researcher with the *Groupe de recherche interdisciplinaire en santé* (GRIS) at the Université de Montréal, associate professor with the Geriatric Services department of McGill University's Faculty of Medicine, and co-director, with Dr. Howard Bergman, of SOLIDAGE, the Université de Montréal-McGill University research group on integrated services for older persons.

SOLIDAGE was created in 1999 as an Interdisciplinary Health Research Team, funded by CIHR to foster collaboration among researchers on integrated services for seniors. Based at the Lady Davis Institute for Medical Research, Jewish General Hospital, SOLIDAGE focuses on research on the integration of services and the frailty of the elderly, as well as their implications for health policies, funding, organization and management of services, and clinical practice.

SOLIDAGE was formed to conduct research in several areas. The conceptualization, implementation and evaluation of the system of integrated services for seniors (SIPA - *Système de services intégrés pour personnes âgées*) is one of SOLIDAGE's major accomplishments. In this evaluation, 1,230 frail elderly individuals were recruited for SIPA's experimental study in Montreal. The results revealed that SIPA had successfully replaced institutional services with community resources at no additional cost, without increasing the burden on loved ones, and maintaining, if not increasing, the quality of services.

SOLIDAGE works closely with the Canadian Initiative on Frailty and Aging and the Canadian Longitudinal Study on Aging.

“Collaboration allows us to pool the information available to help us implement effective health policies and ensure the best possible quality of life for elderly individuals across Canada,” affirms Professor Béland.

Professor Béland plans to build on the support he has received for SOLIDAGE in order to continue his research and researcher training program and actualize the collaboration begun by SOLIDAGE and other research groups in Quebec, Canada and other countries over the past few years.