

Alzheimer's disease / dementia and rehabilitation

Toronto Rehab's Geriatric Psychiatry Service, part of the Geriatric Rehabilitation Program, provides interprofessional inpatient and outpatient services for seniors experiencing physical, mental, emotional and social issues as a result of dementias.

What are dementias?

- Dementias are conditions that cause deterioration in cognitive function, resulting in symptoms such as loss of memory, judgment and reasoning, and changes in behaviour, communication and mood that are severe enough to impact on daily living.
- Dementia affects each person differently, making it difficult to predict the speed, order or severity of symptoms. There is no known cure.
- Alzheimer's disease is the most common form of dementia. It is a progressive and degenerative brain disorder.
- Dementias affect how people think, feel and act, influencing all aspects of their lives. The impact of dementias on individuals, families, caregivers and the health care system is enormous.

Facts about dementias

- More than 500,000 Canadians have Alzheimer's disease or a related dementia. This includes more than 420,000 people over the age of 65, and more than 70,000 under 65.
- One in three Canadians knows someone with Alzheimer's disease. Almost one in five Canadians has Alzheimer's disease in their immediate family. Alzheimer's disease accounts for about 64% of all dementias in Canada.
- In just five years, as many as 50% more Canadians and their families could be facing Alzheimer's disease or a related dementia.
- By 2031, more than 750,000 Canadians will have Alzheimer's disease or a related dementia.
- The biggest risk factor for Alzheimer's disease is family history.
- Women make up almost 75% of Canadians with Alzheimer's disease.
- Canadians currently spend an estimated \$5.5 billion per year to care for people with Alzheimer's disease and related dementias.
- As the population ages, the number of Canadians diagnosed with dementias will increase dramatically. Rehabilitation is a vital part of Canada's solution to this challenge.

Toronto Rehab's expert dementia rehabilitation

- At Toronto Rehab, rehabilitation is the interprofessional process of helping people who experience disabling injury, illness and conditions associated with aging to regain the skills, abilities, confidence and independence they need to live their lives to the fullest.

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- Rehabilitation can improve quality of life for people with dementias by helping them use retained skills in a meaningful way and implement strategies to minimize memory and cognitive deterioration. Rehabilitation can also help understand and control the context and triggers of responsive behaviours, such as wandering and aggression, to maximize independence.
- Rehabilitation treatment for dementia involves an individualized combination of, behaviour assessment and monitoring, individual therapy, therapeutic group activities, medication, and family and caregiver education and counselling.
- In order to ensure our patients and others around the world can benefit from the newest therapies, methods and equipment, leading-edge research is at the centre of the care Toronto Rehab provides. Through close collaboration between Toronto Rehab researchers and clinicians, innovations in research are rapidly translated to the clinical setting.

Pushing the frontiers of dementia rehabilitation research

Toronto Rehab conducts high-impact research that leads to advances in knowledge, treatment and technology and has a valuable impact on people affected by disability and their caregivers. Our rehabilitation research program is one of the largest and most diverse in North America. Current dementia-related research projects include:

- **Intelligent homes** – Dr. Alex Mihailidis, mechanical and biomedical engineer, is involved in a wide range of projects to create intelligent, self-adaptive technologies that will enable older adults with cognitive impairments to stay safely in their homes. Examples of his team’s research include a “talking” bathroom outfitted with a computer screen that gives video and verbal cues to assist with hand washing, and a personal emergency response system that can detect when a person has fallen and call for help.
- **Finding your way** – Dr. Lawrence Grierson, postdoctoral fellow, is working with scientist Dr. Heather Carnahan to test the applicability of a way-finding belt that uses a programmable combination of GPS and Bluetooth technologies and pulse sensations to help people with mild dementia find their way. Losing one’s way is a common symptom of dementia, which greatly reduces independence.
- **Driving safety** – Geriatrics researcher Dr. Gary Naglie is leading a study to evaluate the long-term driving safety of people with mild cognitive impairment and very mild dementia, and the screening potential of various office-based assessment measures. This research is important because older drivers are the fastest growing segment of the driving population and, because of a higher prevalence of medical conditions that can affect driving, they have the highest crash rate per mile driven of any age group other than teenagers.
- **Improved talking and understanding** – Communication Research Team leader Dr. Elizabeth Rochon collaboratively developed a novel language therapy for people with a form of dementia called primary progressive aphasia. This neurodegenerative disorder, which tends to afflict younger people than those with Alzheimer’s, leaves a person’s memory and judgment intact but can affect the ability to talk or understand words.

For more information

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