

Q&A

What is iDAPT?

iDAPT (Intelligent Design for Adaptation, Participation and Technology) is Toronto Rehab's \$36 million rehabilitation research initiative. iDAPT will be one of the most advanced rehabilitation research facilities in the world where new and effective treatments and assistive devices will be developed to improve and enhance the lives of individuals recovering from, and living with, disabling injury and illness and age-related conditions.

iDAPT, with its high tech laboratories and unique testing facilities, is part of the Toronto Rehabilitation Institute's ambitious capital redevelopment and transformation. Toronto Rehab aspires to be an international leader in rehabilitation science. While it is well on its way, the redevelopment of its aging facilities is crucial to achieving this goal. Toronto Rehab facilities will undergo an unprecedented multi-million dollar transformation over the next four years. In addition to iDAPT, the hospital's redevelopment includes renovations to its Lyndhurst Centre and an extensive expansion and renovation at its University Centre.

Funding for the redevelopment of Toronto Rehab is being provided in part by Toronto Rehabilitation Foundation. The Foundation's current capital fundraising campaign, *Everything Humanly Possible*, is focused on raising funds to create five endowed research chairs to support Toronto Rehab's growing rehabilitation research enterprise, now one of the largest in North America (three Chairs have already been endowed: Toronto Rehab/U of T Rehabilitation Science Research Chair; Saunderson Family Chair in Acquired Brain Injury Research; and the Spinal Cord Injury Rehabilitation Research Chair).

Why is iDAPT needed?

The number of people with disabilities is on the rise worldwide. There are many reasons for this trend, including: aging populations; increased life expectancy; medical advances that preserve and prolong life; and a rise in chronic health conditions such as the epidemics of diabetes and obesity. In Canada alone, over 3.6 million (about one in eight) Canadians have a disability affecting their mobility, agility, hearing, vision or learning. The number of Canadians living with the consequences of disabling injury and illness is expected to grow to more than 4.1 million by 2011.

The demand for rehabilitation services is growing and with it, the need to develop new and more effective treatments, and assistive devices and technologies that will improve the quality of life and independence of people with disabilities and people as they age. Rehabilitation is the emerging frontier in health science.

What research will be done through iDAPT?

iDAPT research will push the boundaries of rehabilitation science in Canada by using the most advanced technology and equipment, and by providing a research environment where ideas can be cultivated, tested and applied in the real world.

Current assistive devices often do not function well in challenging environments, like in an inaccessible building or home or in icy and snowy winter conditions, or they are not attractively designed or as user-friendly as consumers would like. iDAPT facilities will enable researchers to safely study the complex interactions between people and their environment and help people with disabilities adapt to their new challenges, and equip them with innovative and well-designed products that they will actually use and benefit from.

Practical solutions will be developed to address the many challenges faced by people with disabilities and improve their quality of life. Research will lead to innovative assistive technology and interventions such as:

- wheelchairs and other mobility aids to help people get around in ice and snow;
- intelligent, self-adaptive technologies that will enable older adults with cognitive impairments, such as Alzheimer's disease or other types of dementia to safely remain in their own homes;
- communication aids that will function better in noisier and busier environments with reduced effort;
- more effective treatments for paralysis from stroke and spinal cord injury; and
- better treatments to help prevent cardiovascular disease and stroke in people with sleep disturbances such as sleep apnea.

Where will iDAPT facilities be located?

Part of the Toronto Rehabilitation Institute's multi-million dollar redevelopment, iDAPT will be housed at the hospital's University Centre (550 University Ave., Toronto) and Lyndhurst Centre (520 Sutherland Dr., Toronto) and in the Rehabilitation Sciences building at the University of Toronto (500 University Ave., Toronto).

When will iDAPT research begin?

Several iDAPT labs and workshops are already open and research is currently taking place. The Rehabilitation Engineering Laboratory at the hospital's Lyndhurst Centre, for example, is already working on research to help restore or replace functions of the human neuromuscular system when it is damaged while new and innovative assistive devices are being designed and prototyped in the interdisciplinary Research and Design Studio and cutting-edge Rapid Prototyping Workshop.

It is anticipated that the remaining iDAPT labs and workspaces – including the hallmark of iDAPT, the Challenging Environment Assessment Laboratory (CEAL) – will be operational by 2011, when the University Centre redevelopment is expected to be complete.

How is iDAPT funded?

Toronto Rehab's iDAPT research facility will bring together the brightest research minds and state-of-the-art technology in a collaborative venture, one that involves participants from both the public and private sectors who share a vision of improving quality of life for older people and those living with disabilities.

Funding has been provided by the federal government through the Canada Foundation for Innovation, by the provincial government through the Ontario Innovation Trust and the Ontario Ministry of Research and Innovation, by Toronto Rehab Foundation, and the University of Toronto. Local, national and international private-sector partnerships will be vital to iDAPT research and to the development of practical interventions and products.

Where can I find more information about iDAPT?

Information and updates about iDAPT research and facilities is available at www.torontorehab.com. To view iDAPT media material, please go to the Media Centre on Toronto Rehab's website or to book an interview with an iDAPT spokesperson, contact Carolyn Lovas, Media Relations Specialist at 416-597-3422 ext. 3837 or email at: lovas.carolyn@torontorehab.on.ca.