



iDAPT[®]
SOLUTIONS

www.torontorehab.com
416-597-3422



iDAPT[®]
SOLUTIONS

Swallowing Rehabilitation Research Laboratory (SRRL)



Swallowing is as basic as breathing and difficulties with it are surprisingly common. An estimated 200,000 Canadians have swallowing disorders (dysphagia) caused by various diseases and conditions, including Parkinson's disease, cancer, Alzheimer's disease, stroke and brain injury. People with swallowing impairments often face a lifelong diet of puréed food and thickened liquids, and can die from choking or pneumonia.

The Swallowing Rehabilitation Research Laboratory (SRRL) at iDAPT is the most sophisticated of its kind in North America for studying swallowing disorders. The lab is equipped with the latest tools to measure oral movements during swallowing. Researchers use this lab to better understand and develop new ways to treat swallowing problems.

One area of active inquiry is the role of the tongue in swallowing. By tracking its movement, researchers are gaining knowledge about the tongue's behaviour during swallowing that will help them identify ways to get it working again in people with dysphagia.

Collaborating with scientists at Bloorview Kids Rehab, researchers in the SRRL are also working on a non-invasive device that can detect swallowing abnormalities by reading neck vibrations. It is hoped the device could also be used to easily ascertain whether someone with swallowing problems has inadvertently inhaled food. Aspiration, as it is called, can lead to pneumonia.

Probing the relationship between aspiration and respiratory problems, such as pneumonia, is another area of intense activity in the SRRL. Researchers are exploring the possibility that dental hygiene could help limit the presence of harmful bacteria in saliva, so that aspiration risk is reduced in patients with dysphagia.

Working in partnership with clinicians, SRRL researchers conduct important clinical trials. For example, they are working with speech-language pathologists at Toronto Rehab to study the effectiveness of surface EMG biofeedback and of a new tongue-skill training therapy—techniques that can help some people return to more normal eating and drinking.

For more information on the SRRL and iDAPT at Toronto Rehab, please visit www.torontorehab.com or contact Dayle Levine, iDAPT Project Manager, at 416-597-3422, ext. 7602 or by email: levine.dayle@torontorehab.on.ca.

iDAPT is Toronto Rehab's \$36 million rehabilitation research initiative to develop one of the world's most advanced rehabilitation research facilities where new therapies and assistive technologies will be developed for older people and those living with disabling injury or illness.