

## MISSION

To understand the nervous system, discover mechanisms of disease and develop and deliver effective treatments for neurological conditions.

To foster an outstanding research and clinical atmosphere by promoting interaction and collaboration.

To train and mentor new generations of scientists and skilled health care professionals and foster clinician scientists.

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Montreal Neurological Institute and Hospital

# The Development Fund for the Aging SPINE



Centre universitaire  
de santé McGill



McGill University  
Health Centre

# What is the aging spine?



- Many people will experience back, neck, or sciatica-type leg pain in their lifetime.
- Fortunately, these conditions are often transient or non-disabling, and do not require surgical treatment.
- Unfortunately, a minority of individuals exhibit the severe and under-recognized consequences of an aging spine: **Degenerative Cervical Myelopathy** and **Lumbar stenosis**.



## Degenerative Cervical Myelopathy (DCM)

- The **most common** cause of spinal cord injury in individuals over 55
- Due to spinal cord compression from degenerative changes in the cervical spine
- Initial symptoms include: **hand numbness, loss of hand dexterity, and imbalance**
- Often unrecognized by family physicians and family members
- Confused for “old age” or carpal tunnel syndrome
- **If untreated**, it leads to paralysis
- **If treated** the majority of individuals have improvement in symptoms

## Lumbar stenosis

- **Very common in older individuals**
- Arthritic changes in the lumbar spine compress nerve roots that innervate the lower extremities
- There is nerve root dysfunction leading to **leg weakness, numbness or pain when upright**
- Characteristically, these leg symptoms improve with sitting or leaning forward
- Often confused for “old age”
- Lumbar stenosis is **easily treated with minimally invasive day-surgery**



# Dr. Carlo Santaguida's Development Fund for the Aging Spine

## Building a better future for spine patients

Dr. Carlo Santaguida and The Neuro's Spine Program strive to improve the outcomes of individuals with problems related to the aging spine, through hard-work and dedication in 6 distinct clinical and research programs:

- To ensure quality care, all patients will be enrolled in "outcome measure assessments."
- The collection of data will be a feedback loop for process improvement.
- Although this is an old idea in non-medical fields, there is a surprising lack of outcome based quality control in surgery. We will change this.
- No unexpected outcomes will be accepted without review.

1  
Outcome and  
evidence based  
spine care

2  
Spinal  
surgery  
innovation

- Dr. Santaguida has the skill set to perform all new and innovative spine techniques - **minimally invasive approaches** are now established at The Neuro and we will continue to build on these surgical approaches.
- Emphasis on developing new navigation technology to ensure perfect implant placement and precise decompressions of nervous structures.

- Most surgical treatments do not require admission to the hospital if performed minimally invasively.
- We are developing a comfortable and efficient day-surgery program that will have the majority of our patients **recovering in the comfort of their home**.
- Leads to patients having a better surgical experience, at a lower cost to our healthcare system.

6  
Spine  
day-surgery  
program

A  
BETTER FUTURE  
FOR SPINE  
PATIENTS

3  
Patient  
advocacy  
and access

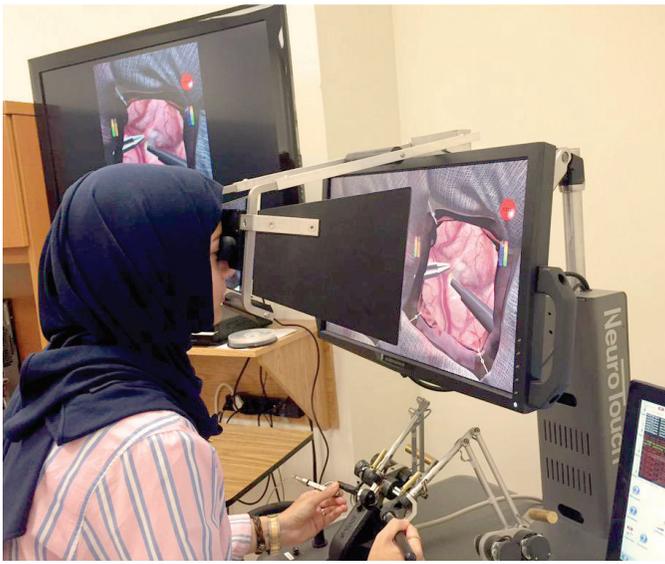
- **Current wait times for spine care and under-diagnosis of spine pathology are unacceptable.**
- Partly due to insufficient resources but inefficiency in broken clinical pathways is the more likely culprit.
- Develop a program that triages patients so that *surgical* patients are seen more quickly and non-surgical patients receive appropriate and timely treatment.

- Dr. Santaguida will serve as an ambassador to the spine world to **attract large multi-centered trials to The Neuro**.
- Provide patients with access to the newest medical and surgical treatments, and cutting-edge therapeutics.

5  
Participation  
in multi-centred  
trials

4  
Surgical  
simulation and  
education

- Our simulation program will use virtual scenarios to give trainees the necessary skill sets, so that they are well trained prior to entering an operating room.
- Introduction of a competency-based curriculum to educate our trainees more efficiently.



## Facts:



→ Degenerative Cervical Myelopathy is the most common **cause of spinal cord injury**.



→ **Spine and back pain is the leading cause of disability**. It occurs in similar proportions in all cultures, interferes with quality of life and work performance, and is the most common reason for medical consultations. The incidence of these conditions also increases with age.



→ Disability costs Canadians **\$19.8 billion** in direct and indirect costs every year.



→ During the next 25 years, the number of people older than **65 years of age will increase by 125%**, with a doubling of those older than age 85 years.

## How can I help?

Your donation to the **Development Fund for the Aging Spine** will help our patients in two ways:

1. Provide the funds needed to meet the program's **most urgent needs** – such as new equipment and the support of our day-surgery centre.
2. **Build an endowment** to guarantee a strong future for the program and sustainable high-quality care for patients.

**To make your gift today, please contact:**  
**The Neuro Development Office at 514-398-1958.**  
Donations.mni@mcgill.ca

Please note that all donations are eligible for a 100% tax receipt.