

If you are interested in participating or learning more about the study, please contact the National Research Coordinator at als@ualberta.ca or 780-248-1805

THE CANADIAN ALS NEUROIMAGING CONSORTIUM (CALSNIC)

WHAT?

MRI imaging study in ALS

WHEN?

Recruitment is now underway

WHERE?

This study is being conducted at:

- University of Alberta (EDMONTON)
- University of Calgary (CALGARY)
- Western University (LONDON)
- McGill University (MONTREAL)
- University of Toronto (TORONTO)
- University of British Columbia (VANCOUVER)
- Laval University (QUEBEC CITY)

WHO?

Patients with ALS and other motor neuron diseases, and healthy volunteers

MRI Biomarkers in ALS

We are looking for individuals with Amyotrophic Lateral Sclerosis (ALS) and other motor neuron diseases, and healthy adults to participate in this research. This multi-centre study aims to include over 700 patients and healthy subjects from 7 sites across Canada.

Advanced MRI techniques can provide an objective measure of degeneration (a “biomarker”) by examining brain structure, wiring, chemistry, and function. We will develop and evaluate novel MRI techniques that could improve our understanding of ALS and provide a means to diagnose it sooner.

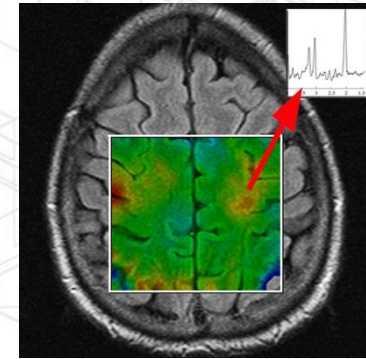
Importantly, we expect these techniques to improve how new drugs are tested, which may lead to the more rapid discovery of a treatment for ALS.

Each participant will have 3 MRI scans over a period of 8 months, along with neurological and cognitive evaluations. Study visits will take 2 - 3 hours and parking passes will be provided. The MRI will be done on a special high powered MRI scanner in a facility for neuroimaging research. MRI is a safe technique that does not involve radiation.

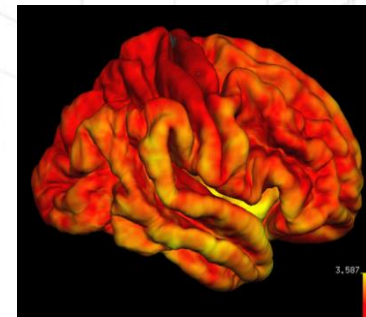
The minimum criteria to be eligible to participate are:

- Be able to lie still inside an MRI scanner for approximately 60 minutes
- No pacemaker
- Greater than 40 years of age if you are a healthy individual

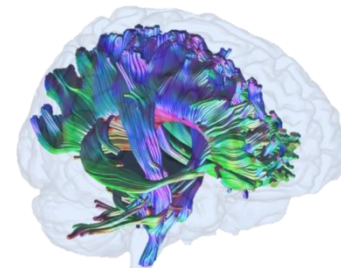
Examples of MRI images and techniques



Magnetic Resonance Spectroscopy of the motor cortex, measuring metabolites of motor neurons



Cortical thickness analysis with color map representing thickness of the gray matter in millimetres



White matter fibres (the wiring of the brain) visualized using Diffusion Tensor Tractography

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