

Alzheimer's: Clinical trial using magnetic pulses in bid to halt disease's progress

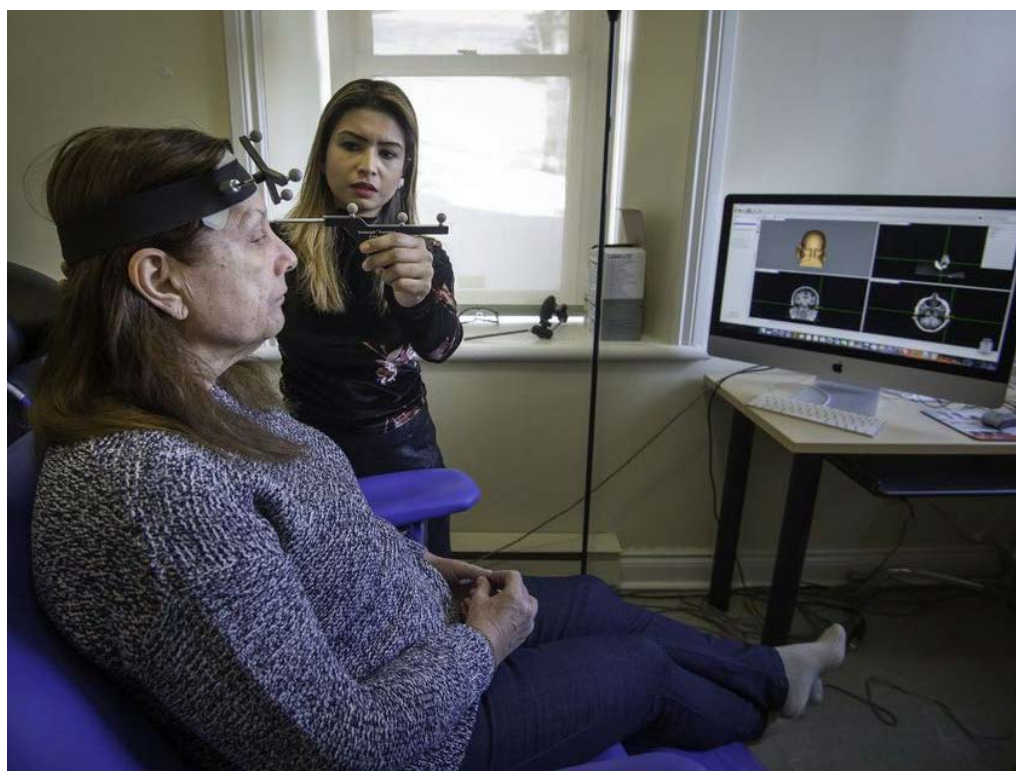
Researchers are attempting to find out whether magnetic pulses applied to the scalp can halt Alzheimer's inexorable decline.



CHARLIE FIDELMAN, MONTREAL GAZETTE

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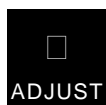
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Dr. Rishanthi Sivakumaran creates reference points on the head of Micheline Morency at the Transcranial Magnetic Stimulation laboratory at the McGill research lab in Montreal on Wednesday, Jan. 24, 2018. PETER MCCABE / MONTREAL GAZETTE

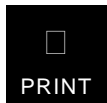


Serge Gervais says he couldn't watch passively as his wife of 42 years slowly lost her memory. She had received a diagnosis of Alzheimer's, a degenerative brain disorder that destroys brain cells.



So Gervais went to the internet looking for ways to ease her symptoms, from

drug therapies to cannabis oil, and then he found an international clinical trial in Montreal run by the McGill University Health Centre. The study uses magnetic pulses to stimulate the brain.



Researchers are attempting to find out whether magnetic pulses applied to the scalp can halt Alzheimer's inexorable decline.

"I'm not waiting for a miracle," said Gervais at the MUHC's Transcranial Magnetic Stimulation (TMS) laboratory, while his wife, Micheline Morency, 62, waited for treatment.

"If Micheline remains stable, that's great," he said. "But if there's an improvement, well, that would be even better."

An electromagnetic coil is placed on the scalp, and its pulsing magnetic field produces electrical currents that stimulate cells in the frontal lobes of the brain. In this study, the magnetic stimulation will take about 20 minutes a day, for two to four weeks.

Morency is among the first patients recruited to the Montreal study run by MUHC neuropsychologist Lisa Koski, whose lab is on the grounds of the former Royal Victoria Hospital downtown. Her team is hoping to recruit a total of 100 participants locally to complete the study.

According to recent statistics, more than 750,000 Canadians are living with the disease, and rates are expected to double during the next 20 years.

Koski's laboratory is the only one in Quebec — with sister sites in Manitoba and Australia — now seeking participants with early or mid-stage Alzheimer's for the double-blind and placebo-controlled study, which means that neither patients nor technicians will know who is getting real therapy and who is getting a sham. Those who get the sham treatment will be offered active treatment after the six-month followup period has ended.

This non-invasive and painless technology been used to treat depression and anxiety since 1985, usually after medication and psychotherapy failed to work. Now it's being tried for other conditions.

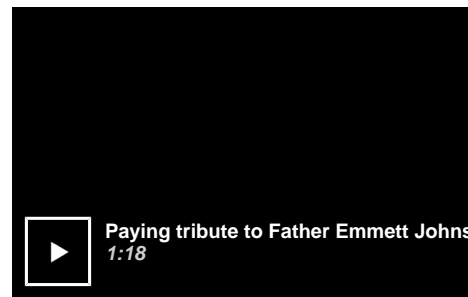
The project is based on results from an earlier trial by Zahra Moussavi, Canada Research Chair in Biomedical Engineering, at the University of Manitoba.

Initially, Moussavi had established a TMS laboratory for Alzheimer's treatment in Manitoba with the dream of helping her own mother battle an unrelenting condition that turned her into a confused and anxious patient.

"(To) be able to see her, even only a few minutes, the way she used to be before Alzheimer's," Moussavi told the Montreal Gazette Thursday. "That didn't happen; my mom passed away a month after my lab became functional."

To honour her mother's memory, Moussavi ran a pilot study with 10 volunteers, each at a different stage of Alzheimer's severity. Results were so encouraging that two years ago, Moussavi received \$1.8 million from the Weston Brain Institute, a private organization that funds research on brain diseases of aging, to launch this large clinical trial on transcranial magnetic stimulation for Alzheimer's disease.

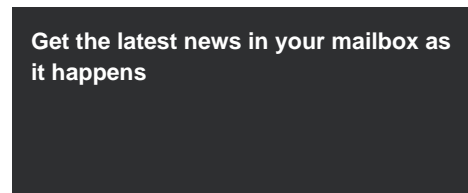
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What Moussavi had found is that applying magnetic pulses to the brain was effective for those with early and moderate-stage Alzheimer's. It improved memory and other cognitive functions for those with early disease, and those advanced stages of the illness remained the same, or stable, as long as they were getting treatment.



Koski noted that participants can also continue their current drug therapies. The magnetic stimulation will be complementary to other therapies patients may already be using, she said.

"Despite progress in dementia research, we still don't know how to prevent Alzheimer's or stop its progression," Koski said. "We hope to use it to help slow down the progression of Alzheimer's in patients with early and moderate stages of the disease. The effect might not last forever, but we hope to bring these people a better quality of life."

According to the World Health Organization, nearly 50 million people worldwide have dementia, a figure that's expected to soar to 131.5 million in 2050.

Anyone wishing to participate in the study should call Dr. Rishanthi Sivakumaran at 514 934-1934, Ext. 34439

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