

The life-changing opportunity for mental health of rTMS

When Dr. Lisa Harpur began using repetitive transcranial magnetic stimulation (rTMS) therapy to treat her patients, she didn't anticipate the radical outcomes her patients would experience.

Mental health struggles can impact different people in different ways. For some, the support they receive through therapy or medications helps them develop tools to manage their symptoms. But for others, after trying many different approaches, it can feel like nothing is working and there is no hope.

Struggling with extreme depression can make it challenging to maintain a job, enjoy time with family and even make any plans for the future. Feelings of immense sadness and worthlessness become overbearing, and the weight of it all can interfere dramatically with a person's life. So what options are left there when someone has tried everything?

rTMS is a non-invasive brain therapy that uses magnetic fields to stimulate nerve cells and improve the symptoms of depression. It generates pulses through a figure-eight coil specifically placed in the dorsolateral prefrontal cortex (the frontal lobe of the brain). Patients undergo a total of 30 treatments over six weeks with each one lasting anywhere from as little as three minutes to up to 37-and-a-half minutes. rTMS is non-invasive and relatively painless.

The stimulation attempts to reactivate parts of the brain that have decreased activity during depression. It is a therapy method offered to people who have what is classified as treatment-resistant depression. These individuals have tried, without success, at least two different medications, but in reality, many who seek rTMS are down to their last resort.

And the outcomes are renewing hope.



“rTMS, for many people, is a life-changer. It has provided me with the opportunity to see changes in patients that I have never seen before,” says Dr. Harpur.

Depression affects everyone in the family and anyone close to a person who is struggling.

“People notice at first that they are able to make decisions more easily. They feel more motivated and energetic in their life and we typically see these changes [at the clinic] in people before they see them in themselves.

By the end of treatment, those who have not been at work for a long time can return to work or school. Many people have the confidence and ability to apply for jobs. It’s really exciting for us to see these changes in people.”

One of the clinic’s patients shared her feeling of joy spending the day with her granddaughter, an activity that previously felt too burdensome for her even think about. Now, it’s one of her favourite things to do.

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“We have had family members come and say ‘we have our family member back and you have changed our lives.’

It is so exciting to come to work and know that we can help people and that people can get some relief from their depression. People can get function back in their lives.



Where they come in feeling fearful and hopeless, they leave feeling optimistic, in control of their lives, and like they have a sense of purpose again. To see how they can connect with people in their lives is so rewarding for me.”

There are five rTMS clinics in Alberta, two of which are located in Calgary at Rockyview General Hospital and Foothills Medical Centre. Dr. Harpur and her team hope to build the program across the province, but there is currently a lack of funding.

The rising need for mental health services

- Investments in therapies like rTMS are highlighting the importance of mental health for so many people relying on our health care system
- 1 in 5 Canadians will struggle with mental health in their lifetime.*
- More than 6.7 million people living in Canada are living with a mental health problem or illness today.**
- By 2030, the leading burden of disease worldwide is anticipated to be depression.*

*2019 Mood Disorders Society of Canada (www.mdsc.ca)

** Mental Health Commission of Canada (www.mentalhealthcommission.ca)

You can support clinicians like Dr. Harpur in discovering new technology and treatments that are transforming lives. Become a monthly donor and make an ongoing investment in health that ensures breakthrough treatments, like rTMS, are available for patients who are seeking hope!