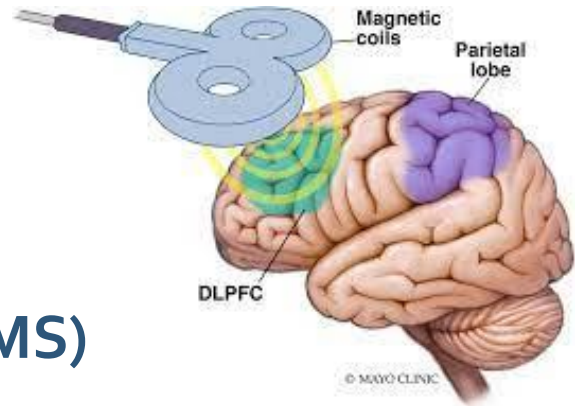




**NL Health  
Services**

# Repetitive Transcranial Magnetic Stimulation (rTMS)

## Information for Physicians



### How can I describe rTMS to my patients?

- rTMS is a type of neurostimulation which uses a magnetic field, approximately the size of a toonie, to stimulate parts of the brain associated with mood regulation.
- A magnetic coil is placed against the scalp and short, repeated pulses of magnetic energy are used to gradually increase (stimulate) or decrease (inhibit) the activity in the region of the brain underneath the magnetic coil.

### What kinds of disorders can be treated with rTMS?

- rTMS has been approved by Health Canada for the treatment of major depression since 2002.
- Efficacy rates of rTMS have a >50% reduction in symptoms in 50-60% of patients and remission in 30-35% of patients with medically refractory depression.

### How does rTMS compare to ECT?

- ECT's efficacy is greater than rTMS, with remission rates of 60-70% in refractory depression.
- Patients tend to have a greater tolerability for rTMS as it does not require an anesthetic, and does not produce the same adverse effect on cognition.

### Can medications interfere with rTMS?

- GABAergic medications and anticonvulsants may block the effects of rTMS.
- Ideally, anticonvulsant medications (including gabapentin, pregabalin, topiramate, lamotrigine, valproate, carbamazepine, and phenytoin, among others) are discontinued prior to rTMS.
- Benzodiazepines must be tapered down to less than 2 mg of lorazepam equivalent per day.
- Patients should be on a stable regimen of medications for at least 4 weeks before treatment.
- Medication changes just prior to referring a patient to rTMS may impact the start date of the course of rTMS.
- Medication changes during the course of rTMS should be avoided as it may impact the ability of the rTMS team to interpret response and nonresponse to the treatment. If a medication is changed/alterd during the rTMS treatment period, it should be clearly communicated with the rTMS team.

### At what point should I consider referring a patient for rTMS?

- After unsuccessful trials of medication and/or therapy, but before attempting ECT. i.e. patient has failed to improve with 2 antidepressant medication trials of adequate dose and duration.
- Patient has previously responded to ECT but experienced significant cognitive adverse effects.

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### What kind of patients are good candidates for rTMS?

Individuals who experience the following are typically **good** candidates for rTMS:

- Unipolar depression as a primary diagnosis
- History of episodic rather than chronic lifelong depression
- Motivated and reliable to adhere to the schedule of treatments,
- Has a plan for psychiatric follow-up (medications or individual therapy)

### What kind of patients are poor candidates for rTMS?

Individuals who experience the following are typically **poor** candidates for rTMS:

- Dysthymia
- Depression secondary to personality disorders or active substance abuse
- Failed to previously respond to ECT or rTMS
- Unaddressed life/situational stressors
- Greater than 1 hour commute from the clinic

### How do I refer a patient for rTMS?

- A patient being referred to the rTMS service must have a psychiatrist actively involved in the Patient's care.
- An rTMS referral form must be completed in full by a psychiatrist and emailed to the clinic.
- Our team will review the referral and notify the referring psychiatrist if the patient is a candidate for treatment.

### What follow-up care is provided for patients who undergo rTMS?

- The rTMS team cannot assume responsibility for patient follow-up. In order to allow us to offer treatment to as many patients as possible, aspects of psychiatric care other than the rTMS treatment itself remain the responsibility of the referring physician.
- The referring physician is responsible to monitor for signs of early relapse, and to facilitate adherence to a regimen of medications and psychotherapy to reduce the risk of relapse in the future.

### What should I do if a patient who has responded to rTMS relapses?

- If a patient relapses, the referring psychiatrist should first ensure medications have been optimized, psychosocial stressors have been adequately addressed, and appropriate psychotherapies have been pursued in conjunction with the rTMS treatment.
- Patients who have responded to rTMS in the past will typically respond again.
- Patients can be referred back to our clinic to be considered for another course of rTMS. The duration and scheduling of this course of rTMS will depend on the severity of the relapse.