

## Repetitive Transcranial Magnetic Stimulation (rTMS) for Depression and OCD

### What is TMS?

TMS stands for "Transcranial Magnetic Stimulation." TMS therapy has been extensively researched and is an approved treatment method for the treatment of a range of psychiatric and neurological disorders, such as Major Depressive Disorder, Obsessive Compulsive Disorder (OCD) and many others.

### How does it work?

TMS works by delivering MRI-strength magnetic pulses to safely stimulate the left side of the brain area called Dorsolateral Prefrontal Cortex (DLPFC) in the case of Depression. The left DLPFC is one area that has a function of regulating mood. For those that struggle with depression, this area has low activity. TMS treatments are thought to help reactivate this brain area and normalize its activity. Once this area has increased activity, it begins to communicate with deeper brain regions also responsible for depression.

With regards to OCD, this location is more central, and the magnetic field is focused more on stimulating deeper layers of the outer brain areas.

### Is TMS therapy like ECT (Electroconvulsive Therapy)?

No, TMS is not like ECT. TMS is performed in our clinic and does not require anesthesia or any sedation. The patient can return to normal activities immediately afterward.

TMS does not have the same side effects as ECT. Memory loss is one significant side effect of ECT that TMS does not have. TMS side effects are rare but include mild scalp discomfort and headache. Each side effect lessens after several treatments.

### How does TMS and antidepressant medications differ?

TMS is a focused treatment that has no systemic effects because it does not travel in the bloodstream. For medications to work they need to enter the bloodstream.

Since TMS is non-systemic, it does not have medication side effects, such as weight changes, dry mouth, fatigue, sexual dysfunctions, and a myriad of others.

\* It is important to note that medications have helped many with depression. Although TMS is a non-medication treatment your treating psychiatrist will likely keep you on medications that you can tolerate and are providing some benefits. In this way, TMS, medications, and psychotherapy can all work together toward the goal of remission.

### Can TMS help beyond Depression?

Scientific research is studying TMS for other mental health and physical indications. Mental health concerns like schizophrenia, post-traumatic stress disorder, ADD, hallucinations and beyond. TMS is also in research for physical ailments in the treatment of pain (including fibromyalgia and neuropathic pain), tinnitus, Parkinson's and stroke.

At Modalis, we provide treatment for pain, depression and OCD, but the list of possible indications will increase in the near future as the evidence-based protocols become available. Modalis is striving to provide to its patients access to the most advanced and validated treatment protocols.

### How long does TMS treatment effects last or endure?

TMS treatment effects are known to have long-lasting effects. Some patients have maintained wellness on medications alone for over two years. Others may require medication changes or reintroduction of a short session of TMS (maintenance therapy). It differs for each since depression and OCD are very complex conditions, which are affected by your specific biological and environmental factors.

### What are some facts about TMS therapy?

- This form of treatment does not include any medication.
- TMS does not require anaesthesia or sedation – you are awake during TMS therapy.
- This treatment is provided on an out-patient basis – you can maintain your normal daily activities. We advise taking care with driving following the procedure and encourage discussing with the nurse coordinator if you have any concerns about your concentration and any other physical symptoms following this procedure.
- TMS is generally safe, with very few or no side effects – Extensive clinical experience of this form of treatment proved a very favourable safety profile. There were no reports of any adverse effects on memory or cognition (as compared to ECT) and no weight gain, sleep, sexual side effects nor drug interactions (as compared to commonly used medications). Some patient may experience a headache or scalp discomfort temporarily, but it is usually easily tolerated and disappears as treatment continues.
- Increasing use of TMS Worldwide consistently proves good outcomes –Statistically and clinically significant improvement in depression symptoms.

### How long does TMS Therapy take?

Each treatment takes approximately 20 to 40 minutes, depending on the specific treatment protocol. Generally, the initial course of treatment will involve 20 treatments five times per week, but the course of the treatment will be individualised and modified as clinically indicated. The specific treatment protocols will be discussed with you at the time of consent for this procedure.

### How does the treatment feel?

Patients who have undergone TMS Therapy describe the first treatment as a tapping sensation. The sensation may feel uncomfortable and at times mildly painful. Those that feel slight pain can manage it effectively with over the counter pain relievers. This pain is usually short-lived and reduces with each subsequent treatment.

During a treatment session, you will sit in a comfortable reclining chair. A headset is applied to deliver the magnetic stimulation. Ear plugs

are also provided to decrease the loud clicks associated with each magnetic pulse.

You have the option of observing 3D-computer pictures demonstrating the location of the stimulated brain areas on a monitor. You may also watch television, listen to music, or simply relax during the treatment session.

Your treatment will be continually monitored by the coordinator to ensure correct coil positioning and comfort level.

### Is family involved in the treatment?

Family can be involved in the consultation for TMS and are welcome in the TMS suite. Family members are invited to inquire about the progress of the treatment if consented to by the patients.

### How can I get TMS treatment?

TMS is a medical treatment that requires an assessment by a trained medical practitioner. Modalis has several specialist physicians who can assist with a treatment plan. You will need a referral from your GP or other medical practitioner to Modalis who will then arrange an assessment session.

### Is there anything else I need to be aware of?

Outpatient TMS for treatment-resistant depression is currently funded by Medicare and the Department of Veteran Affairs (DVA). It is available for patients over 18 years of age who have never had TMS before. There are some critical conditions to such funding that you should discuss with the Modalis team before starting the treatment.

The Medicare and DVA funding are available for one acute treatment (up to 35 sessions) and one maintenance course of TMS (up to 10 sessions). If you are responsible for the treatment (not meeting these Medicare/ DVA conditions), the fee for the initial session is \$240 and \$185 for each treatment after that.

Your TMS treating doctor may also arrange a follow up appointment after your treatment to assess your response and to arrange any longer-term maintenance sessions if required.

If you have any further queries, please do not hesitate to contact one of our friendly reception staff on **(08) 6166 3733** or [tms@modalis.com.au](mailto:tms@modalis.com.au).

Reception is open Monday-Friday between 9:00am and 4:30pm.