

Repetitive Transcranial Magnetic Stimulation (rTMS) for Other Conditions

What is TMS?

TMS stands for "Transcranial Magnetic Stimulation". TMS therapy has been extensively researched and has been successfully used in the treatment of a number of different conditions including depression, OCD, PTSD, neuropathic pain, fibromyalgia, and tinnitus, amongst others.

TMS is a focal brain stimulation treatment that involves passing small electromagnetic currents through certain areas of the brain. Different areas of the brain can be targeted by holding a specially designed coil near the patient's scalp. The energy applied acts to stimulate nerve cells in that particular brain region.

Do I need a referral for TMS?

Yes, patients will need a referral in order to get TMS. This can be from a GP, psychiatrist, or other allied health medical practitioner. Referral forms can be found on the Modalis website.

Is TMS an approved treatment?

TMS was approved as a treatment for medication-resistant depression by the Therapeutic Goods Administration (TGA) in 2007 and recognised by the RANZCP in 2013. Currently, TMS for other conditions is an off-label treatment. For conditions such as chronic pain and tinnitus, this is similar to many of the current medication options that are often used.

How does TMS work for Chronic Pain?

TMS works by delivering MRI-strength magnetic pulses to safely stimulate a particular region of the brain. For pain management, an area of the brain called the primary motor cortex (M1) is typically targeted. TMS exerts its effect via a myriad of complex pathways. One mechanism in particular involves opioids, which are the body's own pain relieving chemicals. When TMS stimulates the brain area involved in pain there is a significant release of opioids. Opioids work in conjunction with a number of other brain chemical systems to create long term changes to the brain cells involved in pain that provides significant pain relief beyond the time of stimulation.

How does TMS work for PTSD?

TMS works by delivering MRI-strength magnetic pulses to safely stimulate a particular region of the brain. For Post Traumatic Stress Disorder (PTSD), the brain area called the Dorsolateral Prefrontal Cortex (DLPFC) is targeted. The DLPFC is one area that is involved in mood regulation and anxiety. TMS exerts its effect via a myriad of complex pathways. TMS treatments are thought to help normalize the activity of this region which then also begins to communicate with deeper or more distant brain regions also responsible for PTSD and it's related symptoms.

How does TMS work for OCD?

TMS works by delivering MRI-strength magnetic pulses to safely stimulate a particular region of the brain. For Obsessive Compulsive Disorder (OCD), the brain area called the Orbitofrontal Cortex (OFC) is targeted. Compared to the treatment for depression which usually targets the DLPFC, this location is more central, and the magnetic field is focused more on stimulating deeper layers of the outer brain areas. This is one region that is involved in anxiety, and TMS treatments are thought to help normalize its activity and communications with other areas that contribute to OCD and it's related symptoms.

How does TMS work for Tinnitus?

TMS works by delivering MRI-strength magnetic pulses to safely stimulate a particular region of the brain. For tinnitus, an area of the brain called the auditory cortex is typically targeted. The auditory cortex is the part of the brain responsible for processing information related to hearing. In tinnitus there is altered neural activity along the auditory pathway with hyperactivity of nerve signaling occurring in the auditory, but also non-auditory areas. TMS may help to reduce this hyperactivity and in turn reduce the tinnitus perception level and/or make it less intense.

The 6 steps to TMS:

Referral



Screening Call



Initial Consult &
RMT



Acute Course



Final Review



Maintenance
Course
(if needed)

How long does a session of TMS Therapy take?

There are a number of different TMS protocols, which are specific to the condition being treated and the presentation of symptoms. The specific treatment protocols will be discussed and determined during the Initial Consult with one of our TMS Specialists. For most conditions, each treatment session takes approximately 15-20 minutes, depending on the specific treatment protocol. Treatment sessions for Tinnitus may however take up to approximately 35 minutes. Sessions are usually delivered once-daily from Monday to Friday, but the course of treatment will be individualised and modified as clinically indicated.

How many sessions are needed for Chronic Pain?

The duration of the initial course of treatment for pain can vary between patients and their pain condition. For some patients, this is approximately 20-35 sessions total, whereas others may need to go up to 45 sessions. This will be assessed on an ongoing basis.

How many sessions are needed for PTSD?

The duration of the initial course of treatment for PTSD is approximately 35 sessions total, particularly if the PTSD is also associated with depression.

How many sessions are needed for OCD?

The duration of the initial course of treatment for OCD is approximately 20-35 sessions total. For patients being treated for both OCD and depression, the initial course is usually at least approximately 35 sessions.

How many sessions are needed for Tinnitus?

The exact length of TMS treatment for tinnitus can vary between patients, but in general 10 treatments will be required. Some patients may require up to 30 sessions, particularly if their tinnitus is associated with depression. This will be assessed on an ongoing basis.

How many sessions are needed for other conditions?

The duration of treatment for other conditions varies depending on the patient and what they are being treated for. The treatment plan will be discussed during the Initial Consult appointment and assessed on an ongoing basis according to how the patient is responding and the treatment goals.

How long will the benefit last?

As TMS is usually used to treat very complex conditions, the type of benefits from TMS can vary between patients. A reduction in direct symptoms is just one measure of success. Other benefits can include improvement in function, psychological and emotional wellbeing, improvement to sleep and quality of life, and reduction in medication requirements. The duration of these benefits can also vary between patients and conditions. In some cases, the benefits from TMS can last for months or years, whereas others may require "top up" (maintenance) sessions to maintain the benefits. In chronic pain, benefits can last up to 2 months, but usually require maintenance sessions for an ongoing treatment plan. In tinnitus, some studies have shown benefit for up to 6 months, with others 2-3 months. In conditions such as depression, OCD, and PTSD, some patients benefit from maintenance sessions after a few months, whereas others have maintained wellness for multiple years.

How much does each session cost?

If you are responsible for the treatment costs then you can expect to pay \$240 for the initial consult and \$185 per treatment session. Medicare rebates are currently only available for eligible patients receiving TMS for treatment-resistant depression. Unfortunately other treatment indications are not currently covered. If you are a Department of Veteran Affairs (DVA) patient or covered by a third party insurance claim, you may be able to have your treatment costs covered. Modalis also considers patients with financial difficulties and can assist with payment plans or personalised fees on a case-by-case basis for pensioners and those experiencing financial hardship.