Transcranial Magnetic Stimulation

How it works

Transcranial magnetic stimulation (TMS) is a Health Canada and FDA approved treatment for individuals with depression who have failed to respond to trials of anti-depressants.

In addition, TMS has been used successfully in other psychiatric illnesses such as Addictions (including cigarettes & food), Eating disorders , ADHD, Anxiety, Autism, Post Natal Depression, Bipolar Depression, PTSD, OCD, negative symptoms of Schizophrenia, persistent auditory hallucination in Schizophrenia as well as other neurological conditions such as Alzheimer Disease, Chronic Pain, Epilepsy, Multiple Sclerosis , Migraine, Tinnitus, motor symptoms of Parkinson's Disease and Stroke Rehabilitation

It is a procedure in which the brain activity is influenced by brief pulses of magnetic field which are generated by passing brief pulses of electric current through a coil which is encased in a plastic material and held close to the scalp in order to focus the magnetic field onto specific areas of the brain.
The magnetic field generated by the electric current has the ability to penetrate the scalp and the skull safely and painlessly to induce a current in specific regions of the brain thus activatingbrain neurons and causing the release of neurotransmitters both locally and in deeper areas of the brain.

TMS may be used to elicit certain desired effects in the brain (i.e. excitatory or inhibitory effects) depending on the frequency of the stimulation applied.

Benefits of TMS

TMS is well tolerated and is associated with few side effects. No sedation or general anesthesia is required and patients are awake and alert throughout the treatment.

There is a quick onset of therapeutic effect. Most patients tend to be aware of the therapeutic benefit after 14 – 20 sessions. Late responders may require additional sessions to achieve significant symptom reduction.

After completing a treatment of TMS, no recovery period is required so patients can drive home or to work and resume their usual activities.

TMS has not been shown to be associated with cognitive impairments such as memory loss or inability to concentrate but it has been shown to have cognitive enhancing effects.

It does not produce many of the side effects caused by antidepressant medications such as gastrointestinal upset, dry mouth, sexual dysfunction, weight gain or sedation.

In most TMS trials the response rate for depression has been shown to be between 50-60% (response is defined as greater than 50% reduction in depressive symptoms on the validated scales). The remission rates have been shown to be between 30-40%.

Risk of side effects

The potential side effects include temporary scalp tenderness, temporary jaw pain, and temporary tooth ache, headache in 20-40 % (due to muscle tension generated by the stimulation especially over frontal or occipital locations or the posture assumed during the stimulation). A single dose of acetaminophen or aspirin may be recommended if pain persists beyond stimulation but the local pain generated through prefrontal TMS has been shown to decrease over the first three days of treatment.

There may also be lightheadedness and a rare incidence of seizure which is estimated at 0.1 per 1,000 to 1 per 1,000 cases versus 1 per 1,000 to 6 per 1,000 on antidepressant medications and 0.7 per 1,000 to 0.9 per 1,000 spontaneous incidence of seizure in the general population.

Discomfort from noise during treatment can occur which is why ear plugs are recommended during treatment.

Other rare side effects have been documented including precipitation of mania (equal risk as anti-depressant medication). In addition, a small number of patients have reported some deterioration in their mood symptoms between weeks 2-4 of their treatment.

For more information

Contact Synapse TMS
269B Hamilton road Yorkton S3N 4C6 SK Canada.
Phone number 1-306-782 -2533
Fax 1-855-262-5309
Website :www.synapsetms.ca
Email : info@synapsetms.ca