



### **FACT SHEET**

#### FOR MENTAL HEALTH CLINICIANS

# RTMS CLINIC FOR YOUNG PEOPLE WITH DEPRESSION AT ORYGEN

## WHAT IS REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION?

Repetitive transcranial magnetic stimulation (rTMS) is a non-invasive technique that stimulates brain tissue to treat a number of conditions, including depression.

Studies have shown that rTMS can be effective in treating a person's symptoms of depression when other treatments, such as medication, have not worked for them.(1)

rTMS is different from electroconvulsive therapy (ECT), formerly known as electroshock therapy. ECT is considered to be more invasive and have more side effects than rTMS.

#### rTMS:

- is safe;
- can reduce symptoms of depression for a significant percentage of people;
- · is less invasive than ECT; and
- has fewer side effects than ECT.

#### **HOW DOES IT WORK?**

rTMS is administered by an electromagnetic device which, for depression, usually sits lightly on the front left hand side of the scalp. The device is shaped like a figure eight.

The device delivers an electromagnetic pulse that passes through the scalp and skull and stimulates the brain tissue. Receiving these pulses over time has been shown to change brain activity.

It is thought that this change in brain activity may be the reason why people experience an improvement in depression symptoms; although there is no conclusive evidence yet.

rTMS stimulates brain tissue with an electromagnetic device that sits on the scalp to change brain activity levels in the area stimulated.

#### WHAT DOES IT INVOLVE?

An rTMS treatment course at Orygen is usually made up of daily, Monday to Friday, treatments for four weeks. Each treatment generally lasts 30-40 minutes.

At the initial appointment, a clinician will undertake a few assessments, such as measuring the patient's head and assessing their depressive symptoms and resting motor threshold.

Assessing the patient's resting motor threshold is done to determine how strong the electromagnetic pulses from the device need to be to effectively deliver the rTMS treatment.

The treatment is delivered by a trained clinician who stays in the room with the patient for the entire treatment.

During treatment, patients are seated in a chair and are awake and alert. Patients are generally able to engage in other activities immediately after treatment.

Patients do not need to change the treatment they're already receiving to undergo rTMS treatment.

This means, ideally, patients will not change or start taking medications in the four weeks before starting rTMS, or during the rTMS treatment course.

There is currently no cost for receiving rTMS treatment at Orygen.

#### rTMS at Orygen:

- requires an initial appointment to set up treatment;
- is made up of 30-40 minute appointments, Monday - Friday for four weeks;
- does not require you to change or stop your medication; and
- · is provided at no cost.

#### **WILL IT WORK?**

rTMS is effective in approximately 50 per cent of people who have not responded to antidepressant medication.(1)

Most people feel the effects of rTMS towards the end of their treatment course and retain the benefits of rTMS for a number of months after completing the course.

Because it can take days or weeks to notice the effects of rTMS, it is important that patients responding to rTMS continue with any other treatments (e.g. medication or psychological therapies) during treatment.

#### Positive effects of rTMS:

- are experienced by approximately 50 per cent of people;
- are usually noticed towards end of treatment; and
- · are expected to last several months.



#### ARE THERE SIDE EFFECTS?

rTMS is generally well tolerated. However, as with all treatments, there are potential side effects. These include:

- brow twitching;
- · tapping sensation;
- discomfort or pain at the treatment site or away from treatment site;
- · headache:
- · neck ache; and
- discomfort from the noise generated during treatment.

These types of side effects tend to lessen quickly as a patient gets used to the treatment.

More severe side effects may include seizure or fainting, however these are very rare.

rTMS for depression has been studied for over 20 years and although animal and human studies have not shown any risks of longer-term injury to the brain or its functions after rTMS, adverse effects emerging in the longer term are a possibility.

Side effects of rTMS are generally mild and short lived.

### HOW CAN MY PATIENT ACCESS RTMS TREATMENT?

Orygen offers rTMS treatment through our outpatient clinic. Treatment is available to young people, aged 18-25-years-old, with depression.

The process to access treatment includes:

- 1. Doctor referral (see below).
- 2. Completion of patient information forms.
- 3. Patient information session.
- 4. Consent session.
- 5. Commence treatment.

Referrals can be sent to:

TMS Psychiatrist, Orygen Locked Bag 10 Parkville, VIC 3051 Australia.

#### Or: parkvilleclinic@orygen.org.au

Please provide a brief statement indicating that your patient meets criteria for treatment (see criteria below) and include any significant psychiatric and/or medical history, current medication and relevant previous medications. Referral letters will only be accepted from a General Practitioner or psychiatrist.

Alternatively, you can contact parkvilleclinic@orygen.org.au to request a referral form.

#### **INCLUSION CRITERIA FOR RTMS** TREATMENT AT ORYGEN

Patients must:

- be 18-25 years of age;
- · have a diagnosis of major depression or bipolar disorder (depressive episode) with symptoms in the moderate to severe range;
- have failed to respond to first-line treatment for depression:
- not have epilepsy or an unstable neurological or serious medical condition;
- not have any contraindications for an MRI (e.g. internal ferromagnetic metals or implanted devices such cochlear implant, neural stimulators);
- not have any current severe or uncontrolled substance use;
- not at acute high risk of suicide;
- · not be pregnant or lactating; and
- be on a stable medication regime (i.e. type and dose) for the treatment of their depression over the course of treatment and for 4 weeks prior to commencement of treatment.

Please note that the TMS service of the Parkville clinic will respond to your patient's needs with respect to TMS related matters. Patients will be encouraged to contact their referring doctor or an emergency health service for other health or mental health needs.

At the end of their course of treatment, or in the unlikely event they have to be withdrawn from treatment, the patient will be referred back to your care with a discharge summary.

#### CONTACT

If you or your patient require more information our rTMS clinicians can be contacted at parkvilleclinic@orygen.org.au or on (03) 9966 9100.

#### **REFERENCES**

The Royal Australian and New Zealand College of Psychiatrists - Professional Practice Guidelines 16: Administration of repetitive transcranial magnetic stimulation (rTMS) November 2018 url: https://www. ranzcp.org/files/resources/college\_statements/ practice\_guidelines/ppg16-administration-ofrepetitive-transcranial-ma.aspx

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