

Repetitive Transcranial Magnetic Stimulation (rTMS) for depression and obsessive compulsive disorder

Effective non-pharmaceutical treatment with limited side effects

- **Non-invasive**
- **Minimal side effects**
- **Outpatient treatment**



DO YOU SUFFER FROM DEPRESSION?

Depression can be a highly debilitating mental health condition, that globally affects over 300,000 million people.

Approximately a third of those suffering from depression do not respond to pharmaceutical and/or psychological treatment.

In addition,

- Some patients cannot tolerate the side effects of anti-depressants, such as weight gain, sexual dysfunction or sleep issues
- Some patients do not want to have ECT
- Some women with postnatal depression wish to breastfeed and avoid transmission of anti-depressant medication

AND/OR OBSESSIVE COMPULSIVE DISORDER?

Obsessive-compulsive disorder (OCD) is an extremely common mental health condition with a lifetime prevalence of 2%–3%.

A notable 40-60% of patients have a partial, or no response to medication.

WHAT IS REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION?

Repetitive Transcranial Magnetic Stimulation (rTMS) is a non-invasive method of brain stimulation.

The basic principle of rTMS is to target short magnetic pulses over the scalp in specific brain regions that regulate mood.

rTMS is a medically safe treatment that has been evidenced to significantly decrease symptoms of depression and OCD.

TESTED, APPROVED AND EFFECTIVE

rTMS has been the subject of significant research worldwide, with it being consistently reported to be an effective form of treatment.

In 2008, the Food and Drug Administration (FDA) in the United States of America approved rTMS to treat depression, which is now routinely used in the top hospitals internationally.

In 2015, The National Institute for Health and Care Excellence (NICE) in the United Kingdom concluded that rTMS for depression treatment was **“safe enough and works well enough for use in the NHS.”**

BENEFITS OF RTMS

- Research and clinical trials worldwide have reported it to be an effective treatment
- rTMS is a non-invasive, outpatient treatment that is well-tolerated by most patients
- It has minimal side effects, and daily activities can be resumed immediately after each session (e.g. driving)

WHAT ARE THE SIDE EFFECTS OF RTMS?

rTMS is generally well tolerated by most patients but can cause some minor short-term side effects including:

- Headaches
- Scalp discomfort at the site of stimulation
- Tingling, spasms or twitching of facial muscles
- Light-headedness
- Discomfort from noise during treatment

COMPARING TREATMENT SIDE EFFECTS

When compared to anti-depressant medication and ECT, rTMS is proven to have far fewer side-effects.

| | Anti-depressants | ECT | rTMS |
|----------------------------|------------------|----------|----------------------------|
| Confusion | | X | |
| Diarrhoea | X | | |
| Dizziness | X | X | |
| Headaches | X | | X *Temporary |
| Insomnia/drowsiness | X | | |
| Loss of appetite | | X | |
| Memory loss | X | X | |
| Nausea | X | | |
| Seizures | | | X *2 per 1000 cases |
| Sexual dysfunction | X | | |
| Weight gain | X | | |

WHY CHOOSE RTMS TREATMENT AT NIGHTINGALE HOSPITAL?

In 2014, Nightingale (in partnership with MagnaCentre) was the **first private hospital in the UK to pioneer rTMS treatment**. Since then, we have been the most experienced provider of rTMS treatment in the UK, delivered by our expert and internationally experienced practitioner team.

Not only were we the first private hospital in the UK to deliver rTMS treatment, we were also the first private hospital in the UK to offer rTMS using a BrainsWay H-coil.

STATE-OF-THE-ART EQUIPMENT

rTMS is typically delivered using a figure-8 shaped coil. The standard figure-8 coil uses a highly focused magnetic field. This type of coil has limitations when it comes to accurately targeting the specific sections of the brain which are impacted in depression and OCD.

By contrast, H-coils supply a wider field, and are designed to stimulate the key brain regions more consistently.

H-coils also induce an effective field at a depth of approximately 3cm below the skull, compared to less than 1.5cm for the standard figure-8 coil.

It has been suggested that the deeper and wider penetration provided by H-coils accounts for the superior response rate and greater reduction of depression severity reported in the first head-to-head trial between the H-Coil and figure-8 coil published in 2019.



WHAT HAPPENS IN AN RTMS SESSION?

During your first appointment, our rTMS specialist will conduct an intensive assessment to determine if rTMS is suitable for you.

Our specialist will talk you through the entire treatment procedure, and answer any questions you may have.

Following this, our rTMS specialist will formulate your personalised treatment plan.

You will also be given a welcome pack, inclusive of information about rTMS treatment and an appointment tracker.

Your first rTMS session will last an hour. This is to allow for all initial paperwork to be completed, and to also locate the ideal positioning for the treatment to take place on your head.

To begin the treatment, you will be seated in a comfortable chair and given a cap to wear.

Measurements will then be taken for head and facial positioning, and your individual motor threshold will be recorded before the treatment commences.

Typically, you will hear a noise and feel a tapping sensation on the head area during the session.

To diminish the sound, you will be provided earplugs if you wish.

The entire rTMS session will last approximately 20-minutes, after which you can resume your day without any disruption.

WHEN IS RTMS NOT SUITABLE?

- If you have a co-morbid neurological disorder, history of epilepsy and/or neurosurgery
- If you have metal plates in the head/brain, presence of pacemakers or other electronic implants, inner-ear implants, metal or magnetic objects in the brain and medication pumps. (Standard amalgam dental fillings do not pose an issue)
- Patients below 18 years of age

REFERRAL INFORMATION

Consultant psychiatrists, GPs and health professionals can all refer patients for rTMS at Nightingale Hospital.

All patients will need to be under the care of a Nightingale psychiatrist for the duration of rTMS treatment.

The referring psychiatrist or GP will receive regular updates on a patient's progress including HDRS scores upon the commencement of treatment and at discharge.

BILLING AND PAYMENT OPTIONS

Prices for treatment vary based on the condition being treated. For detailed billing information, please contact:

Email: rtms@nightingalehospital.co.uk

Telephone: +44 (0)20 7535 7803

Most private medical insurers review applications to fund rTMS treatment on a case-by-case basis. Please get in touch with your insurance provider to assess your eligibility. The hospital requires an insurer's authorisation before treatment can commence.

rTMS treatments can be provided at Nightingale Hospital from Monday through to Friday, from 9:00 am – 5:00 pm.

CLINICAL TRIALS AND FURTHER EVIDENCE

- *Antidepressant outcomes of high frequency repetitive transcranial magnetic stimulation (rTMS) with f8-coil and deep transcranial magnetic stimulation (dTMS) with h1-coil in major depression: a systematic review and meta-analysis*
- *A Coil Design For Transcranial Magnetic Stimulation Of Deep Brain Regions*
- *Augmenting Antidepressants With Deep Transcranial Magnetic Stimulation (DTMS) in treatment-resistant major depression*

NIGHTINGALE HOSPITAL RTMS PATIENT TESTIMONIALS

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All first-class, from the moment I arrived each day.

This is a really positive option for those suffering depression.

The process was extremely fast, efficient, friendly and reassuring.

Excellent care and help.

I was very happy about the service in every aspect.

Staff service I can't recommend enough. Treatment (from a very sceptical chap!) has been amazing. Feel as though depression never happened! Hope more people use it.

Felt like a new man after my course of treatment. Wife and family all amazed at the change in me!

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