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What is transcranial magnetic stimulation?

Transcranial magnetic stimulation (TMS) is a non-invasive method that assesses inhibitory and excitatory mechanisms in the brain. Inhibitory processes include the cortical silent period, which is measured from the motor evoked potential onset to the return of electromyography. Long and short-interval cortical inhibition involve the pairing of a suprathreshold conditioning stimulus followed by a suprathreshold test stimulus, at either long or short interstimulus intervals. Excitatory processes include the motor evoked potential amplitude, which is measured as the average response to a series of pulses applied at a consistent TMS intensity. The resting motor threshold is defined as the minimal intensity that produces a motor evoked potential in a relaxed muscle, and intracortical facilitation is a paired-pulse paradigm whereby a conditioning stimulus is applied to the motor cortex before the test stimulus.

What is the evidence for TMS?

High quality evidence suggests decreased motor evoked potential and short-interval cortical inhibition in people with schizophrenia compared to controls. There were no differences in resting motor threshold, intracortical facilitation, cortical silent period, and motor evoked potential amplitude

For more information see the technical table



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NeuRA (Neuroscience Research Australia) is one of the largest independent medical and clinical research institutes in Australia and an international leader in neurological research.

Diseases of the brain and nervous system pose the greatest health, economic and social burden of any disease group because they are chronic, debilitating and have no known cures.

Medical research is the cornerstone of efforts to advance the health and wellbeing of families and the community. Our dedicated scientists are focussed on transforming their research into significant and practical benefits for all patients.

While we hope you find this information useful, it is always important to discuss any questions about schizophrenia or its treatment with your doctor or other health care provider.

HOW YOUR SUPPORT HELPS

We are able to make significant advances due to the generosity of countless people. Your donation allows us to continue to work towards transforming lives. For information on how you can support our research, phone **1300 888 019** or make a secure donation at neura.edu.au/donate/schizophrenia.