Effect of individualised transcranial magnetic stimulation (TMS) on cognitive functioning in healthy volunteers

ACTRN12620000162910

Status	RECRUITING
Sponsor	UNSW
Enrollment	40 participants

Plain Language Summary

Transcranial Magnetic Stimulation (TMS) is a non-invasive procedure that uses magnetic pulses to gently stimulate specific areas of the brain. Researchers are investigating whether TMS applied to an individually targeted brain site can improve cognitive flexibility — that is, the ability to switch between tasks or adapt thinking in response to new situations. This is a study in healthy volunteers, not patients, making it a low-risk way to understand how TMS might work for future uses.

Participants will undergo TMS using a new method that targets each person's brain based on their own neuroimaging data, rather than using a standard location. The study will measure whether this personalised approach leads to better cognitive performance compared to a control condition.

You may be eligible if you are a healthy adult aged 18–40, are right-handed, are not currently taking medications that could affect TMS (like benzodiazepines), and have no history of neurological or psychiatric conditions, seizures, stroke, recent head injury, or drug and alcohol dependence.

Key Eligibility Criteria

Inclusion (1)

- Healthy, right handed, not taking any concurrent medications which may affect TMS effects (e.g., benzodiazepines), free from any neurological or psychiatric disorder, no recent head injury, no history of seizure or stroke, and no current history of drug or alcohol abuse or dependence.

Exclusion (1)

- History of any psychiatric or neurological illness, seizure, stroke, any serious medical conditions, or current pregnancy

Locations (1 total)

NSW, Australia