# Article information:

Cortical Hemodynamic Response and Connectivity Modulated by Sub-threshold High-Frequency Repetitive Transcranial Magnetic Stimulation - PMC  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6434517/>

# Article summary:

1. This study used functional near-infrared spectroscopy (fNIRS) to investigate the effects of high-frequency repetitive transcranial magnetic stimulation (rTMS) at a sub-threshold intensity on hemodynamic responses and cortical connectivity patterns.

2. Results showed that rTMS induced a significant reduction in oxygenated hemoglobin (HbO) concentration in most regions of interest (ROIs).

3. Decreased functional connectivity within prefrontal areas as well as between symmetrical ROI-pairs was also observed during the stimulation period.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides evidence for its claims through the use of functional near-infrared spectroscopy (fNIRS). The study was conducted with healthy volunteers, which reduces potential bias due to pre-existing conditions. The article does not appear to be one-sided or promotional, as it presents both sides of the argument equally and objectively. Furthermore, possible risks associated with rTMS are noted in the introduction section.

However, there are some points of consideration that are missing from the article. For example, there is no discussion about how long the effects of rTMS last or whether they can be sustained over time. Additionally, there is no mention of any potential side effects associated with rTMS or how these might be mitigated. Finally, there is no exploration of counterarguments or alternative explanations for the results observed in this study.

# Topics for further research:

* Long-term effects of rTMS
* Side effects of rTMS
* Managing side effects of rTMS
* Counterarguments to rTMS
* Alternative explanations for rTMS results
* Functional near-infrared spectroscopy (fNIRS) and rTMS

# Report location:

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