

# TRANSCRANIAL MAGNETIC STIMULATION AS A TOOL FOR BRAIN CORTEX EXCITABILITY ANALYSIS IN MIGRAINE PATHOPHYSIOLOGY

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## **Abstract**

Evidence is growing that neuronal excitability and responsiveness to sensory stimulation increase in migraine at cortical and brain stem levels. The perception of phosphenes induced by transcranial magnetic stimulation (TMS) allows analysis of visual cortex excitability during migraine attacks and interictal periods; TMS can also help assess prophylactic drug effects. The paper reviews studies of anticonvulsants and discuss the reduction of migraine frequency correlated inversely with an increase of phosphene thresholds and not correlated with motor thresholds. Multidisciplinary analysis along with TMS will aid our understanding of migraine mechanisms since most modern anticonvulsants have complex effects, not simply inhibition of cortical excitability.

**Keywords:** migraine, pathophysiology, cortex excitability, transcranial magnetic stimulation, evoked potential, electroencephalography, anticonvulsants