Dose-response of tDCS effects on motor learning and cortical excitability: a preregistered study



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Introduction

Transcranial direct current stimulation (tDCS) shows promising effects on motor behavior and corticospinal excitability, but results are mixed. Typical *in vivo* stimulation intensities (up to 2 mA) are much lower than those used *in vitro* to demonstrate modulation of synaptic plasticity. We hypothesized a monotonic effect of increasing tDCS intensity above 4 mA on cortical excitability and motor learning.

Methods



Results



tDCS applied concurrently with initial learning task (S1). Different sequences (S2, S3) were used as follow-ups.

In a parallel design, subjects received either 0, +4, or +6 mA tDCS (n=40 each). Sample size powered at 80%.

Results



Summary



This work is supported by the National Institutes of Health through grant R01NS130484. Preregistration available on OSF: https://osf.io/jyuev