

Official title of the study

Modulation of Cognitive Flexibility by Tyrosine Depletion and Transcranial Direct Current Stimulation

Date of submission:

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This study will be a mixed-subjects, randomized design investigating the effects of tyrosine depletion on behavioural flexibility (BF) performance as modulated by anodal stimulation of the dorsolateral prefrontal cortex (dLPFC/). The dependent measures will be number of errors on the probabilistic reversal learning task and the Wisconsin Card test which are measured over four times.

Thirty six healthy participants (aged 18-30) will be recruited to undergo a one five- hour session. Power calculations are based on G*Power 3, repeated measures, number of measurements (4), number of groups (4), on a power level of 0.8 and with a medium-large effect size (partial eta squared 0.16).

Electrode placement over the dLPFC will be based using the convention of the EEG 10/20 system.