

Noninvasive neuromodulation targeted to the lateral prefrontal cortex induces changes in energy intake and weight loss in obesity

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SUPPLEMENTARY DATA

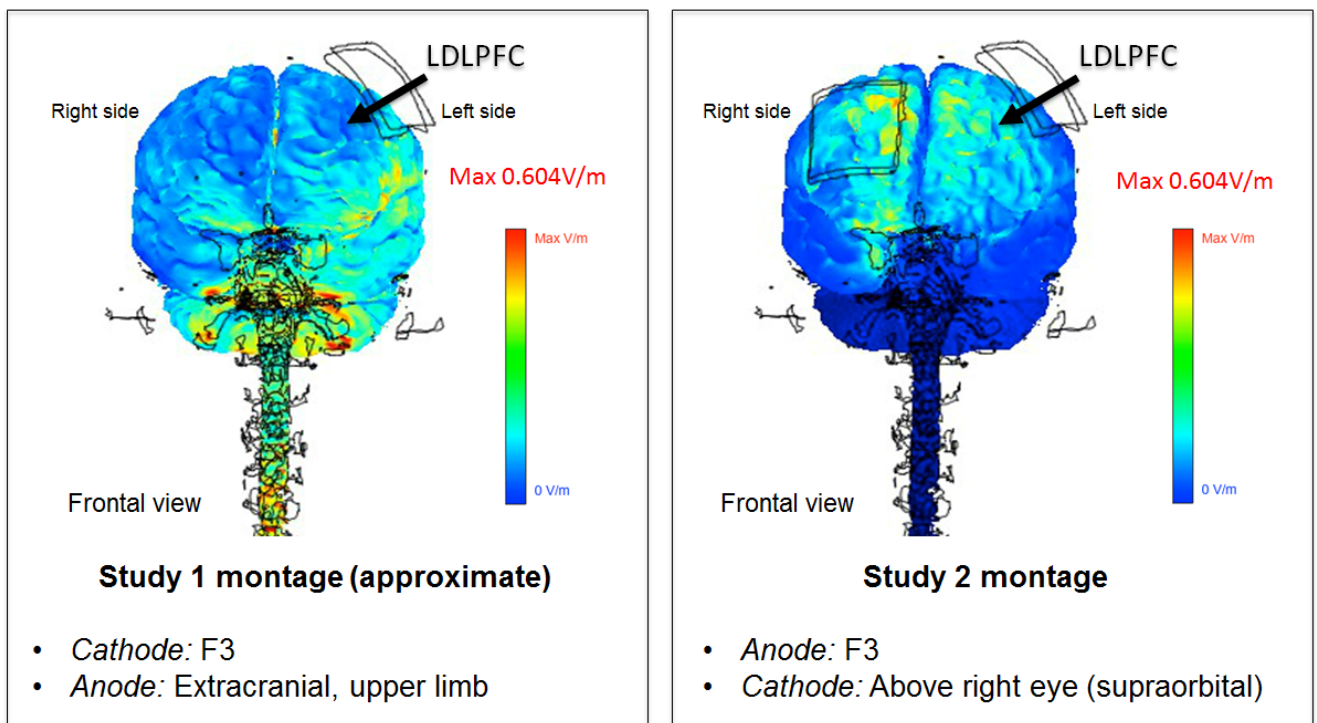


FIGURE S1. Simulations of tDCS montages used in the present study.

Computational modeling of tDCS currents based on pre-solved high-resolution MRI-derived models simulations in a healthy male head based on six-tissue compartment models (skin, skull, cerebral spinal fluid, gray matter and white matter). Electrodes are 5x5 cm and locations are based on the 10-20 EEG system. Current density was estimated for 2mA. The extracranial montage (study 1) results in widespread electric fields, with peak density mostly at the base of the brain and down the spine, and there is no much change in areas that are located immediately below the electrode (i.e. the target DLPFC, black arrow). In the corrected montage (study 2) there is a more clear and focused distribution of current in prefrontal regions, including the target.

Figures were generated with the Bonsai open-source platform for tDCS computational modeling developed at the Neural Engineering Group, Department of Biomedical Engineering, The City College of New York, CUNY (available at www.neuralengr.com/bonsai), based on Truong et al. Clinician accessible tools for GUI computational models of transcranial electrical stimulation: BONSAI and SPHERES. *Brain Stim* 2014;7(4):521-4.