

# Theses

## Transcranial direct current stimulation effects in subjects with motor language disorders (Abstract)\*. Theses. Salvador, 2010.

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**Background:** Aphasia is among the most disabling deficits after stroke. Despite the importance of aphasia in neurological clinical practice, and given the limited number of controlled studies, most patients are treated only partially and for a limited time. In the last two decades non-invasive brain stimulation techniques as transcranial direct current stimulation (tDCS) have been developed. tDCS is a technique for modulating brain function.

**Objective:** To investigate the tDCS effects in motor language abilities from subjects with chronic expressive aphasia.

**Method:** A cross-over trial, double-blinded, placebo-controlled was developed. A group received anodic tDCS

in Broca's area (1mA) for ten days consecutively; the other group received placebo in the same conditions. Finally, those that received anodic tDCS now received placebo and vice versa.

**Results:** Twelve subjects with chronic expressive aphasia completed the study. They showed improvement in articulation of words after anodic stimulation ( $p=0.01693$ ,  $V=43$ ). Four subjects were capable of repeating words immediately after anodic stimulation and preserved this ability when re-assessed at the one week and six months follow-ups.

**Conclusion:** Results suggest that tDCS in Broca's area can improve motor patterns of language.

**Key words:** Aphasia, transcranial direct current stimulation, language disorders, stroke, Broca's area.

\*Efeitos da estimulação transcraniana por corrente contínua sobre indivíduos com desordens motoras de linguagem (Resumo). Tese de Doutorado. Universidade Federal da Bahia (Área de concentração: Neuropsicofarmacologia). Orientadora: Rita Lucena.

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