

## Development of a Non-invasive Approach to Test Cortical-Brainstem Motor Pathways in Humans

**Status:** Recruiting

### Eligibility Criteria

**Sex:** Male or Female

**Age Group:** 18 years and over

This study is also accepting healthy volunteers

**Inclusion Criteria:**

- Healthy adults: age 21-50 years - People with diagnosis of hereditary spastic paraplegia: - age 21-50 years - able to stand, unassisted, for more than 2 minutes

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**Exclusion Criteria:**

- history of a frequent fainting in response to blood, needles, emotional or sensory triggers - on anti-coagulant medications - musculoskeletal disorder that affects the ability to stand - history of seizures, epilepsy, stroke, multiple sclerosis or traumatic brain injury - presence of any metal in the brain or implanted pacemaker - history of surgery on blood vessels, brain or heart - unexplained, recurring headaches or concussion within the last six months - moderate to severe hearing impairment - pregnancy

### Conditions & Interventions

**Conditions:**

Brain & Nervous System

**Keywords:**

Hereditary spastic paraplegia, Transcranial magnetic stimulation (TMS)

### More Information

**Description:** The purpose of this project is to develop and test a novel non-invasive brain stimulation protocol, using transcranial magnetic stimulation (TMS), that will allow reliable examination of cortical-brainstem motor pathways in humans.

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