

Don't Forget!

- We need both stroke and healthy volunteers
- Stroke volunteers will receive hand/ arm therapy and may receive non-invasive brain stimulation applied over scalp
- Please contact us if you are interested

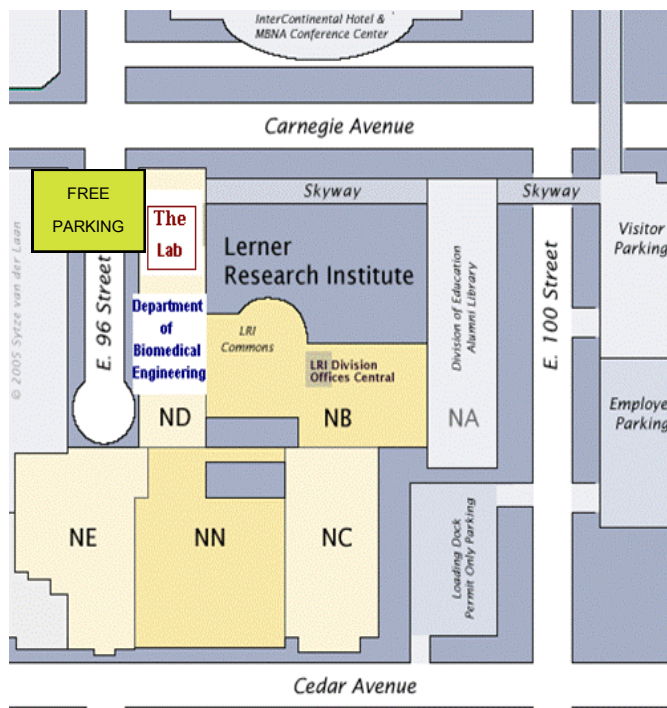
Lerner Research Institute
Department of
Biomedical Engineering

Neuromodulatory Rehabilitation Lab
9500 Euclid Avenue/ ND20
Cleveland, Ohio 44195

For more information, please call:

Thelma Asare at 216-445-6728

Dr, Ela Plow at 216-445-4589



Cleveland Clinic

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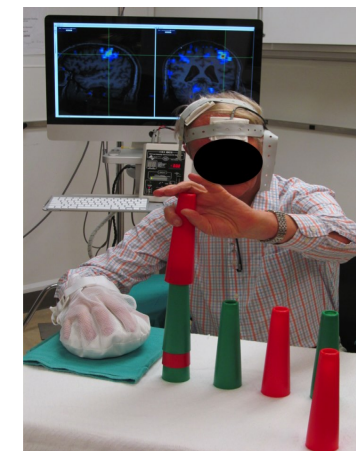


Cleveland Clinic
Lerner Research
Institute



Non-invasive brain stimulation

Stroke Study



Constraint Induced Movement Therapy

For more information, please call:

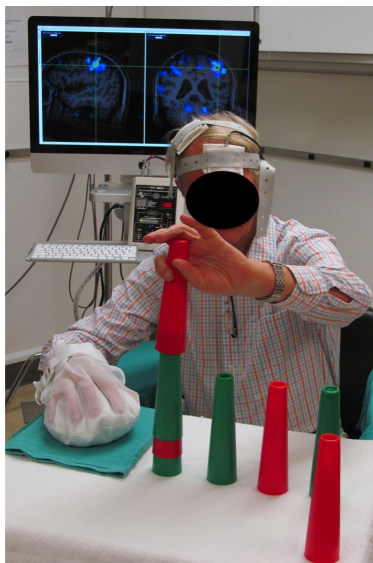
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Study Involvement

What is Constraint Induced Movement Therapy (CIMT)?

- Using affected hand while the less-affected hand is restrained in a mitt



What is Transcranial Direct Current Stimulation (tDCS)?

- Non-invasive brain stimulation applied over scalp and hair
- Delivered through sponge electrodes

Study Testing for All Volunteers

What is Transcranial Magnetic Stimulation (TMS)?

- Non-invasive method to study function and connectivity of the brain.



What is Magnetic Resonance Imaging (MRI)?

- Test that uses a magnetic field and radio wave energy to take images of the brain
- During the MRI, we will ask you to perform hand movements so we can capture brain activity

What is Electromyography (EMG)?

- Surface electrodes placed on upper arm and hand muscles to measure muscle activity

Who may participate?

Stroke Survivors

- Diagnosed more than 6 months ago
- Deficit in hand/arm
- Males and females
- 21 years and older
- No other neurological or cognitive impairment
- No history of epilepsy or implants in head
- No cardiac pacemaker

Healthy volunteers

- Males and females
- 21 years and older
- No neurological or cognitive impairment
- No epilepsy, stroke, or implants in head
- No cardiac pacemaker

What is involved?

- Neurological examination
- Magnetic Resonance Imaging (MRI)
- Therapeutic Exercise Program (CIMT)
- Financial compensation and parking provided