

UNIVERSITY OF DELAWARE

STROKE RESEARCH

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Objectives

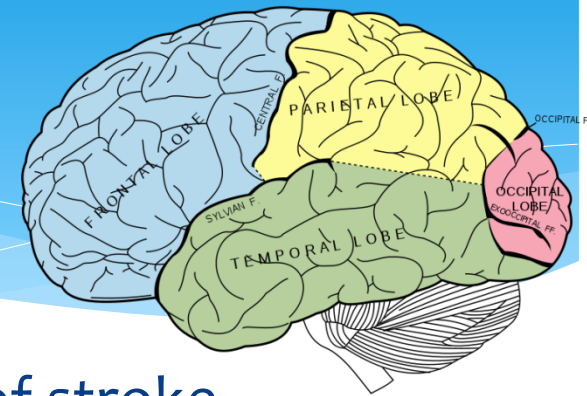
- * Discussion of UD Clinical Research Program
- * Questions

UNIVERSITY OF DELAWARE STROKE RESEARCH

Video



Researching Stroke Rehabilitation and Recovery



- * Working hard to advance the science of stroke rehabilitation
- * New techniques that examine:
 - * How brain damage affects performance
 - * How to improve function after a stroke
- * Findings will help us understand how the brain works after stroke and design future rehabilitation protocols

Who is Eligible to Participate?

- * Individuals 18-85 who have suffered a stroke
- * Able to provide informed consent

A brief screening will determine if you meet the initial inclusion criteria to participate in a study.

Our scheduling coordinator will contact you or you can call her at 302-831-3391

If you are eligible



- * A detailed Clinical Evaluation will take place at UD
 - * Approximately 2-3 hours one on one with a PT
 - * Balance, Walking, Coordination, Overall Mobility
 - * Questionnaires about how the stroke has affected your life
 - * Questions about language, communication, and cognition

Participation is voluntary and there is no fee to participate

After the Clinical Evaluation

- * You may qualify for another study and be invited to participate!



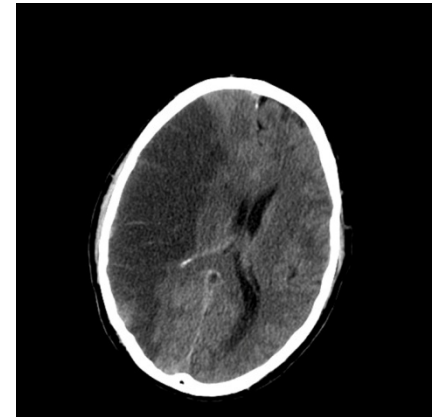
Benefits to participate



- * There is no fee charged to you for participation
- * Free PT Clinical Evaluation!!
- * You are helping to improve PT clinical practice!

What happens after the evaluation?

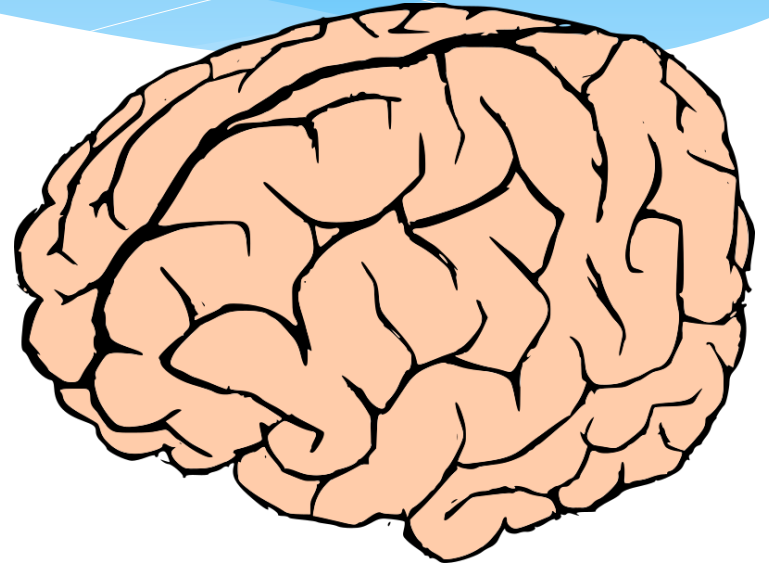
- * Previous imaging (from MRI/CT scan) is obtained to confirm/detail your stroke location/type
- * You may qualify for another study!
- * Do you meet the inclusion/exclusion criteria?



LOTS OF GREAT OPPORTUNITIES TO GET INVOLVED IN STROKE STUDIES!!

Stroke research areas include:

- * Walking
- * Arm and body movements
- * Physical sensation
- * Language/communication
- * Cognition/thinking
- * Learning
- * Brain activity
- * Preventing falls



Promoting Recovery Optimization with Walking Exercise after Stroke (PROWALKS)

- * To investigate an intervention designed to improve everyday physical activity after stroke
- * A 12-week Walking Training Program to encourage more daily walking (3 different groups)
- * Use of a FitBit to track walking activity
- * Allows multiple strokes
- * Training sites at UD, Christiana, Indiana and UPENN
- * Up to \$100 dollars compensation



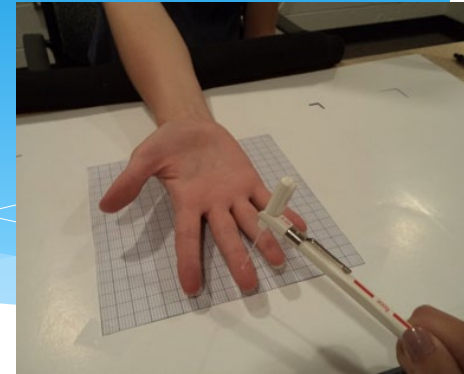
Moderate-Intensity Exercises Versus High-Intensity Interval Training to Recover Walking Post Stroke



- * To help determine the optimal intensity and duration of walking exercise to improve walking abilities after stroke
- * Participants randomized to either moderate intensity walking training or high intensity interval walking training
- * Use of a step activity monitor to track daily stepping activity
- * 36 training sessions
- * Participants compensated \$75 for each of 4 testing visits

Studying Our Sense of the Body After Stroke

- * To understand how brain damage can affect a person's perception of touch and their bodies
- * You will be asked to participate in multiple activities
 - * Perception of touch on the hand with use of a small filament
 - * Perception of your body in space
- * One 2-hour session and you are seated throughout



UD Aphasia & Rehabilitation Outcomes Lab



We study **communication difficulties** after stroke. If you had a stroke and have aphasia, please join us for a study about aphasia, stress, and resilience.

- 1 appointment, about 2 hours
- Tests of language and thinking
- Questions about stress, coping
- At UD STAR Campus or your home



Understanding Arm Impairments After Stroke

Sensorimotor Control and Robotic Rehabilitation Lab

Who: Adult Stroke Survivors with no diagnosis of other neurologic disease (e.g., Parkinson's, Multiple Sclerosis)

What:

- 1 Session lasting 1.5-2 hours **OR** 6 Sessions about 1.5-2 hours each
- Fill out several forms, including demographics, medications, handedness, and compensation forms
- Complete several fine and gross motor tests, and a cognition test
- Have movement of your arms evaluated by the robot. For this, you sit in the robot, with your arms supported, and perform simple games (task) on a horizontally-mounted screen. We may also track your eye movements using a camera. The robot will gently move your arms in some tasks.

Where: University of Delaware's Tower at STAR

Why: To better understand the types of arm impairments stroke survivors have and whether vision helps these impairments



Compensation: \$10/hour - (Up to \$20 for single day study **OR** Up to \$120 for 6-session study)

Thinking/Communication Difficulties after Stroke

Measure What Matters Lab

WHO: Adults with stroke who have:

- * any trouble with language (communicating, understanding, reading, or writing)
- * OR difficulty with thinking or memory

WHAT:

- * 1 appointment, about 1-2 hours
- * questions about your health and quality of life
- * test of thinking and memory

WHERE:

- * UD STAR Campus or your home



WHY: to understand health-related quality of life and improve clinical questionnaires used for neurological conditions

COMPENSATION: \$25 Amazon gift card

CARE PARTNERS of individuals who meet the above criteria can also participate in this study (regardless of whether or not the patient participates)

- * 1 appointment, about 1 hour
- * questions about the health and quality of life of your partner
- * in person OR electronically
- * \$25 Amazon gift card

Custom AFO Study



- * To help determine which type of Ankle-Foot-Orthosis (AFO) works best for an individual post stroke
- * Currently AFO's are given out without looking thoroughly at impairments and function – MANY ARE NOT wearing the correct one!
- * Varied resistances may be needed to improve walking and push off

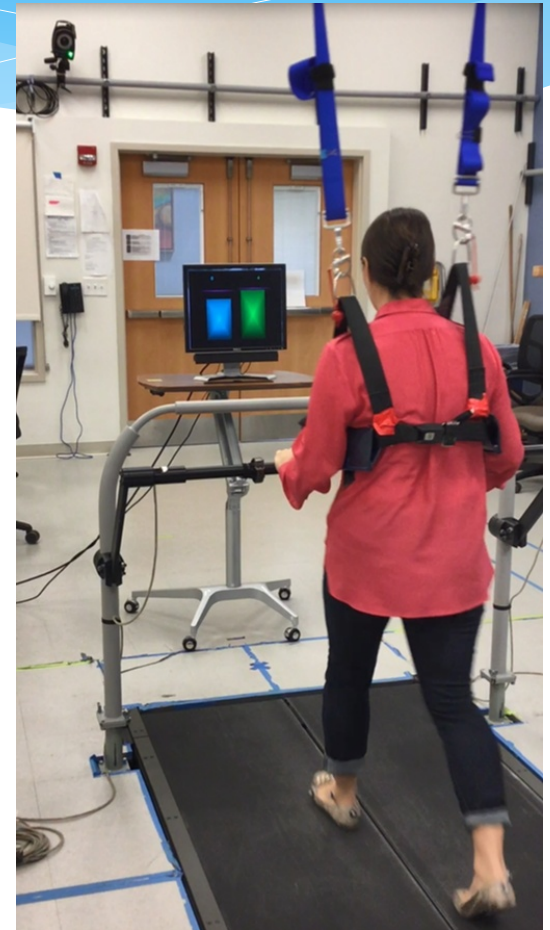
Current Study:

A custom made AFO is provided and worn for 30 days in attempt to improve walking

4 visits with \$25 compensation for each visit

The relationship of motor learning and cognition during walking

- * **Who:** Adults who have had a single stroke
- * **What:** A 3 session study with
 - * 2 sessions (~1 hour) of walking on a treadmill while watching real-time visual feedback about your walking
 - * 1 session (~2 hours) of cognitive testing
- * **Where:** UD STAR Campus
- * **Why:** To investigate the relationship between learning a new walking pattern and cognition
- * **Compensation:** \$25

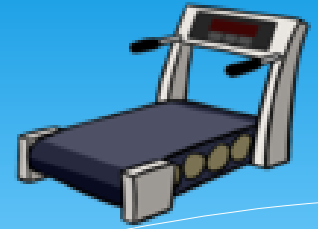


Split Belt Treadmill Study

- * Special treadmill that has 2 treadmill belts
 - * This allows us to control the speed of each leg on the treadmill independently
 - * Shown to temporarily improve the limp commonly seen during walking after stroke
- * You will be asked to walk on the treadmill
 - * with the belts moving at the same speed
 - * with the belts moving at two different speeds



Fall Training Recovery



- * To learn how fall-recovery training may improve the balance and mobility of people post stroke
- * Treadmill that will cause forward and backward falls and slips
- * Body harness for safety





If Interested: 302-831-3391 or rdublin@udel.edu

(Becky Dublin is the Stroke Scheduling Coordinator
who will do your initial phone screening)

Participation is voluntary and you can withdraw at any
time!

Any Questions?



