Participation Timeline for Patients with Stroke

I am a person with stroke and want to participate. How long is this study?

This study will last about three months + one year follow-up (clinical evaluation)

Candidates will participate in:
- One screening visit and clinical evaluation of the arm and hand (about 2-3 hours) (exercises with the arm and hand; recording of the movements with small sensors on the arm and hand; questionnaires related to arm function and quality of life)
- Two Magnetic Resonance Imaging (MRI) scanning visits (about 2 hours each). The scanning will also comprise doing exercises with a robot. The robot attaches to the finger and will gently move your finger in various shapes while you are in the MRI scanner. The purpose of the robot is to evaluate body awareness (how well you can feel movements of your finger).
- 6 weeks of physical therapy (3 times a week, 45 minutes per session) with the neurocognitive approach.

Candidates must fit the following criteria:
- Men and women, 18-99 years of age in good health
- Diagnosed with ischemic stroke at least 6 months ago
- Available for free therapy during 6 weeks and willing/able to undergo MRI scanning
- Are not currently involved in therapy
- Able to hear and comprehend instruction given during the study

Candidates will not fit the requirements of the study if:
- Candidates have injuries to the arm or hand, or other illnesses unrelated to stroke
- Candidates have metal implants, such as surgical clips, or pacemakers. They should not have an MRI, because of the magnetic environment of the MRI scanner
- Candidates are pregnant
- Candidates lack the capacity to consent

If you are uncertain if this study would be for you, feel free to contact us for more information with no obligation.

For more information, please send an email to avdwlab@umn.edu
Screening Visit (less than 1 hour) + Clinical evaluation (about 2-3 hours)
*This visit will occur in the Children's Rehabilitation Center - Physical Therapy
   Brain Plasticity Lab - Clinical Assessment Lab (Room 302)

You will be asked to do the following:
• Consent to participate in the study
• Review your demographic information and medication history
• Complete study required clinical assessments and surveys

MRI Visit (about 2 hours)
*This visit will occur at the Center for Magnetic Resonance Research (CMRR)

• MRI scanning of structural images, and functional MRI procedure with robot. The robot is attached with tape and Velcro to your finger and gently guides your finger in various motions so that you can feel the movements while in the scanner. You will be asked to indicate whether movements are the same or different. You will also be asked to differentiate between musical segments that are played while in the scanner.
• Urine samples will be collected for women of childbearing age. (A negative pregnancy test is required prior to undergoing an MRI).

Therapy Visits (3 x/week, 45 minutes each, for 6 weeks)
*This visit will occur in the Children's Rehabilitation Center - Physical Therapy
   Brain Plasticity Lab - Clinical Assessment Lab (Room 302)

Complete study required exercises. These exercises will be tailored to fit your needs. Examples of the therapy are:
• The therapist performs movements with your arm or hand, while you close your eyes and focus on the movement.
• You will participate in the movement, while the therapist assists. Your eyes will be closed and you will be asked to focus on the movement.
• You move independently, without the assistance of the therapist. In this therapy, your eyes will be open, and you will learn to control your movements that involve multiple joints at once.

Post-Therapy Visit Clinical Evaluation (2-3 hours) + MRI Visit (2 hours)
• Complete study-required clinical assessments and surveys. (The study assessments and surveys will be the same as required at the screening visit.)
• MRI Scanning of structural images, and functional MRI procedure with robot. Urine samples will be collected for women of childbearing age. (A negative pregnancy test is required prior to undergoing an MRI).
Follow-Up Visit Clinical Evaluation (2-3 hours) at one year after therapy
- Complete study-required clinical assessments and surveys. (The study assessments and surveys will be the same as required at the screening visit.)

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*For women of childbearing potential only
** Follow-up at one year after therapy. The study may end early. If there is not change in your condition then the follow-up visit may not be required