

Assessing the Impact of a Cognitive Dual-Task on Motor Impairment of the Upper Extremity Using the Kinarm Robot: A Pilot Study Comparing Healthy Adults and People Living with Stroke

Location: Ottawa area, Ontario

Description: The Kinarm tests the movement of the arms in patients with different diseases and illnesses. After a stroke, movement and cognition are often affected. In daily life, being able to do more than one thing at a time – like moving and thinking –is important to live and maintain independence. The goal of this study is to see if there is a difference in the movement abilities of people living with stroke and healthy adults when completing the arm tasks while counting backwards by 7's (a mental dual task) compared to when you focus only on the task itself. Participants will be asked to attend one 2-hour session at the Advanced Biomechanics & Locomotion Lab at Carleton University to complete two tasks, with and without the cognitive task. The findings from this investigation will allow clinicians to better assess a stroke patient's ability to live and function independently following hospital discharge.

Language: English or French

Eligibility:

- Adults aged 50-80 years old
- Had a stroke affecting the right arm at least 6 months ago
- Right-handed
- Able to attend one session at Carleton University
- No history of neurological conditions (other than stroke) or arm injuries

Participant requirements:

- One 2-hour session using the Kinarm robotic exoskeleton at Carleton University's ABL Lab
- Completion of arm movement tasks with and without a mental task (e.g., counting backwards) using the Kinarm robot
- \$30 gift card by email to a selected location as a thank you for participating

Institution: Carleton University and University of Ottawa

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