Area of study	Cognition	
Name of trial	Cognitive Changes and Rehabilitation in People With Transient Ischemic Attack, Stroke, or Stroke Risk Factors	
Study Type	Cognitive intervention	
Description of trial	Stroke is a leading cause of disability; most strokes (80%) are subcortical, with ischemic damage due to occlusion in penetrating arteries. Although ischemic white matter disease (iWMD) may lack gross clinical manifestation, it causes significant cognitive impairment, particularly on measures of executive function, attention, and memory. This impairment is attributable to diffuse damage affecting network connections. While there are many studies concerning rehabilitation of motor function and language in patients with large focal strokes, few studies have addressed attentional and executive functions. To our knowledge, there are no such studies on iWMD. In this study, patients will be randomized to a novel intervention for improving executive function and a control condition matched for therapist exposure. Patients will be assessed pre-intervention, post-intervention, and at long-term follow-up using a battery of behavioural and neuroimaging tasks.	
Objective of the Study	Through this study, we hope to 1) improve assessment of iWMD injury effects through behavioral assessment and multimodal brain imaging and 2) apply rehabilitation specifically for complex information processing deficits in small vessel white matter stroke.	
Eligibility requirements	**Who can apply** (inclusion criteria) • Age 50-80 • Evidence of ischemic white matter disease **or** elevated risk for stroke (e.g. TIA, minor stroke, hypertension, family history of cerebrovascular disease, etc.) • Cognitive difficulties or complaints (e.g. loss of attention, concentration or organization skills) • Proficiency in English	**Who can not apply** (exclusion criteria) • Co-morbid neurological disorder • Current or history of substance abuse • Medications suspected to influence cognition • Insufficient motor and sensory functioning to complete all study components (despite assistance)

Study Commitment	For the pre-training assessment, participants will come in for 3 visits to complete paper-and-pencil testing, a structural MRI, and simultaneous MRI/EEG (about 3 hours each). For those who are interested and eligible, the training sessions will include 10 small-group sessions twice weekly, over 5 weeks (2 hours each). Following the training sessions, participants will come back for a post-training assessment and 2-month follow-up, which will include paper-and-pencil testing and MRI/EEG sessions.
Location of trial	Baycrest Health Sciences 3560 Bathurst St. Toronto, ON M6A 2E1
Funder	Canadian Institutes of Health Research grant
Contact information	Study Contact Information: **PI: Dr. Brian Levine** If you would like to learn more about participating in this study, please contact: **Nicola de Souza** ndesouza@research.baycrest.org 416-785-2500 x2914 General Information: If you are interested in participating in or learning more about this study, please email research@canadianstroke.ca or call 416-480-6100 ext. 80941