

My Dunhill Fellowship in 5 Minutes: The Cognition and Flow Study



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Background

46 million people living with dementia

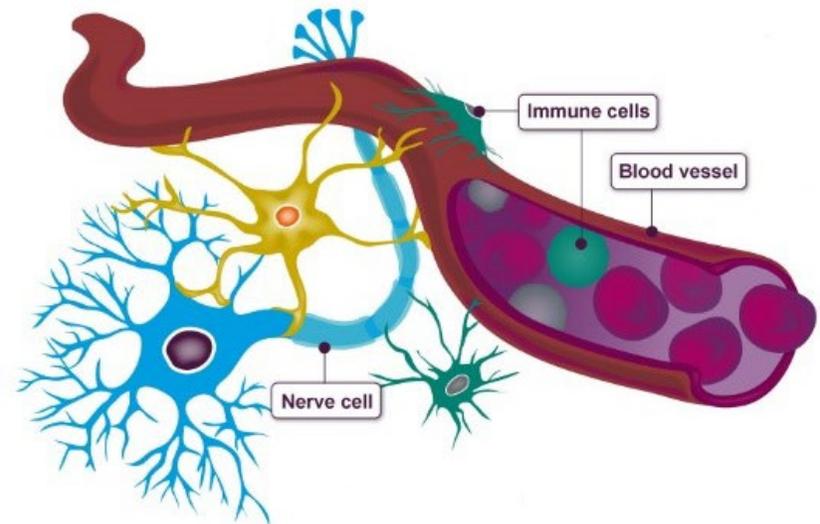
- Few treatments available

Brain training

- Few side effects
- Limited studies with brain imaging

Brain blood flow

- Important in the development of dementia
- Potential treatment target



Aims/ Research questions

- 1) What is the feasibility of a randomised trial of brain training in dementia?
- 2) To identify any clinical benefits of a brain training program in dementia
- 3) To explore any patient or carer benefits or harms not identified by traditional measures

Study methods

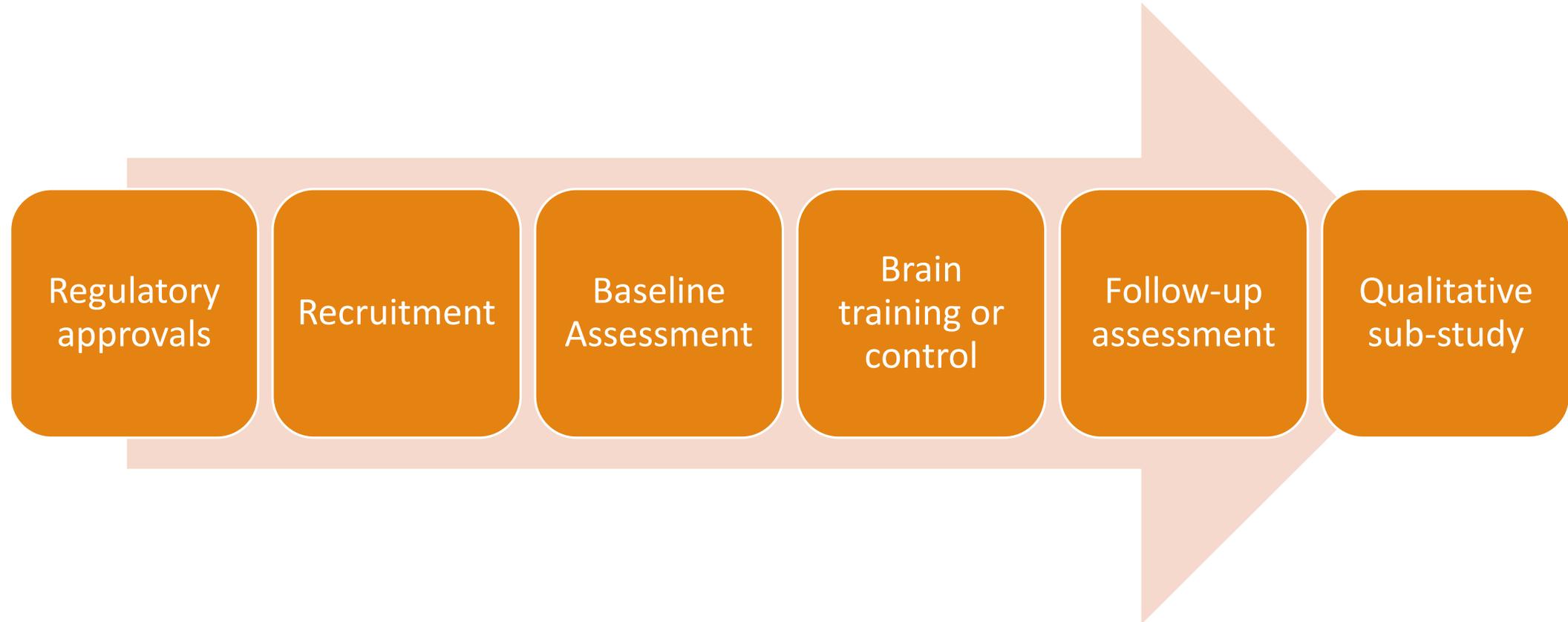
Recruitment

- 20 healthy older adults
- 40 people living with mild cognitive impairment and Alzheimer's disease

Outcomes:

- Brain blood flow
- Memory
- Mood
- Quality of Life
- Everyday activities

Study methods



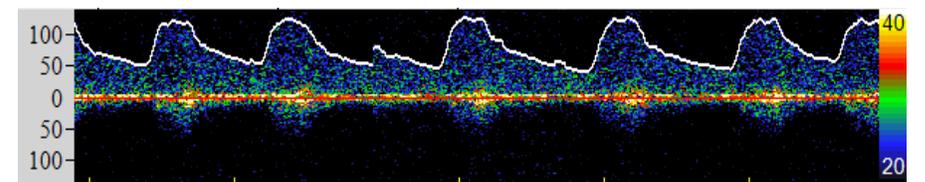
Blood flow assessment

Transcranial Doppler ultrasonography (TCD)

- Ultrasound
- Safe, simple, acceptable

Blood flow response to five memory tasks

- Attention
- Memory
- Fluency
- Visuospatial
- Language



Brain training programme

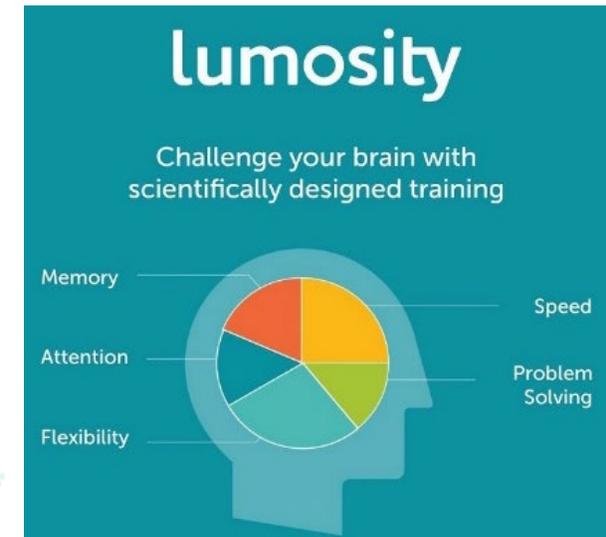
Commercially available

Research-industry partnership with Lumosity©

Targeting the same 5 brain areas

Training:

- 5x per week
- 30 minute sessions
- 12 weeks



Going forward

Currently:

- 20 healthy adults enrolled and followed-up Aug 2019
- 13 patients with MCI or dementia enrolled

Study completion April 2020

Aim to scale to a larger trial

Summary

Brain blood flow is important in the development of dementia

Brain training has potential to delay onset

More research is needed:

- Role of blood flow in dementia
- Role of brain training in dementia

Thank you for listening
