

Dr Sharon Olsen



**AUT BRAIN HEALTH
RESEARCH INSTITUTE**



Research focus

Sharon is a senior lecturer and the Professional Lead of Physiotherapy at AUT. She is an experienced neurological physiotherapist and researcher whose work focuses on training modalities and emerging technologies that support healthy ageing and recovery from neurological conditions. Her work explores the effects of aerobic exercise on the brain and nervous system, with a particular interest in concussion recovery. She also investigates the use of technologies such as EEG, neuromodulatory techniques, wearables, and smartphone applications to assess and enhance rehabilitation outcomes.

Current projects

1. Optimising aerobic exercise interventions after concussion
2. Exercise tolerance and post-exertion impairment testing after concussion
3. Smartphone accelerometry for improved diagnosis and management of gait and balance disorders
4. Cultural and environmental approaches to brain health: Social and outdoor physical activity for cognitive health

Examples of recent work

Olsen, S., McLaren, R., Scrooby, A., Shaikh, N., Henare, D., Taylor, D., & Chaudhary, S. (2026). Advancing standardisation of motor-cognitive dual task walking assessments: a scoping review of methodological practices in healthy older adults. *BMC geriatrics*.

Forch, K., Pedersen, M., Reid, D., Towersey, N. C., & **Olsen, S.** (2025). Use of physical exertion to enhance objective testing following mild traumatic brain injury: A systematic review. *BMJ Open Sport & Exercise Medicine*, 11(2).

Tracey I, Gomes E, Signal N, Alder G, Forch K, **Olsen S.** Highlighting gaps in the reporting of aerobic exercise interventions for mild traumatic brain injury: A systematic review using the TIDieR-Rehab checklist

Positions

Senior Lecturer,
Physiotherapy - AUT

Contact info

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