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## Updated concussion app to help improve recovery and guide future research

In a world-first study, updates to the phone and web-based app HeadCheck will help researchers better understand head injuries and improve treatment for the hundreds of thousands of Australians who suffer a concussion each year.

The groundbreaking [Australian Mild Traumatic Brain Injury](#) (AUS-mTBI) study will see thousands of volunteers from across the country who have had a recent concussion have the option to opt-in to report their symptoms via a specially-designed AUS-mTBI concussion online tool as part of the newly revised [HeadCheck app](#), while they receive support for their recovery.

For nearly 10 years, HeadCheck has been helping Australians recognise the symptoms of concussion and manage their recovery — making it the natural partner for AUS-mTBI.

Study participants can track and manage their symptoms over a 12-month period or until their symptoms resolve, while gaining access to information and resources to help their recovery and return to normal daily activities such as study, work, sports or recreation.

Also known as mild traumatic brain injury, concussion occurs when a physical injury to the head or body transmits force to the brain.

It is estimated around 180,000 cases of concussion occur in Australia annually, however the figure is likely much higher due to the majority of people suffering a concussion not seeking medical treatment.

Curtin University Deputy Vice-Chancellor, Research and study lead [Professor Melinda Fitzgerald](#) said concussion causes feelings of being dazed or confused, with symptoms usually resolving within a few days or weeks.

“However, in a small proportion of people, the symptoms can continue for multiple weeks, if not months or even years,” Professor Fitzgerald said.

“The challenge is we don’t understand what it is about a person and their injury that predicts whether they will recover normally, or if their symptoms will continue.

“Our team of national researchers is aiming to discover why some people experience these long-term, sometimes debilitating, symptoms.”

AUS-mTBI involves more than 100 concussion experts from around Australia and is looking to build a clearer picture of concussion recovery.

“This is the first study of its kind in the world to integrate best practice, world leading research and patient recovery experiences,” Professor Fitzgerald said.

“This app is a novel approach to online health data collection and interpretation and we hope it will help us to understand the experience of more than 5000 people who have had a recent concussion.

“By collecting best practice social, biological, health, clinical, intervention and outcomes information, in an integrated, nationally representative dataset, we can improve the accessibility and consistency of treatment advice to ultimately improve care and recovery for people throughout Australia.”

AUS-mTBI’s large-scale national collaborative effort brings together clinicians and healthcare providers from around Australia, who partnered with researchers and people with lived experience to design the AUS-mTBI concussion app-based tool.

“By confidentially gathering information about the person, their injury, their pre-injury health, and the treatment they have received, our research aims to identify what leads to poorer outcomes in some people who experience a concussion,” Professor Fitzgerald said.

The study is a partnership between leading Australian universities, institutes and organisations and is funded by the Australian Government Medical Research Future Fund, Mission for Traumatic Brain Injury.

The HeadCheck app was developed by Murdoch Children’s Research Institute, the Australian Football League and digital health technology company Curve Tomorrow, while AUS-mTBI project partners include Curtin University, Perron Institute for Neurological and Translational Science, Monash University, Edith Cowan University, The Queensland Brain Institute, Griffith University, The University of Sydney, Deakin University, the Heart Research Institute, the National Imaging Facility and brain injury organisation Synapse.

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### **Notes to Editor:**

#### **About Curtin University**

Curtin University is Western Australia's largest university, with close to 60,000 students. In addition to the University's main campus in Perth, Curtin also has a major regional campus in Kalgoorlie, and a campus in Midland, as well as four global campuses in Malaysia, Singapore, Dubai and Mauritius. Curtin staff and students come from Australia and more than 140 other countries around the world, with about half our international students studying at Curtin's offshore campuses.

Curtin is ranked in the top one per cent of universities worldwide, with the University placed 9th in Australia according to the [Academic Ranking of World Universities \(ARWU\) 2023](#) and has achieved a QS Five Stars Plus rating, the highest available for a tertiary institution, and one of only five to do so in Australia.

The University has built a reputation around innovation and an entrepreneurial spirit, being at the forefront of many high-profile research projects in astronomy, biosciences, economics, mining and information technology. It is also recognised globally for its strong connections with industry, and for its commitment to preparing students for the jobs of the future.

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