

Brain training could save distracted drivers from road accidents

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(Medical Xpress)—It happens to most of us at some point - our eyes are on the road, our mind starts to wander, and several kilometres down the road we're either snapping out of it ... or involved in a road accident.

A startling 20% of Australian drivers involved in crashes have reported they were staring right at the thing they had the accident with but failed to perceive its significance until too late because they were distracted at the time.

Now researchers at The University of Western Australia have won funding from the Western Australian Institute for [Medical Research](#) (WAIMR) Neurotrauma Research Program to test a computer-based program that aims to train the [human brain](#) to ignore or more quickly put aside irrelevant distractions and get back to the task at hand.

Perth man Symon Still - now a high-level [paraplegic](#) - has welcomed the new program to reduce [driver distraction](#).

Mr Still was a 24-year-old physical education teacher riding his bike to school when a 4WD vehicle cut in front of him.

"My helmet saved my life but it couldn't save my [spinal cord](#)," Mr Still said.

"The driver was in the middle of Mandurah, driving back to his office and thinking about a meeting he'd just attended. He was taking a familiar

route only 400m from his work and said he didn't even see me.

"I fully support this research to train drivers' brains. It's got to be better than just telling people not to drive distracted, and it might save somebody's life."

The project's lead researcher, UWA Associate Professor Troy Visser, said that though [texting](#) on a mobile phone or looking away from the road to adjust a car sound system while driving were big problems in themselves, they were not the only causes of distraction.

"You might have had an argument with your spouse or a bad day at work and you are not cognitively engaged with your driving," Associate Professor Visser said. "At that stage it doesn't matter whether you are looking at what you are doing or not because you're not fully there - your mind has wandered off."

He said scientists wanted to see whether the [brain](#) could be changed via training to avoid such [distractions](#).

The \$70,000 one-year grant from the Neurotrauma Research Program and WAIMR will enable Associate Professor Visser, with fellow School of Psychology researchers Associate Professor Shayne Loft and Adjunct Professor Jim Enns, to test the anti-distraction program and validate its effectiveness under simulated driving conditions.

The program requires people to perform a series of challenging tasks that involve picking out targets from sets of confusing images - for example, identifying letters presented among numbers.

"If you give people a task like this they don't do very well at picking out the letters because the numbers are very similar, and thus distracting," Associate Professor Visser said. "People cognitively engage with the

numbers and when they're engaged with the numbers, they miss the letters."

However, like the old saying 'practice making perfect', pilot data suggests that when people's brains are repeatedly exposed to cognitive distraction, they become less distractible over time. It is already known that such computer-based learning can be transferred to other tasks - the question is whether it can help inattentive drivers become more focused.

"This program has great potential to effectively improve driving safety among the general public, especially younger and older drivers who are particularly at risk from distraction while behind the wheel," Associate Professor Visser said.

"But it could also be useful across a wide range of areas where focus and distraction are an issue - in education, treatment of Attention Deficit Hyperactivity Disorder (ADHD), and jobs such as air traffic control, construction and mining, and long-haul driving.

"Basically, if we find you can train people effectively in this way, it opens up opportunities for different industries and people to be able to come in for a couple of hours' worth of training on a simple task and significantly improve their ability to focus. For now we need to see that training works and how long it works for. From there, in many ways, the sky's the limit."

Provided by University of Western Australia

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