

Brain changes may lengthen odds that gamblers can stop

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(Medical Xpress)—People who gamble frequently may experience brain changes that make it extremely difficult for them to give up the habit.

In a new research study, scientists from Monash University will for the first time use a combination of MRI scans, psychological tests and questionnaires to pinpoint the differences between the brains of people who identify themselves as regular gamblers, and those of a control group.

The collaborative study, led by the Monash Clinic and Imaging Neuroscience (MCIN) group at Monash University, will work in conjunction with the Victorian Responsible Gambling Foundation and Turning Point to investigate all types of problem [gambling](#).

Australians spend more on gambling per person than any other nation. At least one million people are defined as problem gamblers, and this group is responsible for 40 per cent of the money spent on gambling in the country.

The research focus will be on people who regularly use gaming machines, or 'pokies'. One of the most popular types of gambling in Australia, pokies are also one of the biggest problem areas. Seventy per cent of people who seek treatment for problem gambling define themselves as gaming machine addicts.

MCIN Director Professor Murat Yücel said the study comes at a critical time.

"Gambling is considered an acceptable leisure activity, and for most people it is," Professor Yücel said. "But it's hard to ignore these alarming statistics. An increasing number of people are unable to control their gambling. Instead of being a bit of harmless fun, it becomes a major problem that people struggle to control, impacting every aspect of a person's life.

"We urgently need more research to understand why some people develop an addiction and some don't. With this information we can develop targeted support for each individual."

Gambling problems develop when certain areas in the brain known as 'reward circuits' begin to malfunction. A couple of the key brain networks relate to how we make predictions about and place 'value' on

rewards and losses and how we exercise self control, each of which plays a part in everyday decisions including spending money and taking part in enjoyable activities, such as gambling.

The research team will test these circuits in people with gambling issues to see which networks are most affected. It's hoped that this information will lead to the development of tailored treatments for problem gamblers.

Dr Valentina Lorenzetti, from the MCIN, said data on problem gambling is well behind that on other forms of addiction.

"At the moment we're 'borrowing' information on what happens to the brain with other forms of addiction and applying this to gambling research. But this is a unique disorder, which needs dedicated research. This study will fill that gap," Dr Lorenzetti said.

The tests, which include personality profiling, responsiveness to stimuli and behavioural patterns, will build a detailed picture of what happens in habitual gamblers' brains.

Professor Yücel said further research is needed because there isn't a 'one size fits all' approach to treating problem gambling.

"Problem gambling is very complex, there are many elements at play. For example, two people could be sitting side by side at the pokies for hours on end doing exactly the same thing for very different reasons.

"The challenge is to get to know these reasons by building a very detailed understanding of the psychological and neurobiological processes that drive or maintain gambling for different individuals. In doing so we can develop individually tailored treatments," Professor Yücel said.

Current treatment for [problem gambling](#) involves a combination of counselling, step-based programs, self-help, peer-support and in some cases medication. However success rates vary, and as many as 92 per cent of people who seek help to stop gambling experience a relapse within 12 months.

Provided by Monash University

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