

## Under the Microscope

### With Dr Daniel Fatovich

---

With the illicit use of amphetamines on the rise in the community, it is becoming increasingly important for us to fully understand what effect amphetamine use has on the brain.

This is the impetus behind a study currently being undertaken by a group of Royal Perth Hospital (RPH) specialists.

Led by Dr Daniel Fatovich and funded by a grant from the RPH Medical Research Foundation, the study will examine patients identified as amphetamine users, and screen them for signs of cerebral abnormalities, or inflammation of the blood vessels in the brain.

A wide range of complications can arise as a result of amphetamine use. It can cause many serious, long term effects and it has shown to cause inflammation of the blood vessels around the brain in some users.

Dr Fatovich said there is evidence to suggest that amphetamine use can affect the way the brain functions. This could be a result of blood vessels in the brain being inflamed.

"The aim of the study is to obtain Medical Resonance Imaging (MRI) scans on users, to see if there are signs of cerebral abnormalities, despite showing no symptoms," Dr Fatovich said.

"Often users may have no obvious symptoms to suggest there is some brain abnormality, but this may not necessarily mean they are not at risk.

"It is possible that amphetamine users may have as yet, unidentified inflammation of the blood vessels, and by carrying out this extra test, we will be able to better understand the prevalence of the condition in amphetamine users," he said.

It is estimated that one in ten Australians has tried methylamphetamine. There are approximately 102,600 regular methylamphetamine users in Australia, and of these 72,700 are dependent users.

The RPH Emergency Department (ED) staff has a great deal of experience in identifying and managing amphetamine users, and previous research has revealed that 1.2% of all presentations to the RPH ED are amphetamine related.

"This is around 2.5 times more of a burden than heroin presentations were when heroin use was in its peak," Dr Fatovich said.

"It is more important than ever that we fully understand the implications of amphetamine use on the brain.

"The results of this research in determining the extent of damage amphetamines have on the brain, could have far reaching public health implications," said Dr Fatovich.