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## **Medicinal cannabis trials a danger to children and teens, expert warns**

Governments should not be backing trials of medicinal cannabis for children and teenagers because mounting evidence suggests the drug harms the developing brain, according to an expert in cannabis addiction and impairment.

“It shouldn’t be used at all on children or adolescents,” says Dr Philip Crowley, an addiction medicine specialist at the Royal Adelaide Hospital. “There are trials of cannabis to treat epilepsy in children planned in Brisbane and underway in Sydney. I can’t see how that is ethical.

“We now know cannabis is toxic to the developing brain in kids and adolescents. It leads to long term damage to structures that are vital for memory, learning and thinking. This can cause learning and behaviour problems or reduced intelligence.

“It’s not like ice, a single dose is not going to cause you huge, dramatic problems, but early and regular use will mean that your trajectory will be diminished. You won’t reach your education potential and there will be other, subtle changes in complex functioning that can be permanent.”

Dr Crowley will speak on ‘Cannabis, addiction and impairment’ in Adelaide on Friday September 16 at a conference of the Faculty of Pain Medicine of the Australian and New Zealand College of Anaesthetists.

He believes the current push to introduce cannabis for medical reasons is based on misconceptions. He says medical studies have found that it has serious negative effects for children and teenagers, including:

- The earlier and more regularly cannabis is used, the more difficulties the person experiences in adulthood, including problems with substance use and mental health. (Scholes-Balog, 2016)
- The levels of disability seen in people who have used cannabis frequently can be quite severe and persist even after they stop. (Hasin, 2016).
- Cannabis is toxic to developing neurons in adolescence, with the effects so severe that the resulting changes can be seen on the brain scans of users. (Batalla, 2013).

“Scans of chronic frequent users show conclusively that regions important for memory, emotional regulation and thinking are reduced in size. Even something as basic to

functioning as the corpus callosum, which connects the two hemispheres of the brain, is diminished in density,” Dr Crowley says. “The work done on frequent adolescent cannabis users showed the brain changes can develop soon after starting the drug, with even worse effects seen in girls.

“This could be part of the reason for the increase in conditions such as anxiety and depression seen in young people who have been regular cannabis users.”

Dr Crowley says that generally, “The earlier that regular cannabis is started, the greater the risk of future addiction and cognitive impairment. And the changes don’t just go away after the adolescent stops using cannabis.

“Why would we consider treating children with something that we know harms the developing brain? Even parents desperate for help should ensure that, at least, no harm is done to their child.”

Dr Crowley says in adolescence, the brain is growing rapidly, setting up new connections and pruning others, and that cannabis use harms that process. This is a time when the brain is optimised for future functioning. “Surely, approving cannabis experiments on kids should not be on the agenda.”

Dr Crowley says that the push for medical cannabis is being promoted by different groups for different reasons, with little discussion of its adverse effects on health.

“People wanting commercial cannabis seem to see it as a way to open up the market; the public seems to see this as an answer for all manner of chronic illness; and the politicians seem confused about how to regulate drugs based on the amount of harm they can cause.”

#### **About FPM**

The Faculty of Pain Medicine is a world-leading professional organisation for pain specialists that sets standards in pain medicine and is responsible for education and training in the discipline in Australia and New Zealand. Pain medicine is multidisciplinary, recognising that the management of severe pain requires the skills of more than one area of medicine.

Chronic pain affects about one in five people in Australia and New Zealand. Specialists also manage acute pain (post-operative, post-trauma, acute episodes of pain in medical conditions) and cancer pain. For more information, please see [here](#).

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