

# How teenagers addicted to cannabis risk damaging their IQ and show signs normally seen in early Alzheimer's

- **Researchers put 1,000 boys and girls through a battery of IQ tests**
- **They did the same tests more than 20 years later, at the age of 38**
- **The study found a marked drop in intelligence and attention and memory were also harmed**

By [Fiona Macrae](#)

Teenagers who become hooked on cannabis risk long-term damage to their IQ, researchers have warned. A study found a marked drop in intelligence in those who started using the drug in their teens and continued to take it for years afterwards.

Attention and memory were also harmed, with those who developed a taste for the drug in adolescence faring worse on a test more usually used to spot the early signs of Alzheimer's in pensioners.

(File picture) Researchers from the Institute of Psychiatry at King's College London found teenagers who become hooked on cannabis risk long-term damage to their IQ

Importantly, the effects on IQ could still be seen in those who had not touched the drug for a year.

The results are significant because while cannabis has been blamed for relatively rare mental health problems such as schizophrenia, this is the first firm evidence of it wreaking damage on everyday life.

Professor Robin Murray, a consultant psychiatrist at the South London and Maudsley NHS Foundation Trust, said: 'It is, of course, part of folklore among young people that some heavy users of cannabis seem to gradually lose their abilities and end up achieving much less than one would have anticipated.'

'This study provides one explanation as to why this might be the case.'

One of the researchers said: 'The simple message is that substance use is not healthy for kids.'

Official figures show that although drug use is falling among British schoolchildren, cannabis is still their drug of choice, with almost 8 per cent of 11 to 15 year olds questioned having used it in 2011.

The analysis, detailed in the journal Proceedings of the National Academy of Sciences, also found those who used the drug (pictured here) persistently from their teens did worse on a memory test

The eminent international research team, including some from the Institute of Psychiatry at King's College London, put more than 1,000 boys and girls through a battery of IQ tests when they were aged 13 and 14.

They did the same tests more than 20 years later, at the age of 38, and any differences were noted. They were also asked every few years if they had taken cannabis and, if so, how often.

**'As with all recreational drugs, it is important that all young people are informed about the potential harms of cannabis use, through good quality drug education and well-resourced public health campaigns.'**

*Martin Barnes, DrugScope*

Unlike some previous studies, none had tried the drug when the research started, making it easier to tease out any effects of cannabis on the brain.

The results showed small falls in IQ in those who never or rarely used the drug and in those who had started to use it a lot as adults.

But in those who became hooked on cannabis in their teens, IQ fell by an average of eight points – the equivalent of going from being of average intelligence to being in the bottom third of the population.

Researcher Professor Terrie Moffitt, of the Institute of Psychiatry, said: 'Research has shown that IQ is a strong

determinant of a person's access to college education, their lifelong total income, their access to a good job, their performance on the job, their tendency to develop heart disease and even early death.

'Individuals who lose eight points in their teens and twenties may be disadvantaged, relative to their same-age peers, in the most important aspects of life and for years to come.'

The analysis, detailed in the journal Proceedings of the National Academy of Sciences, also found those who used the drug persistently from their teens did worse on a memory test used normally to spot tell-tale signs of dementia.

## **SCIENTISTS FIND SWITCH IN BRAIN THAT COULD CAUSE PSYCHOSIS**

Earlier this month scientists revealed they have found a switch in the brain which may explain why smoking cannabis causes psychosis and addiction in more than one-in-ten users.

The team, at Aberdeen University found a genetic difference in the switch, probably inherited from early humans who smoked the drug in prehistoric times.

The difference may also explain why some people could be more susceptible to conditions such as obesity.

The chemical 'switch' discovered by researchers could explain by one in ten cannabis smokers suffer from psychosis and addiction issues.

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And their friends told of them forgetting to return calls, pay bills and do errands.

With those who started taking cannabis persistently as adults suffering few ill-effects, the researchers say the drug may be particularly toxic in the teenage years, when the brain undergoes a rapid growth spurt.

Laurence Steinberg, a U.S. expert on the development of the adolescent brain, said: 'This study points to adolescence as a time of heightened vulnerability.'

'The findings are pretty clear that it is not simply chronic use that causes the deficits but chronic use with adolescent onset.'

Professor Murray, whose own work has shown a clear link between cannabis use in teenage years and mental illness in later life, described the research as very impressive.

He said that if other studies come to the same conclusion 'it will be very important and public education campaigns should be initiated to let people know the risks'.

Martin Barnes, chief executive of charity DrugScope, said: 'Although the number of cannabis users in the UK has been falling consistently for some years, the risks to the health and wellbeing of those who do use it have not decreased.'

'As with all recreational drugs, it is important that all young people are informed about the potential harms of cannabis use, through good quality drug education and well-resourced public health campaigns.'