Smoking may increase risk of mental health problems – study

Researchers find link between tobacco cigarettes and depression and schizophrenia

by [Nicola Davis](https://www.theguardian.com/profile/nicola-davis)

[Smoking](https://www.theguardian.com/society/smoking) tobacco cigarettes could increase the risk of mental health problems such as depression and schizophrenia, research suggests.

It has long been known that smoking is more common among people with mental health conditions. However, it has been unclear whether smoking could be a factor in [causing such problems](https://www.theguardian.com/society/2015/jul/10/smoking-tobacco-might-increase-risk-schizophrenia-say-researchers-psychosis) or is simply a form of self-medication among those already living with poor mental health.

Scientists say they have now unpicked the issue. “What we found was that there was evidence of causal effects in both directions,” said Dr Robyn Wootton, the first author of the research, from the University of Bristol.

Wootton said that while the serious physical consequences of smoking were already known, the new research underlined the importance of preventing people from starting the habit and helping smokers to quit to protect their mental health – whether or not they have existing mental health problems.

“Of course, if [smoking] is also making the risk of mental illness worse then we should be helping individuals who have existing mental health problems to stop as well,” she said.

Writing in the journal Psychological Medicine, Wootton and colleagues report how they compared the risk of developing depression or schizophrenia among people with and without a genetic predisposition to smoking cigarettes. As such genetic variants are randomly distributed across the population – and are not changed by factors such as alcohol consumption, income, exercise or other health issues – the approach is a type of natural experiment that reduces the chances of any link being down to other factors.

The team focused on 378 genetic variants that have previously been linked to whether people start smoking, as well as 126 genetic variants the team found were linked to a higher score for lifetime smoking – a measure encompassing how heavily people smoked, for how long, and if they quit.

Wootton and colleagues then used two separate genetic databases, one including thousands of individuals with schizophrenia and the other including thousands of individuals with major depression, to explore whether the risk of having such conditions was linked to the genetic variants for smoking.

The results reveal that both starting smoking and higher levels of smoking are linked to a greater risk of both depression and schizophrenia. As an example, an individual who smoked 20 cigarettes a day for 15 years but then did not smoke for 17 years had more than twice the odds of developing schizophrenia and almost twice the odds of developing depression than someone who had never smoked.

The team also looked to see whether people with a genetic predisposition to depression or schizophrenia smoked more. While they did indeed find such an effect, it was weaker than for the opposite direction.

However, the study has limitations, including that it focused on people of European ancestry.

Wootton said it was necessary to explore exactly how smoking might increase the risk of schizophrenia and depression, but one possibility was that nicotine influences pathways in the brain linked to mental health problems. That could be important, she added, since nicotine is also found in electronic cigarettes.

Cannabis use might also help to explain the findings, since high-strength cannabis has previously been suggested to [increase the risk](https://www.theguardian.com/society/2019/mar/19/high-strength-cannabis-increases-risk-of-mental-health-problems) of mental health problems, and those who smoke have a greater risk of cannabis dependency.

Dr Ian Hamilton, an expert in addiction and mental health from the University of York, said: “While the physical harms of smoking are well known, this research points to the mental health risks of using tobacco. This risk should be communicated widely but particularly to school-age children who might be tempted to try smoking.”

https://www.theguardian.com/society/2019/nov/06/smoking-may-increase-risk-of-mental-health-problems-study