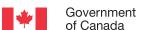
Does cannabis use increase the risk of developing psychosis or schizophrenia?

**CANNABIS RESOURCE SERIES** 





#### **BRIEFS AVAILABLE IN THIS SERIES:**

- ▶ Is cannabis safe to use? Facts for youth aged 13–17 years.
- ▶ Is cannabis safe to use? Facts for young adults aged 18–25 years.
- ▶ Does cannabis use increase the risk of developing psychosis or schizophrenia?
- ▶ Is cannabis safe during preconception, pregnancy and breastfeeding?
- ▶ Is cannabis addictive?

#### **PURPOSE:**

This fact sheet provides basic information about the link between cannabis use and the development of psychosis or schizophrenia. It is intended to provide source material for public education and awareness activities undertaken by medical and public health professionals, including mental health practitioners.

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# Key messages

In light of cannabis use being legalized in Canada for people over 18 years old (or 19 in some provinces and territories), understanding the associated risks of its use is critical to help Canadians make informed decision about their own health.

The risk of developing psychosis or schizophrenia may increase when cannabis is used more frequently, especially on a daily and near-daily use.

The use of high-potency cannabis products has been linked to an increased risk of psychosis.

The risk of developing psychosis or schizophrenia may increase when cannabis use is initiated before the age of 16.

Persons with a family history of psychosis or schizophrenia who use cannabis are at greater risk of developing psychosis and schizophrenia.

Canadians should speak with their medical and public health professionals for more information about using cannabis and its effects on their health.

# Supporting information

For: Medical and public health professionals, including mental health practitioners

#### How does cannabis affect the brain?

Cannabis contains hundreds of chemical substances. Over 100 of these chemicals are known as cannabinoids. Cannabinoids are chemicals that can change how cells communicate with one another. When in the brain, this can affect the way someone perceives their environment, thinks, behaves and feels. THC is the cannabinoid in cannabis that is mainly responsible for the psychoactive effects of cannabis.

#### Does using cannabis increase the risk of psychosis or schizophrenia?

Yes. Although the exact underlying mechanism is still largely unknown, there is strong evidence that using cannabis may increase the risk of an individual developing psychosis and schizophrenia. There are also certain risk factors that studies have shown to be a good predictor of psychosis and schizophrenia in cannabis users:

Age at Earlier-onset cannabis use is associated with an increased risk of first use earlier onset psychosis with cannabis users under the age of 16 at greater risk of developing psychosis or schizophrenia. 1-6, 6 It has been found that cannabis use brings on psychosis 3 years earlier in psychotic patients who use compared to those who don't use cannabis. 5,7 Although further research is needed, studies have found structural and functional alterations that may occur to the brain with chronic use<sup>4</sup> and which may have negative consequences, especially on the developing brain of adolescents. 1,4

### Frequency and potency

There is strong evidence of a dose-response relationship between the level of cannabis use and the risk of psychosis<sup>2</sup> and schizophrenia.<sup>8</sup> Any cannabis use is associated with a 40% increased risk of psychosis.<sup>8,9</sup> Higher frequency of cannabis use has been shown to increase the risk and severity of symptoms of psychosis and developing psychotic disorders compared to less frequent users. 1, 3, 6, 10, 11 Daily use increases that risk to between two- and three-fold compared to non-users. 12 Daily, or near-daily use presents the greatest risk factors for harms. 1, 3, 10

Use of higher potency cannabis products has also been associated with an increased risk of psychotic symptoms as well as an earlier onset of psychosis.6, 11, 13

Cannabis dependence is also associated with a greater risk of psychosis/schizophrenia. 14 Stopping or reducing cannabis use has been shown to improve psychotic symptoms and outcome. 15, 16

# History

Family Persons with a family history of psychosis or schizophrenia can have a genetic predisposition to psychotic disorders, which make them more susceptible. 1, 10 While the degree of this association is inconsistent, studies suggest cannabis users with a family history of psychosis are 2.5 to 10 times more likely to develop psychotic disorders, compared to non-users with a family history.8

> It is recommended that persons with a family history of psychosis or schizophrenia refrain from using cannabis.1

> It has been estimated that cannabis use can account for between 8% and 14% of schizophrenia cases. However, the prevalence of schizophrenia has not increased with increased prevalence of cannabis use.8

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