

# Cannabis-Induced Psychosis in Adolescents

## CANNABIS USE IN CANADA

15%

of Canadians aged 15 and older have used cannabis

16-24 yrs old

The most frequent users of cannabis are between 16-24 years old, and their use is double that of those 25+ years old

49% to 58%

15-24 year olds comprised 49% to 58% of cannabis-related hospitalizations in Canada between 2006 to 2015



Cannabis comes from the plant, cannabis sativa. One property of cannabis, known as **THC**, is responsible for creating a 'high' feeling. However, THC may also create **psychosis** symptoms in certain individuals.

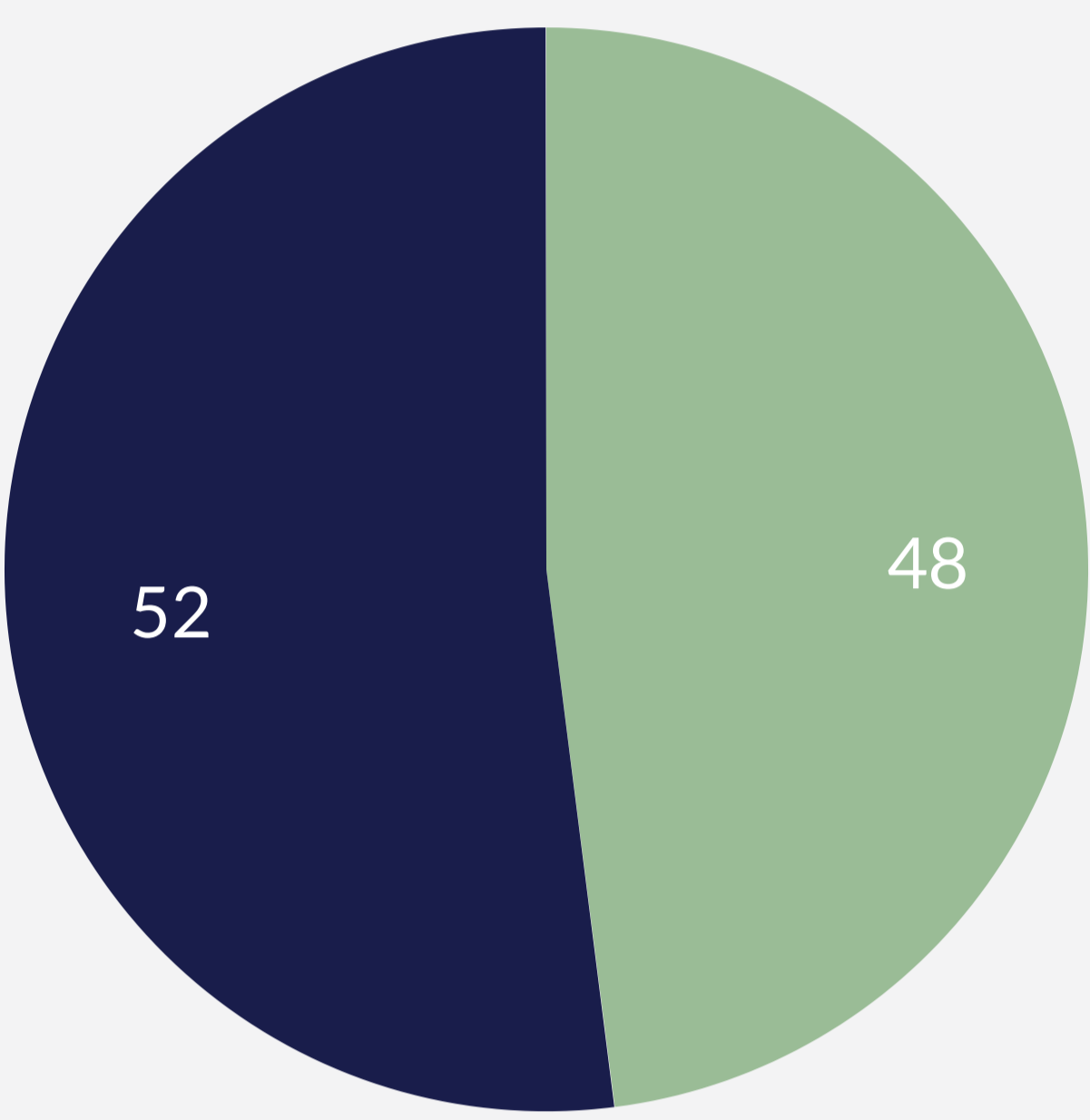
## WHAT IS PSYCHOSIS?

Psychosis is a mental condition where one may find it difficult to determine what is and is not real. A person experiencing psychosis may have negative symptoms like diminished emotional expression. They may also have positive symptoms like **hallucinations** and **delusions**, which can be induced by engaging in cannabis use.

**Hallucinations**  
Sensing something that is not actually there

**Delusions**  
False beliefs a person holds that is not accounted for by their culture

## CANNABIS-RELATED MENTAL DISORDER HOSPITALIZATIONS IN CANADA

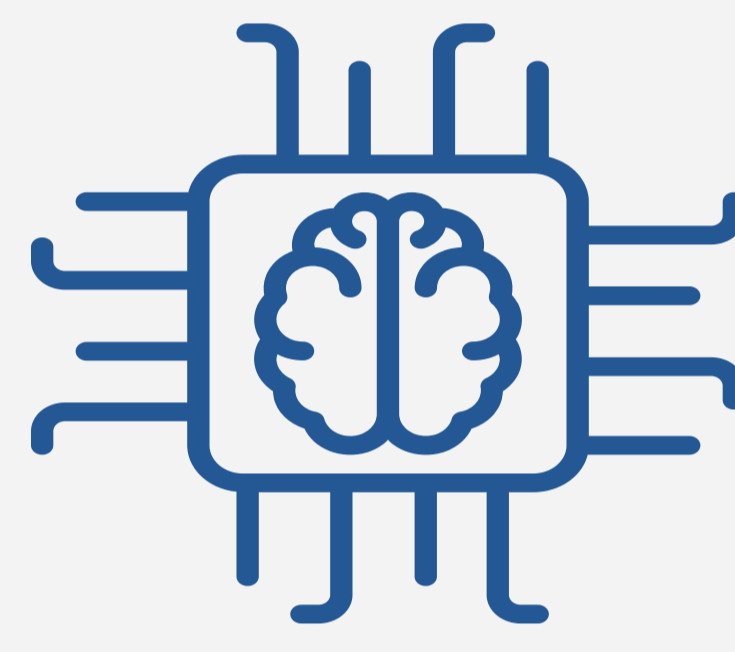


The rate of cannabis-related mental disorder hospitalizations in Canada is rising. Almost half of these hospitalizations are for psychotic disorders.

## HOW ARE CANNABIS AND PSYCHOSIS RELATED?

### 1 ALTERATIONS IN THE BRAIN

Chronic cannabis use is associated with decreases in grey matter in the brain. Decreased grey matter is also associated with people who have psychosis experiences.



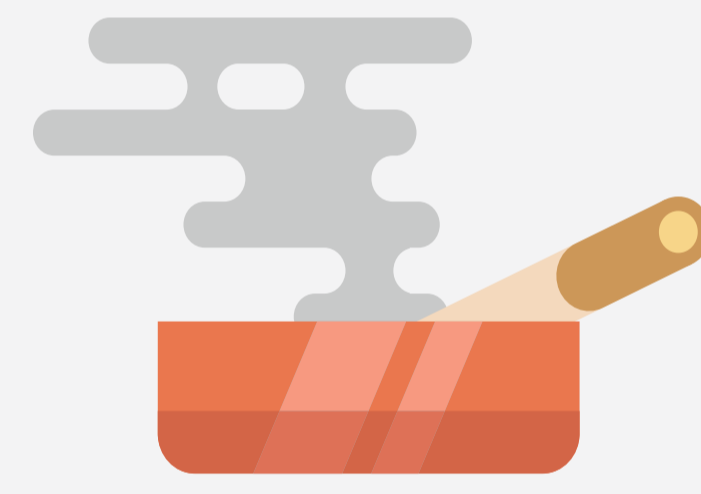
### 2 GENETICS & ENVIRONMENT

Cannabis use in adolescence can be influenced by a host of genetic and environmental risk factors. Combined with these factors, cannabis use can lead to psychosis symptom experiences in adulthood.



### 3 SELF-MEDICATION HYPOTHESIS

Cannabis use does not always precede psychosis. The Self-Medication Hypothesis suggests that people may use cannabis to cope with psychosis symptoms.

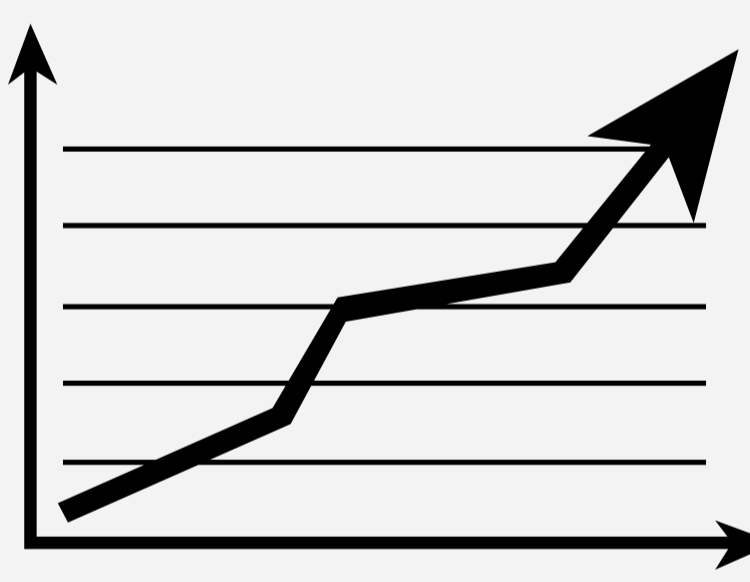


### 4 SENSITIZATION

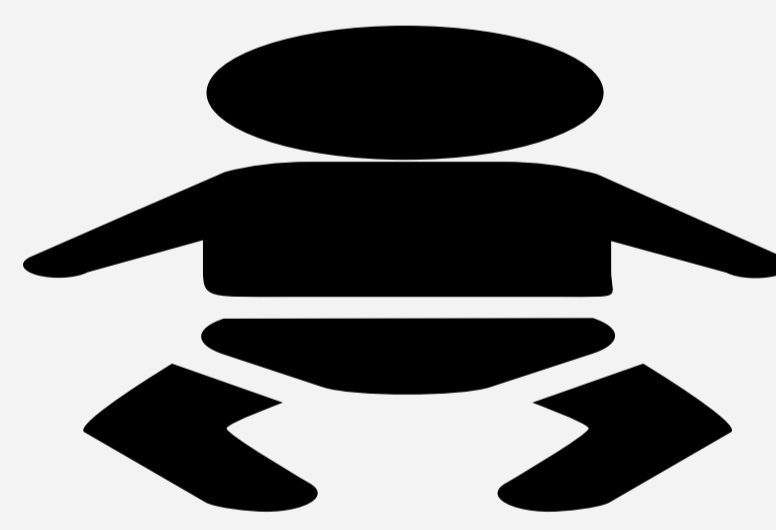
People who chronically use cannabis may become more sensitive to the calming properties of cannabis but also more reactive to its psychosis-inducing effects over time.



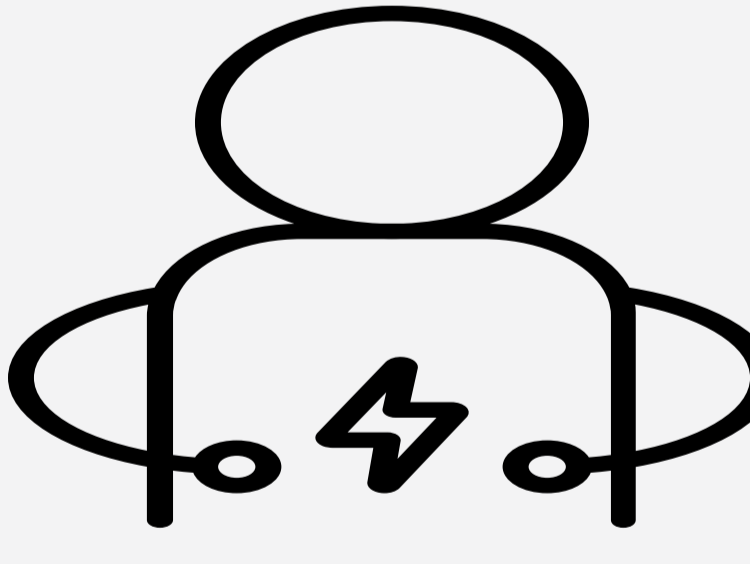
## WHO IS AT RISK?



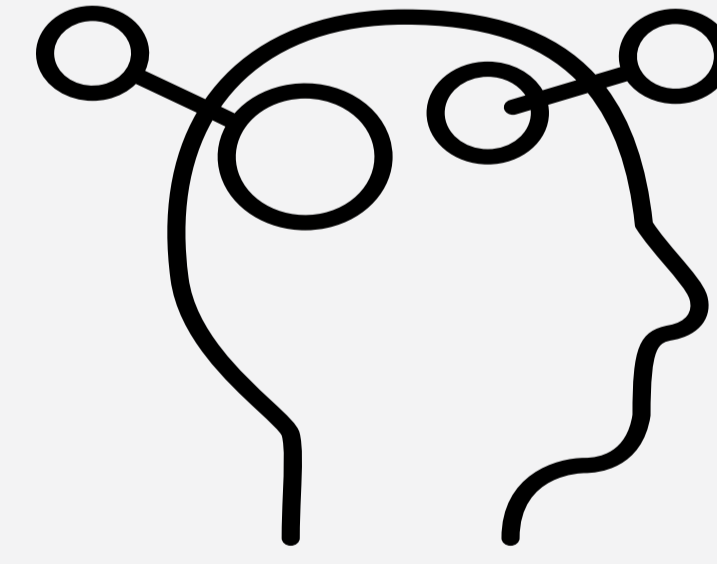
Cannabis-induced psychosis is **dose-dependent**: the more cannabis a person uses, the greater the risk for experiencing psychosis.



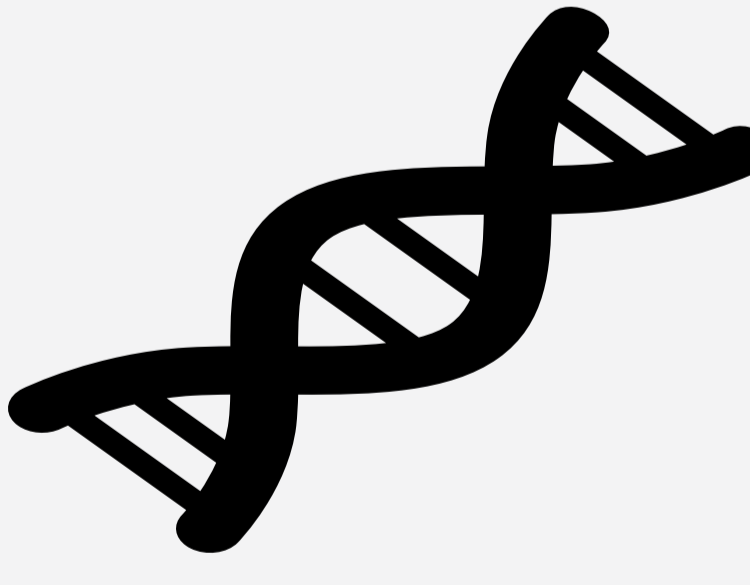
People with a **history of childhood trauma** who use cannabis during adolescence are at increased risk for psychosis



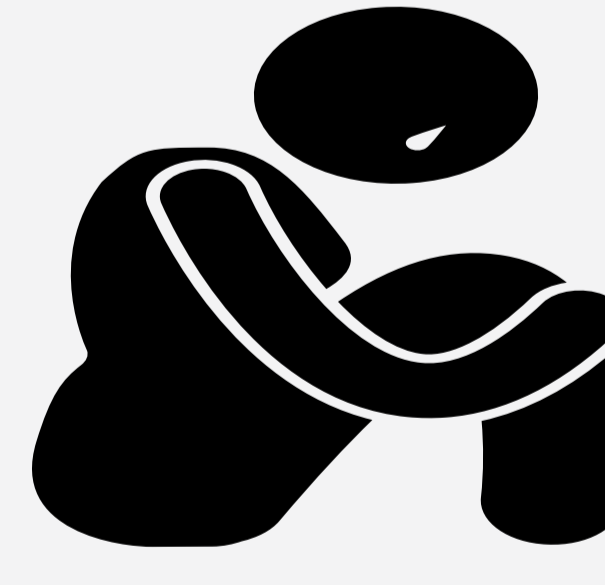
Higher levels of **THC** increases its **potency**, thus increasing the risk for a psychotic episode



Frequent **cannabis use in early adolescence** can affect brain development and increase the risk for future psychosis



People with the **COMT gene** (which may be inherited), or have a family history of psychosis, and use cannabis during adolescence are at increased risk for psychosis



People with **high schizotypy** (ex. dissociative or imaginative states) who engage in cannabis use are at increased risk for psychosis

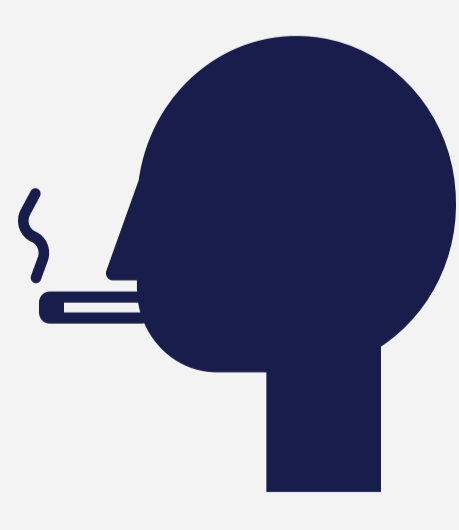
## PREVENTION & TREATMENT



**Abstain** from or reduce frequency of cannabis use, especially during adolescence



**Therapeutic intervention** for vulnerable adolescents who have experienced childhood trauma can reduce risk of cannabis-induced psychosis



Use cannabis products with **little to no THC**, or opt for products with **CBD** (cannabidiol) products instead



**Cognitive Behavioural Therapy** can challenge and reduce fears about and experiences of delusions and hallucinations for people at high risk for psychosis



Please consult with your physician for potential **medication** options



**Psycho-education** about psychosis symptoms and the effects of cannabis can reduce cannabis use and/or encourage people to seek treatment