

Understand How Adolescent Marijuana Use Can Lead to Mental Illness and Psychosis



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What is "Mental Illness"?

There are many different forms of mental illness, but two severe types can be brought on or made worse by using THC:

1. Psychosis – symptoms of delusional thinking, paranoia, and/or hallucinations
2. Schizophrenia – psychosis that becomes permanent


Using marijuana with a THC content over 10% increases the risk of a psychotic disorder by 2- to 5-fold.



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What is Psychosis?



Beliefs that are developed and held "against the evidence of the contrary." Unshakable ideas and worries that others around us find bizarre or unsubstantiated. We become very suspicious and fear we are under threat or the target of a conspiracy.

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What is Psychosis?



We fear that others can read our own thoughts and that our thoughts are no longer private.

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What is Psychosis?



Getting worried about others spying on us. Perhaps our phone is bugged? These worries become so intense that can affect our ability to carry on with life, interact with others, trust those around us, concentrate on work or learning even enjoy and feel happiness! We forget to care for ourselves.

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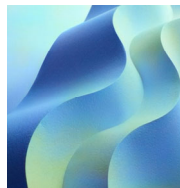
Psychosis is a Symptom

Indicates the brain is processing information inefficiently

When this happens, the brain creates misperceptions

Misperceptions in sensory areas (vision, hearing, touch) are called hallucinations

Misperceptions of significance (making up explanations to explain your thinking) are called delusions.



Dr. Erik Messamore webinar Oct. 2020

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Classifying Substances by C. Miller

1. **DEPRESSANT:** Slows down brain and nervous system activity. Calms nerves, relaxes muscles, and encourages sleep.
• **EXAMPLES?** ALCOHOL, XANAX, VALIUM
2. **STIMULANT:** Increases brain and nervous system activity. Makes users alert and encourages activity.
• **EXAMPLES?** CAFFEINE, NICOTINE, ADDERAL, COCAINE
3. **HALLUCINOGEN:** Interferes with the brain and nervous system and distorts perceptions of reality (visual hallucinations; seeing things that aren't there).
• **EXAMPLES?** LSD, Mushrooms, PCP, DMT (not marijuana!)
4. **PSYCHOTOGENIC:** Induces psychosis, including delusions, delirium, and auditory hallucinations (as opposed to just visual hallucinations).
• **EXAMPLES?** Ketamine, PCP, amphetamine, cocaine, methamphetamine, dextromethorphan (cough suppressant), marijuana (especially—but not only—if exposed during early adolescence). DOI: [10.1111/j.1600-0447.2008.01202.x](https://doi.org/10.1111/j.1600-0447.2008.01202.x)


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Taking The Foot Off The Brake in the Amygdala (the anxiety control center)

"The principal findings of this study are that a **modest dose** of delta-9-THC resulted in the **acute induction of anxiety symptoms** in the **healthy volunteers** studied here and the **severity of anxiety** induced by delta-9-THC was **directly correlated with the baseline availability of CB1 receptors** in the **amygdala**, a region that has been linked to anxiety and fear processing both in health, and under the influence of delta-9-THC."

Bhattacharyya, S. et al. (2017) Acute induction of anxiety in humans by delta-9-tetrahydrocannabinol related to amygdalar cannabinoid CB1 receptors. Scientific reports, 7(1), p. 5525.

- Differences in anxiety sensitivity to THC may be explained by the availability of CB receptors in the amygdala



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The Timeline

2018

May: Graduates high school with honors.

2018

August: Johnny attends university #1 on a scholarship. Dabs for two weeks and texts me he's suicidal. 1st mental hospital stay and 1st suicide attempt.

2018

Sept. to Dec, sober from MJ, moves back home.

2019

January: Johnny attends university #2.

2019

April: First psychotic break and 2nd mental hospital stay.

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What Does Psychosis Look like?

Johnny's Journals

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"Nectar Collector" Dabbing Kit Found in Johnny's College Dorm Room Drawer

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Marijuana Changes You – Photos Taken 2 Years Apart

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The Link Between Marijuana Use and Psychosis/Schizophrenia

Recent research suggests that smoking high-potency marijuana every day could increase the chances of developing psychosis by nearly five times compared to people who have never used marijuana. The amount of drug used, the age at first use, and genetic vulnerability have all been shown to influence this relationship.

Source: Di Forti M, Quattrone D, Freeman TP, et al. "The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study." The Lancet 2019;433:427-436

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Does Smoking Cause Cancer?

"You can't prove marijuana causes psychosis!"

- We can't and don't and will never ethically be able to set up studies to "prove" harmful outcomes from marijuana use like schizophrenia.
- Instead, scientists look for evidence of probable causes.
- We know that smoking cigarettes causes cancer, even though this study has never been done.

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Showing Probable Cause

- Is it biochemically plausible that marijuana could cause schizophrenia? (yes)
- Can we create schizophrenia-like changes in animals by giving them marijuana or by tweaking their cannabinoid system? (yes)
- Can we create features of schizophrenia in human volunteers under controlled conditions in the clinical laboratory? (yes)
- Is there a relationship between marijuana use and schizophrenia in population studies? (yes)
- Does a greater degree of marijuana exposure correlate with a higher risk of schizophrenia? (yes)

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Cannabis Induced Psychosis (CIP) is Nothing New!

Quotes from medical textbooks from the original medical marijuana era (from the mid-19th to early 20th century)

- "Occasionally, a species of intoxication is induced, with hallucinations or complete delirium. Among those who use it habitually, it is said ultimately to impair the mental faculties."
- A Treatise on Therapeutics, and Pharmacology, or Materia Medica, 1868
- "Hallucinations occur, but they are not usually agreeable; they are often painful and are replaced with stupor."
- A Practical Treatise on Materia Medica and Therapeutics, 1893
- "In large doses, it will produce hallucinations, and its habitual use will cause insanity."
- Materia Medica and Clinical Therapeutics, 1905
- "The most common effect, however, is the development of insanities, which have been known for many years."
- A Textbook of Materia Medica, Pharmacology, and Therapeutics, 1908

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Development Over Time of the Population-Attributable Risk Fraction for Cannabis Use Disorder in Schizophrenia in Denmark – July 21, 2021

7M people.

2% schizophrenia before cannabis.

8% schizophrenia after cannabis.

1995 2% 2010 8%

<https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2782607>

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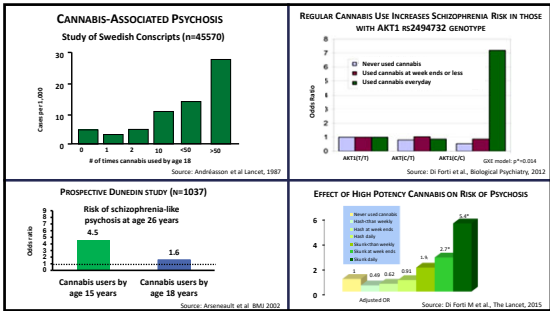
Read the Research About How THC Causes Psychosis

Data do not lie!

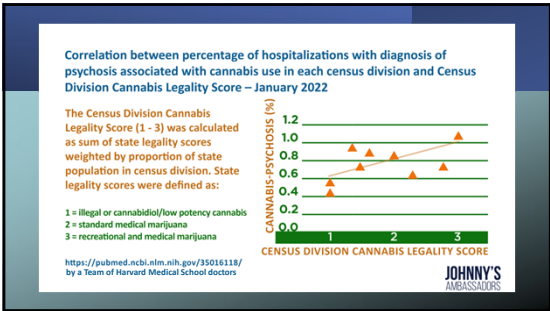
- MORRISON: THC administration in the clinic triggers psychosis in 40% of users with no family history of psychosis. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3055738/pdf/npp2010222a.pdf>
- HINDLEY: A single THC administration induces significant psychotic, negative, total, and other psychiatric symptoms with large effect sizes in adults with no history of psychotic or other major psychiatric disorders. [https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(20\)30074-2/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(20)30074-2/fulltext)
- D'SOUZA: The positive symptoms induced by D-9-THC included suspiciousness, paranoid and grandiose delusions, conceptual disorganization, and illusions. It also produced depersonalization, derealization, distorted sensory perceptions, altered body perception, feelings of unreality and extreme slowing of time. D-9-THC produced negative symptoms including blunted affect, reduced rapport, lack of spontaneity, psychomotor retardation, and emotional withdrawal. <https://pubmed.ncbi.nlm.nih.gov/15173844/>

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Sir Robin Murray, Johnny's Ambassadors Scientific Advisory Board member, from the London Times, Jan. 7, 2022

High-strength skunk causes about a third of the psychosis cases he sees at his practice in south London. Most involve young people, many of whom suffer debilitating paranoia and hallucinations.

"I think we're now 100 per cent sure that cannabis is one of the causes of a schizophrenia-like psychosis," he said. "If we could abolish the consumption of skunk we would have 30 per cent less patients [in south London] and we might make a better job of looking after the patients we have."

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Genetic vs Marijuana Onset Schizophrenia in an Email to Me by Dr. Robin Murray

You can have a heart attack because you have a heavy genetic loading, even if you never eat anything bad.	You can develop schizophrenia because you have a heavy genetic loading, even if you never use marijuana.
Even if you have no genetic loading, you can have a heart attack because you eat too much.	Even if you have no genetic loading, you can develop schizophrenia because you use a lot of marijuana.
It's easiest to have a heart attack if you have genetic loading AND eat too much.	It's easiest to develop schizophrenia if you have genetic loading AND use marijuana.

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A comparison of the clinical features of idiopathic psychosis versus Cannabis-Induced Psychosis

Cannabis urine toxicology sometimes positive	Positive cannabis urine toxicology
Variable reported cannabis use (25% prevalence of positive cannabis urine toxicology in schizophrenia)	Heavy cannabis use within past month
Symptoms appear before heavy substance use	Symptoms appear only during periods of heavy substance use/sudden increase in potency
Symptoms persist despite drug abstinence	Symptoms abate or are reduced with drug abstinence
Antipsychotics markedly improve symptoms	Antipsychotics may/may not improve symptoms
Most often presents with delusions, hallucinations, and thought disorder	Often associated with visual hallucinations and paranoid ideation (eg, features of an "organic" psychosis)
Less insight about psychotic state	More aware of symptoms/insight about disease

<https://www.psychiatristimes.com/view/cannabis-induced-psychosis-review>

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Dronabinol (MARINOL®) is a legal FDA-approved synthetic delta-9-THC for anorexia associated with **weight loss** in patients with AIDS and **nausea and vomiting** associated with cancer chemotherapy in patients who have failed to respond adequately to conventional treatments.

WARNINGS AND PRECAUTIONS

- Psychiatric Adverse Reactions: Dronabinol has been reported to exacerbate mania, depression, or schizophrenia.
- Cognitive Adverse Reactions: Use of MARINOL has been associated with cognitive impairment and altered mental state.
- Multiple Substance Abuse: Patients with a history of substance abuse or dependence, including marijuana or alcohol, may be more likely to abuse MARINOL as well.
- Common Adverse Reactions (up to 10%): Dizziness, euphoria, paranoid reaction, thinking abnormality, amnesia, anxiety/nervousness, depersonalization
- Pediatric patients may be more sensitive to neurological and psychoactive effects of Marinol.

From the FDA insert: "Ingestion of high doses of dronabinol increases the risk of psychiatric adverse reactions if abused or misused, while continued administration can lead to addiction. Psychiatric adverse reactions may include psychosis, hallucinations, depersonalization, mood alteration, and paranoia."

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The American Psychiatric Association's Position Statement in Opposition to Cannabis as Medicine

"There is no current scientific evidence that cannabis is in any way beneficial for the treatment of any psychiatric disorder. In contrast, current evidence supports, at minimum, a strong association of cannabis use with the onset of psychiatric disorders. Adolescents are particularly vulnerable to harm, given the effects of cannabis on neurological development."

<https://www.psychiatry.org/File%20Library/About-APA/Organization-Documents-Policies/Policy%20Position-Cannabis-as-Medicine.pdf>

AMERICAN PSYCHIATRIC ASSOCIATION

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The American Medical Association Statement on Marijuana

Our AMA: (1) believes that **cannabis is a dangerous drug and as such is a serious public health concern**; (2) believes that the sale of **cannabis** for adult use should not be legalized (with adult defined for these purposes as age 21 and older); (3) discourages **cannabis** use, especially by persons vulnerable to the drug's effects and in **high-risk populations such as youth**, pregnant women, and women who are breastfeeding; (10) will advocate for stronger public health messaging on the health effects of **cannabis** and cannabinoid inhalation and ingestion, with an emphasis on **reducing initiation and frequency of cannabis use among adolescents, especially high potency products**.

<https://policysearch.ama-assn.org/policyfinder/detail/cannabis>

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Marijuana and Psychosis and Schizophrenia Summary

- Having an episode of cannabis-induced psychosis proves the affected marijuana user has
 - The genetic vulnerability OR
 - The psychological vulnerability OR
 - The neurological wiring that makes psychosis possible
- An episode of Cannabis Induced Psychosis (CIP) signals extremely high risk (nearly 50%) of eventually progressing to schizophrenia or bipolar disorder.
- Users must completely abstain from marijuana use after the 1st episode to avoid the recurrence of illness and progression.


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Please Become One of Johnny's Ambassadors!

Sign Up	Become a Certified Johnny's Ambassadors Trainer: http://www.JohnnysAmbassadors.org/trainers
Share	Join our online marijuana prevention community at https://community.johnnysambassadors.org
Show Up	Join us for the 2nd Annual #StopDabbing Walk on Sunday, September 18, 2022: StopDabbingWalk.com
Speak Out	Bring education to your community: https://johnnysambassadors.org/education
Support	We gratefully accept donations: johnnysambassadors.org/donate

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Available on Amazon and anywhere books are sold:

The Dangerous Truth About Today's Marijuana: Johnny Stack's Life and Death Story

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Scan This QR Code To Go To Our LinkTree For a Complete List of Free Educational Resources!



Questions? Email me at Laura@JohnnysAmbassadors.org

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