

Marijuana in Missouri: An Update

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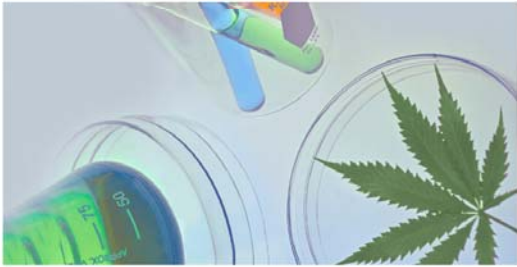
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Health & Fitness

8 Solid CBD Options Bc We Know You're Anxious

Read this before you stock up.


 BY MARA SANTILLI PUBLISHED: JUN 28, 2022



Unplash

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Health & Fitness

Options Bc We Know You'

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What type of CBD is most effective for anxiety?



It really depends on your personal preference and how long you're trying to chill out for. "Tinctures are generally the fastest-acting products, but the effects wear off quickly, while gummies and other edible products take longer to start working and have a longer effect," explains [Lucas Buffaloe, MD](#), a [University of Missouri Health Care](#) family medicine physician who specializes in addiction medicine and pain management.

This is yet again a friendly reminder that what works well for one person may work completely different for someone else, so check in with your doctor before you start any type of regular CBD routine.

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Objectives

Today we will review:

- Missouri's medical marijuana program
- Recreational marijuana use
- Cannabis and cannabinoid products
- Benefits, adverse effects, and societal effects of cannabis and cannabinoids
- Best practices for recommending cannabis

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Amendment 2



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Amendment 2

- Legalized the medical use of marijuana for qualifying Missouri patients
- Patients must be certified by a state-licensed physician as having a qualifying medical condition
- Certified patients may purchase marijuana from licensed dispensaries or cultivate small quantities of marijuana for personal use
- Certified patients may also designate a caregiver to purchase or cultivate marijuana on their behalf
- Sale of medical marijuana began in October 2020

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Amendment 2

- Qualifying medical conditions
 - Cancer
 - Epilepsy
 - Glaucoma
 - HIV or AIDS
 - Intractable migraines unresponsive to other treatment
 - Any terminal illness

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Amendment 2

- Qualifying medical conditions (continued)
 - A chronic medical condition that causes severe, persistent pain or persistent muscle spasms
 - Debilitating psychiatric disorders, if diagnosed by a licensed psychiatrist
 - A chronic medical condition that is normally treated with a prescription medication that could lead to physical or psychological dependence
 - In the professional judgement of a physician, any other chronic, debilitating, or other medical condition

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Medical marijuana in Missouri

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By the numbers

\$605 million in revenue generated by dispensaries since 2020

200,000 Missourians certified to use medical marijuana

24,000 Missourians authorized to grow marijuana

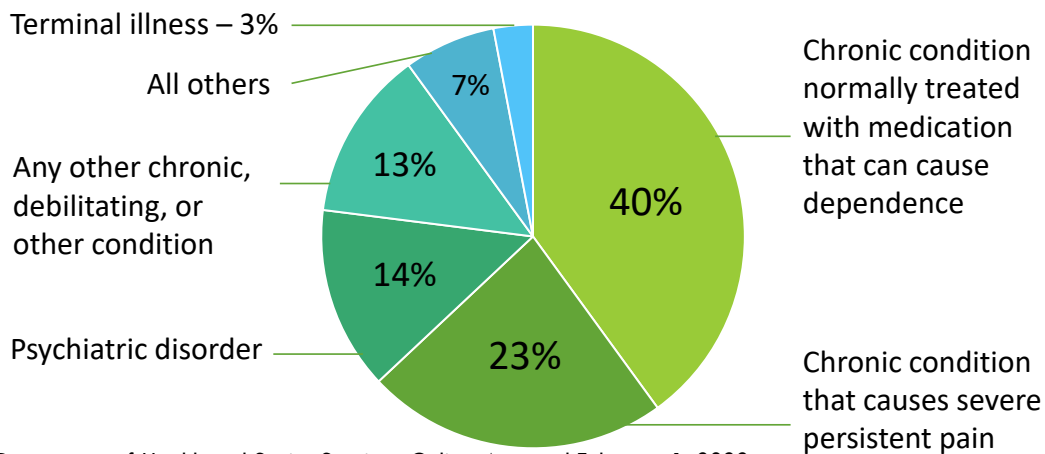
600 Physicians registered to certify patients

20 Nurse practitioners registered to certify patients

Missouri Department of Health and Senior Services. Online. Accessed February 1, 2022

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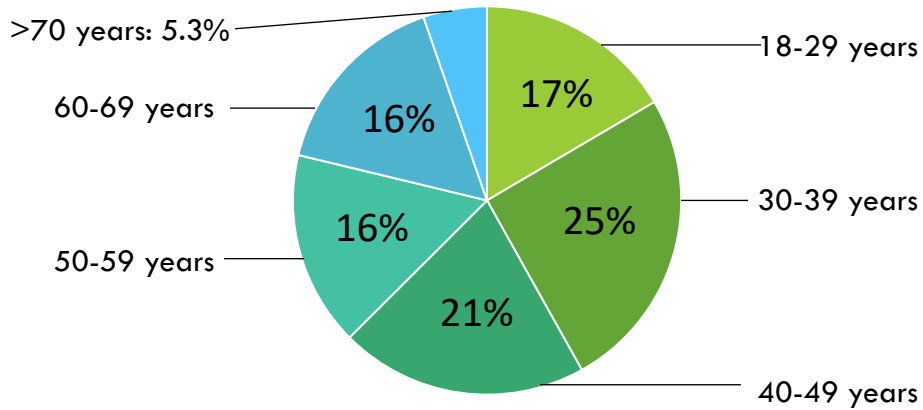
Qualifying conditions



Missouri Department of Health and Senior Services. Online. Accessed February 1, 2022

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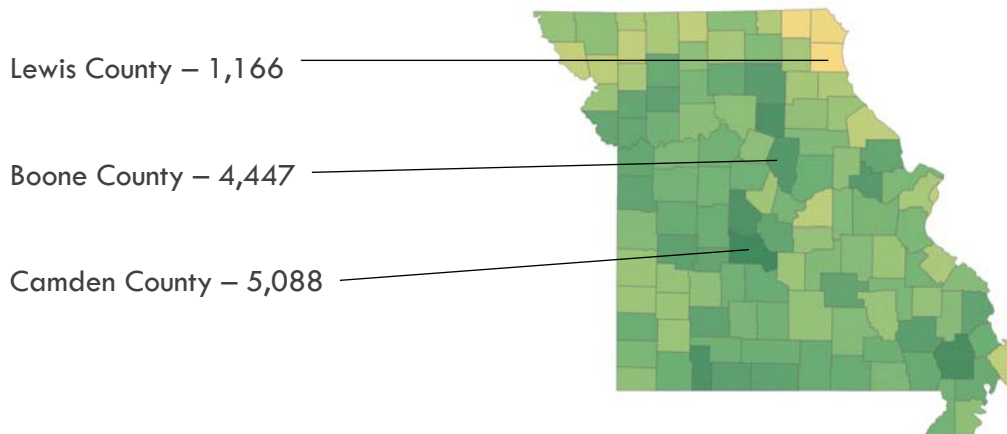
Participants by age



Missouri Department of Health and Senior Services. Online. Accessed February 1, 2022

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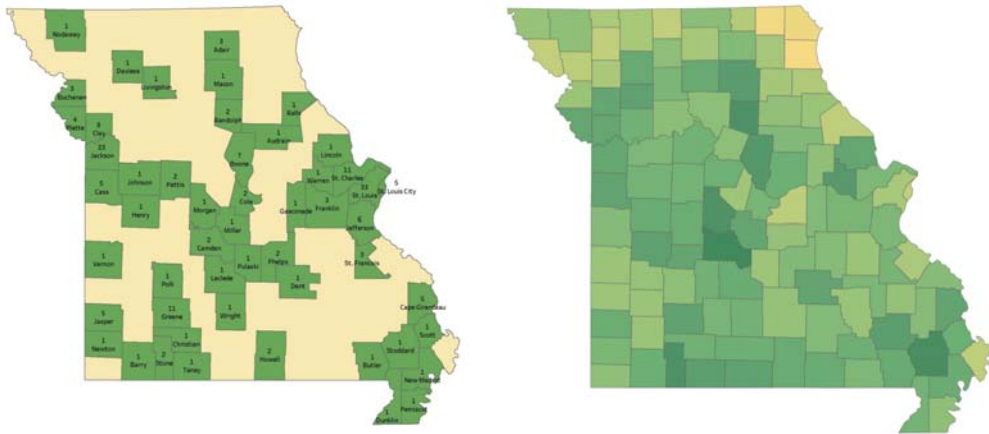
Participants per 100,000 population



Missouri Department of Health and Senior Services. Online. Accessed February 1, 2022

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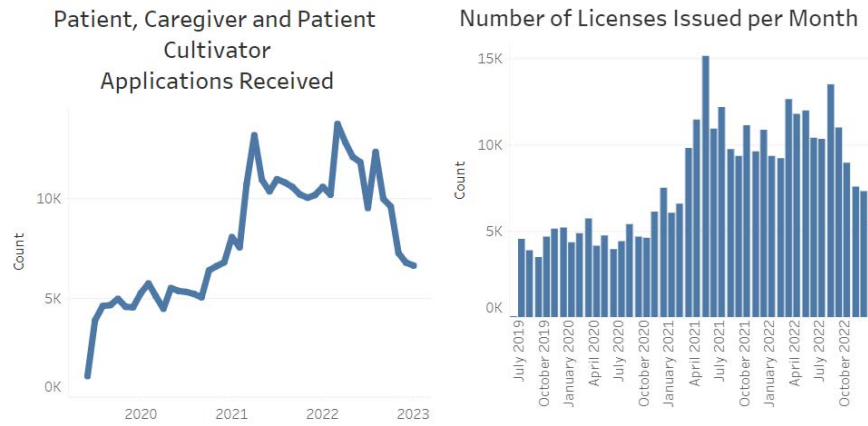
Dispensaries by county



Missouri Department of Health and Senior Services. Online. Accessed February 1, 2022

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Medical marijuana in Missouri



Missouri Department of Health and Senior Services. Online. Accessed February 1, 2022

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Medical marijuana in Missouri

- Missouri's medical marijuana program will continue after legalization of recreational marijuana
- Reasons why patients may still request medical marijuana certification:
 - Price
 - Employment
 - Perception

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Recreational marijuana

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Recreational marijuana

- Legal status of marijuana as of February 2023:
 - Recreational marijuana use is legal in 21 states
 - Medical use of marijuana is legal in an additional 17 states

DISA Global Solutions. *Marijuana legality by state*. Online. Accessed February 23, 2023

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Recreational marijuana

- Perceived great risk of harm associated with smoking marijuana once or twice a week:
 - 2002: 51.3% (35.5% among 18-25 year olds)

Substance Abuse and Mental Health Services Administration. *Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug use and Health 2022*

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Recreational marijuana

- Perceived great risk of harm associated with smoking marijuana once or twice a week:
 - 2002: 51.3% (35.5% among 18-25 year olds)
 - 2012: 40.3% (25.6% among 18-25 year olds)

Substance Abuse and Mental Health Services Administration. *Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug use and Health 2022*

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Recreational marijuana

- Perceived great risk of harm associated with smoking marijuana once or twice a week:
 - 2002: 51.3% (35.5% among 18-25 year olds)
 - 2012: 40.3% (25.6% among 18-25 year olds)
 - 2021: 26.5% (15.4% among 18-25 year olds)

Substance Abuse and Mental Health Services Administration. *Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug use and Health 2022*

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Recreational marijuana

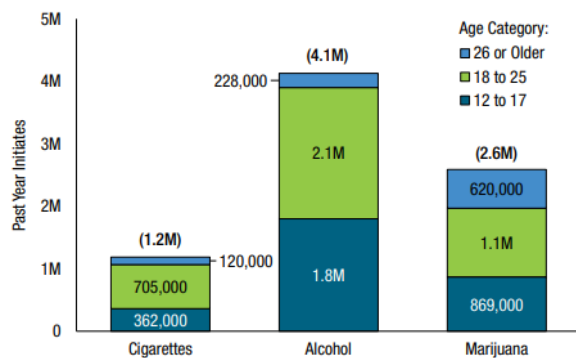
- Lifetime use of marijuana in 2021: **45.7%**
- Past month use of marijuana in 2021: **13.0%**
 - Increased from 7.3% in 2012
 - Past month use in 18-25 year olds: 24.1%

Substance Abuse and Mental Health Services Administration. *Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug use and Health 2022*

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Recreational marijuana

Past year initiates of cigarettes, alcohol, and marijuana, 2021



Substance Abuse and Mental Health Services Administration. *Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug use and Health 2022*

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Recreational marijuana

- Cannabis use disorder in 2021: **5.8%**¹
 - Increased from 1.3% in 2013
 - Cannabis use disorder in 18-25 year olds: 14.4%
- Rates of cannabis use disorder are higher in daily users and individuals who begin using during adolescence²

1. Substance Abuse and Mental Health Services Administration. *Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug use and Health 2022*

2. Volkow ND, et al. *The New England Journal of Medicine* 2014

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Terminology

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Terminology

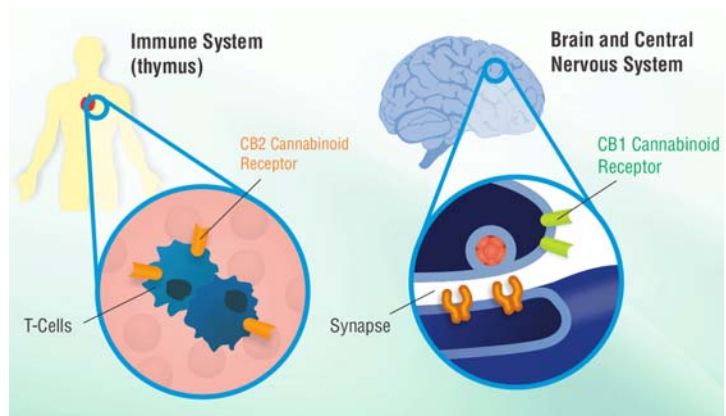
Cannabis: Marijuana; a flowering Asian plant with fibrous stalks



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Terminology

Cannabinoid: Any of the various biologically active chemical constituents of hemp or cannabis



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Terminology

Pharmaceutical cannabinoid:
A naturally-derived or synthetic chemical that is similar to cannabinoids found in hemp or cannabis



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Terminology

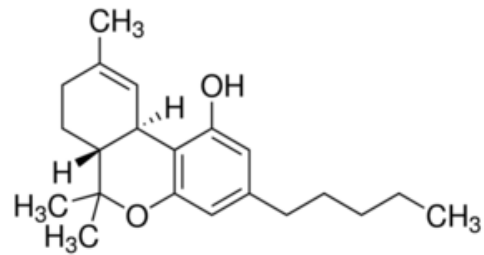
Cannabidiol (CBD): A nonintoxicating compound found in cannabis and hemp



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Terminology

Δ -9-tetrahydrocannabinol (THC): The primary psychoactive constituent of cannabis



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Pharmaceutical cannabinoids

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Pharmaceutical cannabinoids

- **Dronabinol** (*Marinol, Syndros*)
 - Synthetic THC
 - FDA-approved to treat nausea and vomiting caused by chemotherapy, and weight loss due to AIDS
- **Nabilone** (*Cesamet*)
 - Synthetic THC
 - FDA-approved to treat nausea and vomiting caused by chemotherapy



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Pharmaceutical cannabinoids

- **Cannabidiol** (*Epidyolex*)
 - Cannabis extract
 - FDA-approved to treat seizures associated with Lennox-Gastaut syndrome or Dravet syndrome
- **Nabiximols** (*Sativex*)
 - Cannabis extract
 - Used to treat spasticity due to multiple sclerosis (not available in the US)



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Research on cannabis and cannabinoids

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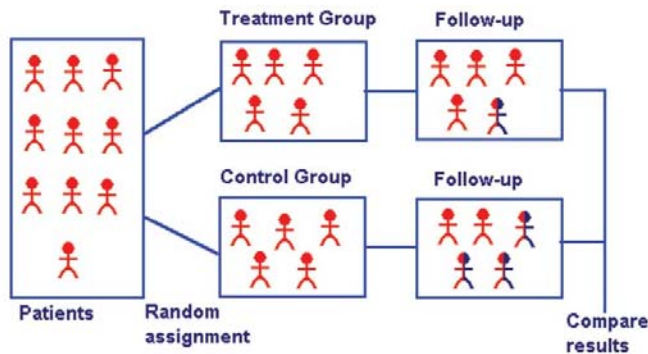
Research on cannabis and cannabinoids

-Very limited information available on medical use of cannabis

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Research on cannabis and cannabinoids

-Very limited information available on medical use of cannabis



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Research on cannabis and cannabinoids

-Very limited information available on medical use of cannabis

- Schedule I controlled substance
- Few trials
- Small number of participants
- Short duration
- Difficult to blind
- Variety of outcome measures
- Lack of cannabis standardization
- Placebo comparator

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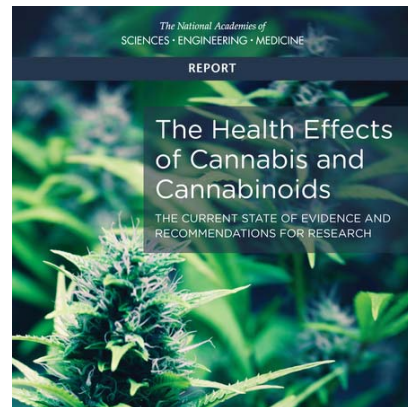
Research on cannabis and cannabinoids

- Very limited information available on medical use of cannabis
 - Schedule I controlled substance
 - Few trials
 - Small number of participants
 - Short duration
 - Difficult to blind
 - Variety of outcome measures
 - Lack of cannabis standardization
 - Placebo comparator
- Most trials employ pharmaceutical cannabinoids

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Research on cannabis and cannabinoids

- *The Health Effects of Cannabis and Cannabinoids*
- Published by the National Academies of Sciences, Engineering, and Medicine in 2017
- Comprehensive review of evidence of health effects of cannabis and cannabinoids
- Recommendations for future research



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Research on cannabis and cannabinoids

- “Cannabinoids for medical use: A systematic review and meta-analysis,” Penny F. Whiting and colleagues
- Published *The Journal of the American Medical Association* (JAMA) in 2015
- Review and analysis of 79 clinical trials with 6462 participants



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Research on cannabis and cannabinoids

There is conclusive or substantial evidence that cannabis or pharmaceutical cannabinoids are effective for the treatment of:

- Chronic pain in adults
- Chemotherapy-induced nausea and vomiting
- Multiple sclerosis spasticity symptoms

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research* 2017

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Research on cannabis and cannabinoids

There is moderate evidence that cannabis or pharmaceutical cannabinoids are effective for improving **sleep** in individuals with sleep disturbances due to chronic pain, multiple sclerosis, fibromyalgia, and obstructive sleep apnea

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research 2017*

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Research on cannabis and cannabinoids

There is limited evidence that cannabis or pharmaceutical cannabinoids are effective for improving symptoms of:

- Tourette syndrome
- Social anxiety disorder
- Post-traumatic stress disorder

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research 2017*

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Research on cannabis and cannabinoids

There is limited evidence that cannabis or pharmaceutical cannabinoids are *ineffective* for:

- Dementia
- Glaucoma
- Depressive symptoms in individuals with chronic pain or multiple sclerosis

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research 2017*

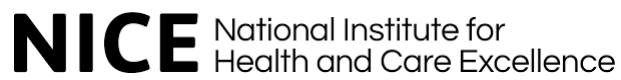
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Research on cannabis and cannabinoids

There is no or insufficient evidence that cannabis or pharmaceutical cannabinoids are an effective treatment for _____.

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research 2017*

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Adverse effects

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Adverse effects

- Immediate effects of cannabis:
 - Euphoria
 - Hallucination
 - Confusion
 - Somnolence
 - Dizziness and impaired motor coordination
 - Impaired short-term memory
 - Dry mouth
 - Tachycardia

Volkow ND, et al. *The New England Journal of Medicine* 2014

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Adverse effects

- Psychiatric disorders
 - Schizophrenia and other psychoses
 - Anxiety, depression, and suicidality (causality not established)

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research* 2017

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Adverse effects

-Respiratory disease

- Long-term cannabis smoking associated with worse respiratory symptoms and more frequent chronic bronchitis episodes
- Unclear if occasional cannabis use associated with increased risk of COPD or lung cancer

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research 2017*

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Adverse effects

-Injury

- Increased risk of motor vehicle collision after cannabis use
- Unclear if cannabis use is associated with occupational injury, overdose injuries, or all-cause mortality

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research 2017*

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Adverse effects

- Cannabis use disorder
- Risk factors for cannabis use disorder:
 - Early initiation
 - Daily use
 - High THC content
- Risk among medical users not established

National Academies of Sciences, Engineering, and Medicine. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research* 2017

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Public health impact

- States that have passed medical marijuana laws have experienced:
 - Increased prevalence of illicit cannabis use and cannabis use disorder¹
 - Increased unintentional marijuana ingestions by young children (Colorado)²
 - Decreased rates of opioid prescribing for Medicaid enrollees³
 - Decreased rates of opioid overdose mortality⁴

1. Hasin DS, et al. *JAMA Psychiatry* 2017
2. Wang GS, et al. *JAMA Pediatrics* 2013
3. Wen H, et al. *JAMA Internal Medicine* 2018
4. Bachhuber MA, et al. *JAMA Internal Medicine* 2014

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Best practices

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Best practices

JOURNAL
OF NURSING
REGULATION



Official publication of the National Council
of State Boards of Nursing

NCSBN
GUIDELINES FOR THE **NURSING CARE** OF
Patients Using Marijuana

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Best practices

Recommendations for APRNs certifying a medical marijuana qualifying condition:

- Conduct an in-person clinical encounter in order to determine whether the patient has a qualifying condition
- Review history relevant to the qualifying condition
- Review the patient's mental health and substance use history
- Gather information regarding the patient's experience with cannabis
- Consider available scientific evidence for the specific qualifying condition

Russell K, et al. *Journal of Nursing Regulation* 2018

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Best practices

Recommendations for APRNs certifying a medical marijuana qualifying condition (continued):

- Provide information to the patient and family members/caregivers regarding the medical use of cannabis
- Together with the patient, decide whether to certify the qualifying condition
- Determine regimen of ongoing monitoring and evaluation
- Document the encounter and reasoning behind the medical use of cannabis, goals of therapy, and patient consent

Russell K, et al. *Journal of Nursing Regulation* 2018

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Best practices

Recommendations for APRNs certifying a medical marijuana qualifying condition (continued):

- Approach the patient without judgement regarding their choice of treatment
- Avoid actual or perceived conflict of interest between yourself and a cannabis cultivation center or dispensary
- Do not provide certification for yourself or a family member

Russell K, et al. *Journal of Nursing Regulation* 2018

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Summary

- Medical and recreational use of marijuana is now legal in Missouri
- Perception of marijuana use is changing, and rates of recreational marijuana use and cannabis use disorder are increasing
- There is little evidence to guide the medical use of cannabis
- Cannabinoids may be beneficial in the treatment of some forms of chronic pain, spasticity, and nausea and vomiting
- Medical use of cannabis should be accompanied by careful provider-patient communication, clear documentation, and close monitoring

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Discussion

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