

MEDICAL MARIJUANA

WHAT ARKANSAS
PHYSICIANS NEED
TO KNOW



ARPrevention.org

UA LITTLE ROCK
MIDSOUTH CENTER FOR
PREVENTION AND TRAINING

UAMS
University of Arkansas for Medical Sciences

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DHS
Division of Behavioral Health Services
Prevention Services

Cannabis/Cannabinoids/Marijuana/ Industrial Hemp/Medical Marijuana

Cannabis: plant products (stems, leaves, flowers) or resinous extract from one or more of three hemp plant species (Cannabis Sativa, Cannabis Indica, Cannabis Ruderalis)

Cannabinoids: Group of over 100 chemical compounds found in plants of the Cannabis genus, including tetrahydrocannabinol (THC) and cannabidiol (CBD) that interact with the body's endocannabinoid system to affect the release of neurotransmitters (serotonin)

CANNABIS PLANT TYPES



- **THC:** Main psychoactive compound in marijuana that binds with cannabinoid 1 (CB1) receptors in the brain to produce *high* or *sense of euphoria*
- **CBD:** Non-psychoactive compound (with a molecular structure almost identical to THC) in marijuana that primarily binds with cannabinoid 2 (CB2) receptors

Marijuana: Plant products, primarily from Cannabis Sativa and/or Cannabis Indica, that contain large amounts of tetrahydrocannabinol (THC)

Industrial Hemp: Cannabis plants that contain minimal ($\leq 0.3\%$) THC; not considered “marijuana”

Medical Marijuana: Unprocessed marijuana plant or basic extracts (non-pharmaceutical grade) used to treat symptoms of illness and other conditions

US Food and Drug Administration (FDA) Stance on Medical Marijuana

Cannabis has not been approved by the FDA for any medical use

- Products containing THC or CBD cannot be sold legally as dietary supplements
- Whether or not medical cannabis or cannabinoids can be sold legally within a state depends on state-specific laws and regulations

FDA-approved drugs that contain individual cannabinoids

Epidiolex: Purified form of cannabis-derived CBD approved to treat seizures associated with rare and severe forms of epilepsy

Marinol and Syndros: Contain Dronabinol (synthetic THC) to treat nausea and vomiting caused by cancer chemotherapy and loss of appetite and weight loss in people with HIV/AIDS

Cesamet: Contains Nabilone (a synthetic substance similar to THC) to treat nausea and vomiting caused by cancer chemotherapy

Evidence for Marijuana to Treat Medical/Psychiatric Problems

Substantial Evidence

- Chronic pain (6 trials/325 patients)
- Neuropathic pain (6 trials/396 patients)
- Spasticity due to multiple sclerosis (MS; 12 trials/1,600 patients)
- Chemotherapy-induced nausea and vomiting
- Seizures for Lennox-Gastaut syndrome or Dravet syndrome (≥ 2 years of age)

Moderate Evidence

- Short-term sleep outcomes (sleep apnea, fibromyalgia, chronic pain, MS)



Limited Evidence

- Loss of appetite/weight (HIV/AIDS)
- Symptoms of Tourette Syndrome
- Anxiety (social anxiety disorder)
- PTSD symptoms
- Glaucoma (early stage)

Insufficient Evidence

- Cancer
- Irritable Bowel Syndrome (IBS)
- Epilepsy (in adults)
- Amyotrophic Lateral Sclerosis (ALS)
- Motor system symptoms (Parkinson's Disease)
- Immune status (healthy, HIV, HPV)

To date, an insufficient number of large-scale clinical trials have been conducted to determine whether or not the health and mental health benefits of medical marijuana (THC or CBD) outweigh its risks.

Adverse Effects of Medical Marijuana

Substantial Evidence

- Motor Vehicle Crashes
- Low Birth Weight (offspring of maternal marijuana users)
- Development of Schizophrenia/Psychoses (heavy users)

Moderate Evidence

- Respiratory Distress (pediatrics)
- Learning, Memory, and Attention
- Increased Mania/Hypomania (Bipolar Disorder)
- Social Anxiety Disorder (regular users)
- Development of Depressive Disorders
- Suicidal Ideation/Attempt/Completion (regular/heavy users)
- Development of Marijuana or Other Substance Use Disorder

Limited Evidence

- Pregnancy Complications
- Poor Academic Achievement/Education Outcomes
- Unemployment/Low Income
- Impaired Social Functioning
- Severity of PTSD Symptoms
- Glaucoma (later stage)

Insufficient Evidence

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|--------------------------|-------------------------------|
| • All-Cause Mortality | • Asthma |
| • Occupational Accidents | • Myocardial Infarction |
| • Death by Overdose | • Stroke |
| | • Peripheral Vascular Disease |

Special Considerations for Children and Adolescents

Effects during and after pregnancy

- Low birth weight
- Increased risk of preterm birth
- Brain and behavioral problems in infants
- Attention, memory, and problem-solving issues in children
- THC in breast milk might affect an infant's developing brain

Prolonged effects on child and adolescent brain development

- Childhood and adolescent marijuana use might:
 - impair thinking, memory, and learning functions
 - affect how the brain builds connections between the areas necessary for these functions.
- People who begin using marijuana before age 18 are 4-7 times more likely than adults to develop a marijuana use disorder
- The length and long-term effects of marijuana use are unknown

Increased risk for mental health problems among adolescents

- Depression
- Anxiety
- Suicidal thoughts

Increased risk for overdose

- Due to unintentional consumption of cannabis or its products

Additional Concerns Requiring Further Research

Use of vaping products

- Use of vaping products that contain THC have been linked to serious lung injuries

Cannabinoid hyperemesis syndrome (CHS)

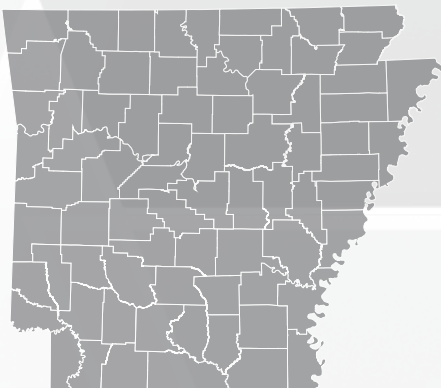
- Condition developed in some long-term, high-dose cannabis users
- Leads to repeated and severe bouts of vomiting
- Rare and only occurs in daily long-term users of marijuana

Contamination of cannabis products

- Due to insufficient oversight, cannabis products might contain microorganisms, pesticides, or other toxic substances

Inaccurate labeling

- Amounts of cannabinoids in some cannabis/cannabinoid products differ from what is stated on their labels
- Can result in no clinical benefit and/or higher risk of adverse effects



Arkansas Medical Marijuana Act (AMMA)

- Passed on November 8, 2016
- Allows qualifying patients to purchase and use medical marijuana **(2.5 ounces/14 days)** from a licensed dispensary if:
 - Arkansas resident
 - Physician's written certification of ***qualifying medical condition***
 - Signed by a medical or osteopathic physician
 - Physician licensed to practice in Arkansas
 - Physician has current DEA number

Arkansas Qualifying Medical Conditions to Use Medical Marijuana

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|----------------------------------|---|
| • Cancer | • Cachexia |
| • Glaucoma | • Peripheral neuropathy |
| • HIV/AIDS | • Intractable pain |
| • Hepatitis C | • Severe nausea |
| • Amyotrophic lateral sclerosis | • Epilepsy/Seizures |
| • Tourette's syndrome | • Multiple Sclerosis/Severe and persistent muscle spasms |
| • Crohn's disease | • <i>Medical condition/treatment approved by Arkansas Department of Health</i> |
| • Ulcerative colitis | |
| • Post-traumatic stress disorder | |
| • Severe arthritis | |
| • Fibromyalgia | |
| • Alzheimer's disease | |

Physician Certification of Qualifying Conditions in Arkansas

- Physician (medical or osteopathic) certifies that
 - He/She is licensed to practice in Arkansas
 - He/She has current DEA number
 - He/She has completed an in-person patient assessment
 - Patient has one of the qualifying conditions
- Physician license and DEA number will be verified
- Valid for 30 days in order to obtain Arkansas Medical Marijuana ID Card
- Not a prescription

Physicians are not legally required to complete or sign certification for a patient.

Physicians are ethically obligated to be informed about the risks and benefits of medical marijuana and discuss such with patients.

Arkansas Medical Marijuana ID Card

- Nonrefundable \$50 application fee
- Valid for 1 year (unless physician designates otherwise)
- Allows for use of medical marijuana at private residence ***only***
- **Use prohibited**
 - School bus or any motor vehicle
 - Preschool, primary, or secondary school grounds
 - Correctional facilities
 - State or local government buildings
 - Childcare, foster care, social service care
 - Wherever tobacco smoking prohibited
 - Members of Arkansas National Guard
 - Members of US military

When to Consider/Discuss Patient Use of Medical Marijuana

Physicians need to weigh the benefits versus risks associated with medical marijuana use.

Physician should consider whether or not patient has:

- Debilitating condition that data from RCTs suggest would respond to medical marijuana
- Failed trials of first- and second-line therapies for these conditions
- Failed trial of FDA-approved synthetically derived cannabinoid (dronabinol, nabilone)
- Current use of medications that could interact with THC/CBD to alter THC/CBD and/or medication blood levels
- Active substance use, psychotic, mood, or anxiety disorder
- Residence in state with medical marijuana law
- Met requirements of medical marijuana law

Comprehensive assessments, open discussions of medical marijuana risks and benefits, and ongoing physician monitoring are required.

AMMA Physician Protections and Prohibited Conduct

AMMA Section 3 (Medical Use Protections)

- Physicians cannot be arrested, prosecuted, or penalized in any manner solely for providing a written certification
 - Provision not applicable to sanctions for failure to properly evaluate a patient's medical condition or violating applicable physician-patient standard of care

AMMA Section 15 (Prohibited Conduct for Physicians)

- Physicians cannot
 - Accept, solicit, or offer any form of pecuniary remuneration from or to a dispensary or cultivation facility
 - Offer discounts or things of value to qualifying patient agreeing to use a particular dispensary
 - Examine patients for purposes of diagnosing qualifying medical conditions at a dispensary
 - Have an economic interest in a dispensary or cultivation facility if certifying a qualifying medical condition for medical marijuana use

References

- Boehnke KF, Litinas E, Clauw DJ. Medical Cannabis Use Is Associated With Decreased Opiate Medication Use in a Retrospective Cross-Sectional Survey of Patients With Chronic Pain. *J Pain*. 2016;17(6):739-744
- Bonn-Miller MO, Boden MT, Bucossi MM, Babson KA. Self-reported cannabis use characteristics, patterns and helpfulness among medical cannabis users. *Am J Drug Alcohol Abuse*. 2014;40(1):23-30
- Bradford AC, Bradford WD, Abraham A, Bagwell Adams G. "Association Between US State Medical Cannabis Laws and Opioid Prescribing in the Medicare Part D Population." *JAMA Intern Med*. 2018 May 1;178(5):667-672. doi: 10.1001/jamainternmed.2018.0266
- Cannabinoids for Medical Use: A Systematic Review and Meta-analysis. *JAMA*. 2015;313(24):2456-2473
- Cannabis and Pain: A Clinical Review. *Cannabis Cannabinoid Res*. 2017; 1;2(1):96-104
- Corroon J, Mischley L, Sexton M. Cannabis as a substitute for prescription drugs – a cross-sectional study. *J Pain Res*. 2017;10:989-998
- Liang D, Bao Y, Wallace M, Grant I, Shi Y. "Medical cannabis legalization and opioid prescriptions: evidence on US Medicaid enrollees during 1993-2014." *Addiction*. 2018 Nov;113(11):2060-2070. doi: 10.1111/add.14382
- Lucas P, Walsh Z. Medical cannabis access, use, and substitution for prescription opioids and other substances: A survey of authorized medical cannabis patients. *Int J Drug Policy*. 2017;42:30-35
- Medical Cannabis. *Mayo Clinic Proc*. 2018;93(12):1842-1847
- National Center for Complementary and Integrative Health (2020). "Cannabis (Marijuana) and Cannabinoids: What You Need To Know." <https://nccih.nih.gov/health/marijuana-cannabinoids>, Accessed 01/02/2020
- National Institute on Drug Abuse (2020). "Marijuana Drug Facts." <https://www.drugabuse.gov/publications/drugfacts/marijuana>, Accessed 01/02/2020
- Opioid and Cannabis Co-Use among Adults with Chronic Pain: Relations to Substance Misuse, Mental Health, and Pain Experience. *J Addict Med*. 2018 Dec 13
- Reiman A, Welty M, Solomon P. Cannabis as a Substitute for Opioid-Based Pain Medication: Patient Self-Report. *Cannabis Cannabinoid Res*. 2017;2(1):160-166
- The Effects of Cannabis Among Adults with Chronic Pain and an Overview of General Harms: A Systematic Review. *Ann Intern Med*. 2017;167:319-331
- The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research. The Health Effects of Cannabis and Cannabinoids. National Academies Press. 2017. <https://www.nap.edu/catalog/24625/the-health-effects-of-cannabis-and-cannabinoids-the-current-state>
- Wen H, Hockenberry JM. "Association of Medical and Adult-Use Marijuana Laws with Opioid Prescribing for Medicaid Enrollees." *JAMA Intern Med*. 2018 May 1;178(5):673-679. doi: 10.1001/jamainternmed.2018.1007

Arkansas Medical Marijuana Resources & References

Arkansas Medical Marijuana Commission:
www.mmc.arkansas.gov

Medical Marijuana Program, Arkansas Department of Health:
www.healthy.arkansas.gov/programs-services/topics/medical-marijuana

Medical Marijuana, Alcoholic Beverage Control: www.dfa.arkansas.gov/alcoholic-beverage-control/abc-medical-marijuana

NCCIH Clearinghouse
Toll-free in the U.S.: **1-888-644-6226**

TTY (for deaf and hard-of-hearing callers): **1-866-464-3615**

Website: **nccih.nih.gov**

Email: **info@nccih.nih.gov**

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