

Purdue Women's Club
Health and Wellness Group

Medical marijuana
Is it up in smoke?

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Outline of presentation

- ▶ History of marijuana as medicine
- ▶ Current states that have legalized marijuana for medical use
- ▶ Current Indiana laws about marijuana
- ▶ What is cannabis?
- ▶ Pros and cons about the use of medical marijuana
- ▶ Resources to learn more about medical marijuana

History of marijuana as medicine

- Chinese Emperor Fu His (ca. 2900 BC)
- 1450 BC Hebrew recipe (anointing oil) in Bible (Exodus 30:22-23)
- Cannabis pollen found on mummy of Rameses II, (d. 1213 BC)
- ca. 1000-200 BC (India, Persia, Greece)

<http://medicalmarijuana.procon.org>

Years 70 - 1840

- 70 Roman text
- 200 Chinese anesthetic (with wine)
- 800-900 considered lethal poison (Islamic MD)
- 1538 hemp used in Middle Ages
- 1611-1762 plant brought to North America
- 1745-1775 George Washington grew plants
- 1774-1824 Thomas Jefferson grew plants
- 1799 Napoleon brings plant to Egypt
- 1840 Queen Victoria for menstrual cramps

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Years 1850 - 1936

- 1850 Marijuana added to US Pharmacopeia
- 1911 Massachusetts first state to outlaw marijuana (Indiana 1913)
- 1928 Cannabis added to UK's "Dangerous Drug Act of 1928) (cocaine added in 1920)
- 1930s Parke-Davis, Eli Lilly, and Grimault & Co. marketed marijuana extracts and cigarettes
- 1936 Reefer Madness (cautionary film)

<http://medicalmarijuana.procon.org>

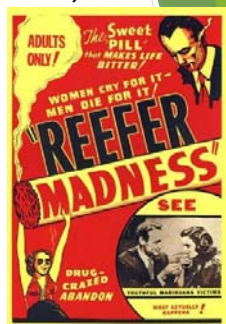


<http://antiquecannabisbook.com/Add-12a/TherapeuticSep1908p101.jpg>

<http://www.deejay.it/wp-content/uploads/2015/02/cannabis.jpg>

Reefer Madness 1936 (formerly Tell Your Children) Original trailer

► [Reefer Madness clip](#) (1:39)



<https://www.youtube.com/watch?v=sbjHOBjzhb0>

Years 1942 - 1970

- 1942 Marijuana removed from US Pharmacopeia
- 1956 Marijuana included in the Narcotics Control Act of 1956
- 1964 Hebrew University of Jerusalem THC identified (same scientist first to synthesize)
- 1968 U of MS Official grower US government
- 1970 Marijuana classified as C-I (CSA)
- 1970 NORML (National Organization for the Reform of Marijuana Laws) founded

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Years 1971 - 1986

- 1971 Nixon declares “war on drugs”
- 1973 DEA formed
- 1976 Netherlands decriminalizes marijuana
- 1978 Compassionate use (NIDA)
- 1978 NM passed first state law about medical marijuana
- 1986 Reagan signs Anti-Drug Abuse Act

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Years 1988 - 1991

- 1988 DEA Judge Young recommends rescheduling to C-II
- 1989 DEA administrator overrules rescheduling
- 1994 US Court of Appeals (DC Circuit) final court decision
- 1990 cannabinoid receptors “discovered”
- 1991 Oncologists surveyed (n-599)
 - 63% affirm efficacy
 - 53% in favor for making available by Rx

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Years 1996-2008

- 1996 California Proposition 215 (State marijuana initiative)
- 2001 Supreme Court rules “There is no medical necessity exception to the CSA”
- 2004 AARP poll finds that 72% seniors support medical marijuana
- 2008 Two pounds of cannabis found buried in 2,700-year-old Chinese tomb

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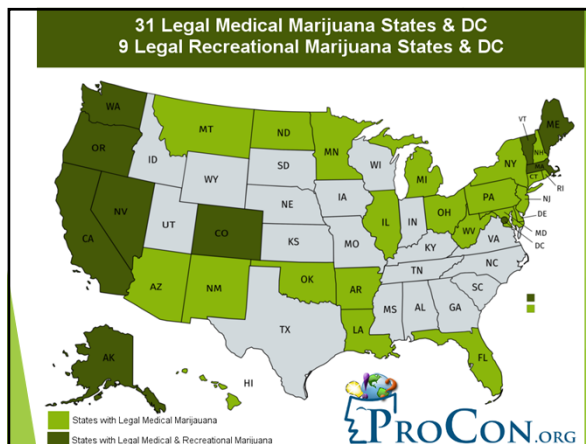
Years 2010-2014

- 2010 Iowa Board of Pharmacy recommends rescheduling of marijuana
- 2011 Study finds legal medical marijuana reduces fatal car accidents
- 2014 US Justice Department will not enforce federal marijuana laws on Native American reservations

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www.procon.org

- ProCon.org is a 501(c)(3) nonprofit nonpartisan public charity that provides well-sourced pro, con, and related research on more than 50 controversial issues, from gun control and death penalty to illegal immigration and alternative energy. With more than 12,000 pages of highly curated, referenced content, ProCon.org provides a platform for people to *question information, evaluate opposing views, and debate them in a respectful way.*
- ProCon.org Mission Statement: "Promoting critical thinking, education, and informed citizenship by presenting controversial issues in a straightforward, nonpartisan, and primarily pro-con format."



States with specific laws about legal cannabidiol * Failed legislation in 2017

- | | |
|----------------|-----------------|
| Alabama | South Carolina* |
| Georgia | South Dakota |
| Indiana* | Tennessee* |
| Iowa* | Texas* |
| Kentucky* | Utah* |
| Mississippi* | Virginia* |
| Missouri | Wisconsin* |
| North Carolina | Wyoming |
| Oklahoma* | |

<https://medicalmarijuana.procon.org>

Indiana

On Apr. 27, 2017, Gov. Eric Holcomb signed HB 1148 into law, allowing the use of cannabidiol that is at least 5% CBD and contains no more than 0.3% THC for treatment-resistant epilepsy.

On Mar. 21, 2018, Gov. Holcomb signed SB 52 into law, which allows distribution and retail sale of low-THC hemp extract, defined as a product (1) derived from *Cannabis sativa L.* that meets the definition of industrial hemp; (2) that contains not more than 0.3% delta-9-THC (including precursors); and (3) that contains no other controlled substances."

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Indiana laws about marijuana

Offense	Penalty	Incarceration	Max. Fine
<u>Possession</u>			
30 g or less	misdemeanor	1 year	\$ 5,000
More than 30 g	felony	6 mos - 3 yrs	\$ 10,000
Conditional discharge may be available for first-time offenders			
<u>Sale or Cultivation</u>			
30 g or less	misdemeanor	1 year	\$ 5,000
30 g - 10 lbs	felony	6 mos - 3 yrs	\$ 10,000
More than 10 lbs	felony	2 - 8 yrs	\$ 10,000
Within 1000 feet of a school or other specified areas	felony	2 - 8 yrs	\$ 10,000
To a minor	felony	6 mos - 3 yrs	\$ 10,000

<http://norml.org/laws/penalties/item/indiana-penalties-2>

Indiana laws about marijuana

Offense	Penalty	Incarceration	Max. Fine
<u>Hash and Concentrates</u>			
Possession	felony	1 year	\$ 5,000
Manufacture	felony	1 year	\$ 5,000
<u>Paraphernalia</u>			
Possession of paraphernalia	infraction	N/A	\$ 10,000
Subsequent conviction	felony	6 mos-3 yrs	\$ 10,000
<u>Miscellaneous (license suspensions, civil damages)</u>			
Presence where knowledge of drug activity occurs	misdemeanor	6 mos	\$ 1,000
Possession, sale, or distribution conviction will result in a driver's license suspension.			

<http://norml.org/laws/penalties/item/indiana-penalties-2>

What is cannabis?

Botanical classification

Family : Cannabaceae

Genus : Cannabis

Species : sativa; indica; ruderalis

Common names

Marijuana, marihuana, pot, weed, grass, Mary Jane




Photo © Erowid.org

<https://accesspharmacy.mhmedical.com/content.aspx?sectionid=175218675&bookid=2249&jumpsectionID=175218764&ResUftclick=2#1148435676>

Endocannabinoid system

In the brain and body, there are CB1 and CB2 receptors. Endogenous CB1 ligands that are rapidly synthesized by neurons in response to calcium influx or activation of acetylcholine and glutamate receptors. When CB1 receptors are activated, neurotransmitters release is suppressed.

Cannabinoids may affect memory, cognition, and pain perception.

Constituents in cannabis

- Over 480 constituents have been identified
- Delta-9 tetrahydrocannabinol (THC), cannabinol (CBN), and cannabinodiol (CBDL) produce psychoactive effects
- Cannabidiol (CBD), cannabigerols (CBGs), and cannabichromenes (CBCs) are not known to have psychoactive properties

<https://accesspharmacy.mhmedical.com/content.aspx?sectionid=192534128&bookid=2129&jumpsectionID=192534168&ResultClick=#1155960382>

Pharmaceuticals based on cannabis

Chemicals taken directly from plant

- ▶ Sativex® (not in US)
- ▶ Epidiolex (June 25, 2018) (CBD)

Synthetic chemicals

- ▶ dronabinol (Marinol®) (THC)

Chemicals similar but not found in plants

- ▶ nabilone (Cesamet™) (THC)
- ▶ (not FDA-approved) dexanabinol; CT-3; cannabior; HU 308; HU 331

Same pathways in brain (but not like MJ)

- ▶ rimonabant (Acomplia™) (withdrawn from market); taranabant/MK-0364

<http://medicalmarijuana.procon.org>

Synthetic marijuana

Common names: Spice, K2, Mojo, Black Mamba

Chemical name: JWH-018

JW Huffman - retired scientist at Clemson University Researched synthesized cannabinoids for treatment of glaucoma and appetite stimulant (mice)

IC 35-48-4 Possession and sale of synthetic cannabinoids is illegal in IN (Level 6 felony)

https://www.in.gov/isdh/files/Spice%20FAQ_Final.pdf



Medical conditions treated with medical cannabis

- ▶ AIDS/HIV and AIDS wasting
- ▶ Alzheimer's disease
- ▶ Arthritis
- ▶ Asthma/ breathing disorders
- ▶ Cancer/nausea
- ▶ Crohn's/ gastrointestinal disorders
- ▶ Glaucoma
- ▶ Epilepsy/seizures
- ▶ Hepatitis C
- ▶ Migraines
- ▶ MS/muscle spasms
- ▶ Pain/analgesia
- ▶ Psychological conditions
- ▶ Tourette syndrome
- ▶ Terminally ill

Debate topics on the use of medical marijuana

- Physician perspectives medical use
- US government officials' views
- Health risks of smoked marijuana
- Treating AIDs with marijuana
- Marijuana use for the terminally ill
- Marijuana versus Marinol®
- Addictiveness of marijuana
- "Gateway" effect
- Medical marijuana debate and its effect on youth drug use

<https://medicalmarijuana.procon.org/view.resource.php?resourceID=000141#7>

Deaths from marijuana v. 17 FDA-approved drugs (1997- 2005)

<http://medicalmarijuana.procon.org/view.resource.php?resourceID=000145>

Marijuana use and driving

<https://www.cdc.gov/healthcommunication/toolstemplates/entertained/tips/marijuana-driving.html>

Last updated on: 10/6/2017

Annual causes of death in US CDC (2015-2016)

1. Heart disease
2. Cancer
3. Accidents (unintentional injuries)
4. Chronic lower respiratory disease
5. Cerebrovascular diseases
6. Alzheimer's disease
7. Diabetes mellitus
8. Influenza/pneumonia
9. Nephritis, nephrotic syndrome, nephrosis
10. Intentional self-harm (suicide)

https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_06.pdf
National Vital Statistics Report. Volume 64, No 2, February 16, 2016.

Charlotte's Web (4:24)

<https://www.youtube.com/watch?v=9XHEoUeAD7s>

Oliver Miller (6:39)

<https://www.youtube.com/watch?v=7UR1UTAVpIM>

You read/hear...

...you decide...

Top ten pro and con arguments at
<http://medicalmarijuana.procon.org/view.resource.php?resourceID=000141>
Last updated 1/4/2018

Resources for more information

- ▶ The American Alliance for Medical Cannabis
www.letfreedomgrow.com
- ▶ The National Association of Cannabis Pharmacy
www.cannabisrx.org
- ▶ American Cannabis Nurses Association
www.americancannabisnursesassociation.org
- ▶ International Association for Cannabinoid Medicine
<http://cannabis-med.org>
- ▶ Marijuana Science Forum
<http://marijuanascienceforum.org>

Resources for more information

- ▶ Medical Cannabis Caregivers Institute
www.mccdirectory.org
- ▶ National Institute on Drug Abuse
www.drugabuse.gov
- ▶ National Organization for the Reform of Marijuana Laws
<http://norml.org>
- ▶ Office of National Drug Control Policy
www.whitehouse.gov
- ▶ Patients Out of Time
www.medicalcannabis.com
- ▶ United Patients Group
www.unitedpatientsgroup.com

Thank you for your attention!

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