

Medical Marijuana

What the Provider Needs to Know

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Agenda

- ▶ What is Medical Marijuana?
 - ▶ Why do we care about marijuana?
 - ▶ Cannabis: Hemp v. Marijuana
 - ▶ How does it work?
 - ▶ What is it used for?
 - ▶ Endocannabinoid System
 - ▶ History of medical marijuana
 - ▶ How does one get it?
- ▶ How does one take it?
 - ▶ Example dosages
 - ▶ Where is it legal?
 - ▶ Is it FDA/DEA Approved?
 - ▶ Physician Obligation to Patient
 - ▶ Review of Application Forms
 - ▶ Questions
 - ▶ References

Why Do We Care?

- ▶ *Study shows more in U.S. using marijuana for medical conditions*
- ▶ *US awards \$3M to fill gaps in medical marijuana research*
- ▶ *Several medical marijuana facilities hope to open locally*
- ▶ *City readying ordinance for medical and recreational marijuana business*
- ▶ *Georgia on the cusp of legalizing medical marijuana*
- ▶ *Voters increase spending, OK medical marijuana retail*
- ▶ *Lawmakers look at limiting marijuana highs*
- ▶ *College of Medicine eyes more instruction on medical cannabis as study suggests doctors are reluctant to talk about it*
- ▶ *House marijuana bill draws heated reaction*
- ▶ *Marijuana Edibles: Not Such a Treat*
- ▶ *First FDA-approved drug containing marijuana extract does on sale in U.S.*

What is Medical Marijuana

- ▶ Medical Marijuana uses the marijuana plant or its chemicals to treat diseases and medical conditions, or to manage symptoms related to serious health diagnoses.

Genus: Cannabis

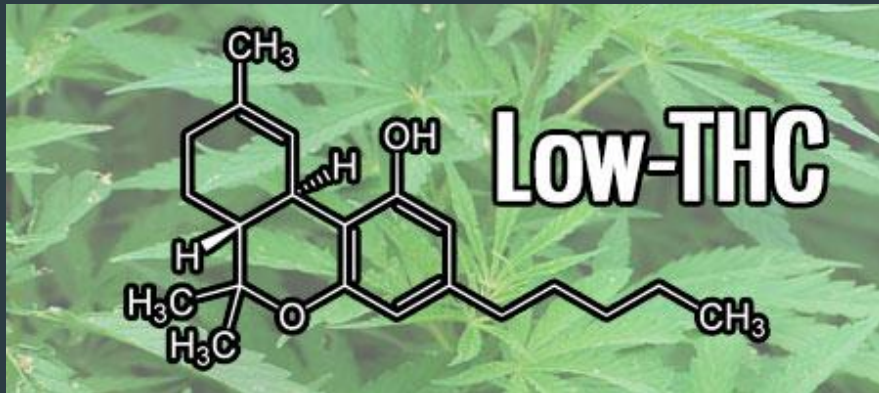
Species: Hemp and Marijuana

- ▶ Plant contains more than 100 different chemicals: “Cannabinoids” effect on the body via Endocannabinoid System



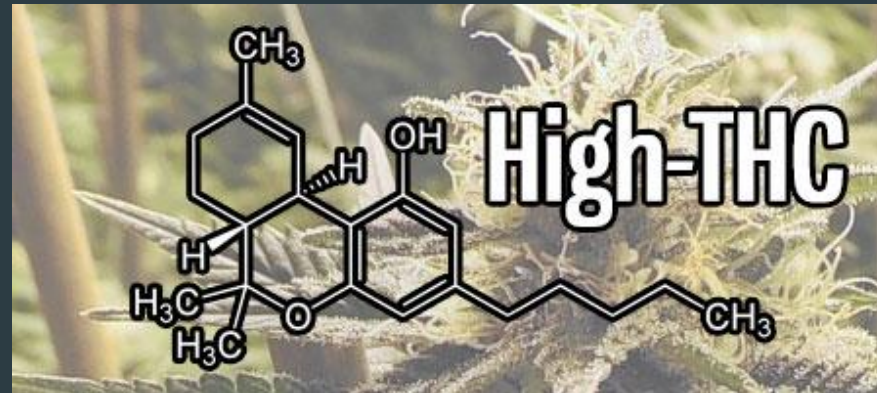
Hemp vs. Marijuana

Hemp Plant



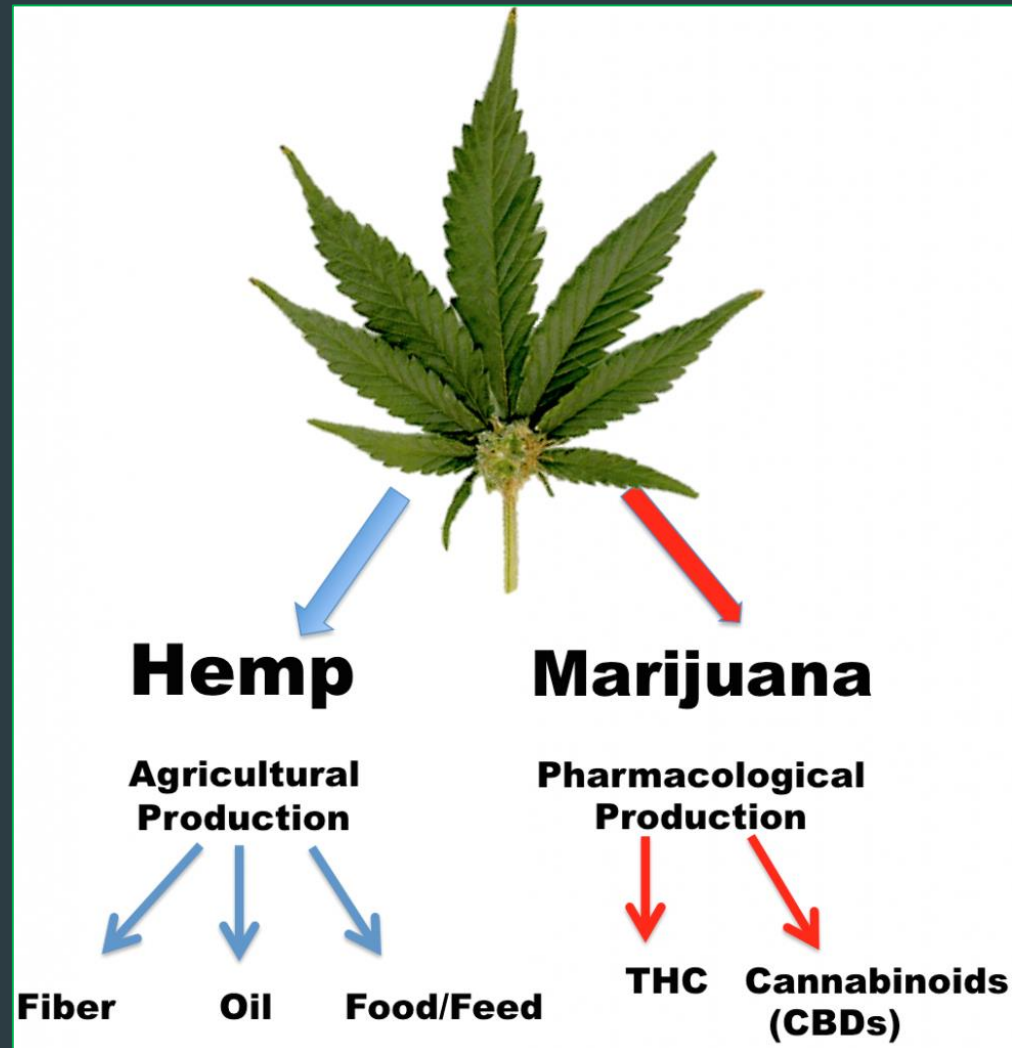
Non-psychoactive
< 0.3% THC

Marijuana Plant



Psychoactive
20-25% THC

Hemp vs. Marijuana



Cannabinoids

Delta-9-tetrahydrocannabinol

- THC
- Produces the “high”
- Euphorogenic
- Can cause anxiety/paranoia

Cannabidiol

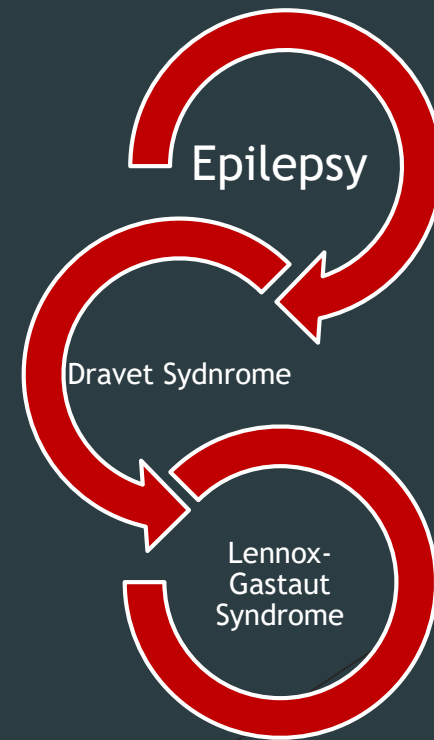
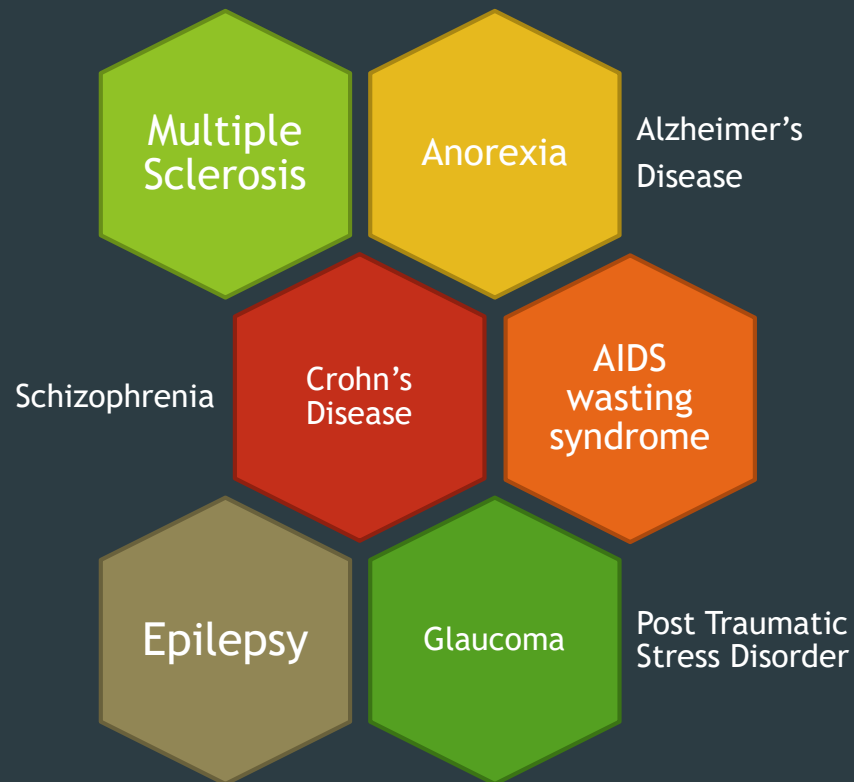
- CBD
- Non-psychoactive
- Non-euphorogenic
- Decreases paranoia, anxiety

Endocannabinoid System

What is it used for?

Medical Marijuana has been used to treat a number of different conditions

Medical Marijuana has only been *proven* to help a few conditions

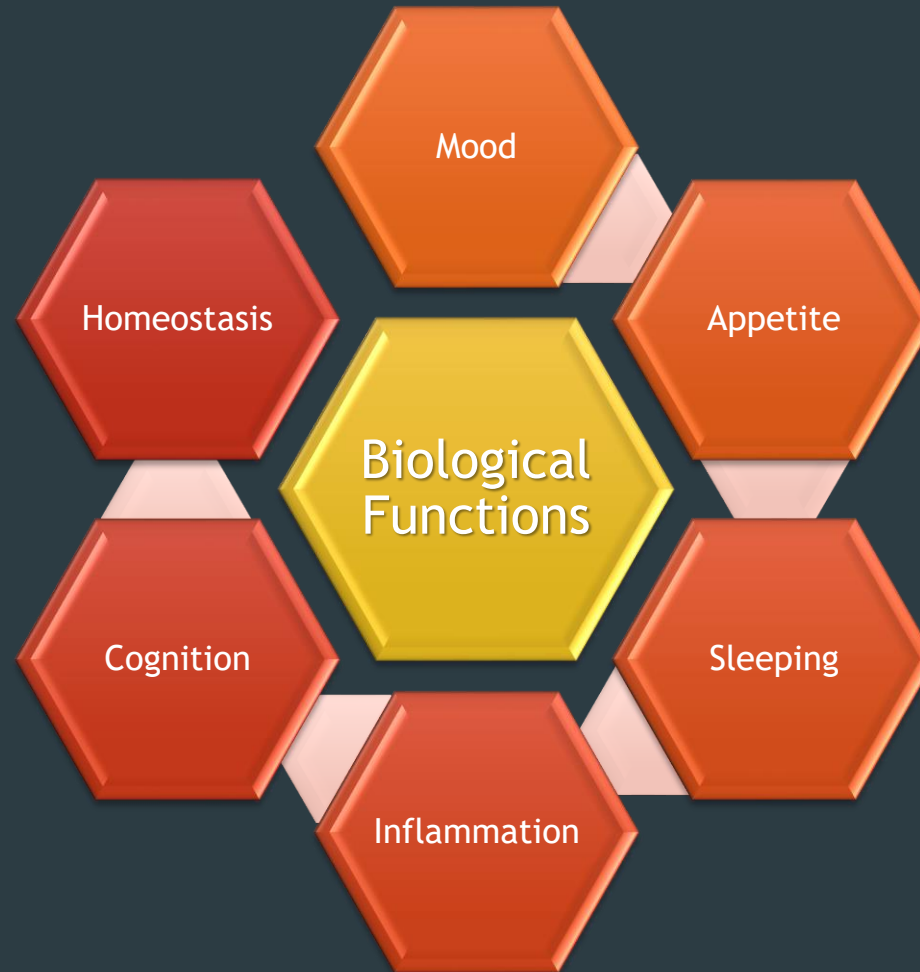


How Does It Work?

- ▶ Cannabinoids (THC, CBN, CBD) are similar to chemicals the body makes naturally that are involved in appetite, memory, movement and pain
- ▶ Research suggests cannabinoids might



Endocannabinoid System



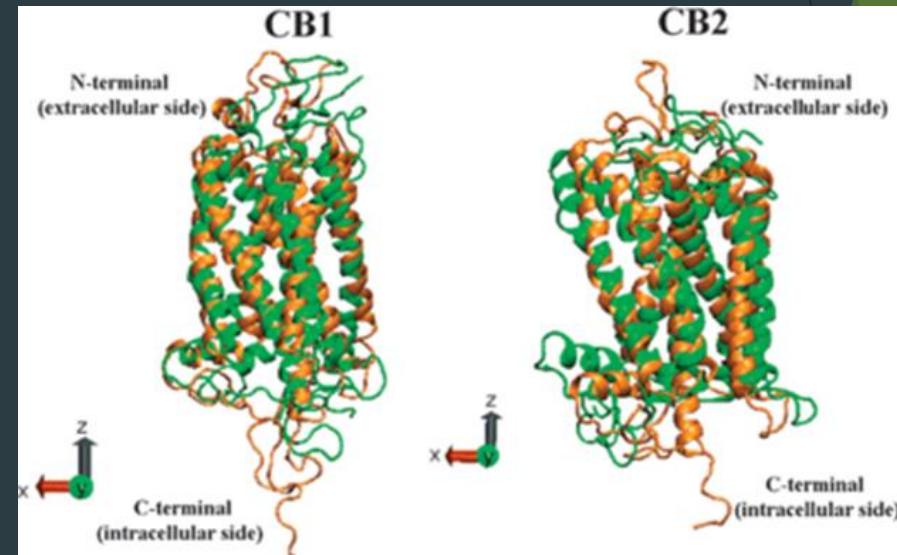
Endocannabinoid System

- ▶ 2 main cannabinoid receptors, CB1 and CB2
- ▶ CB1: Brain and CNS
- ▶ CB2: Peripheral nervous system, immune system, GI tract

▶ Endogenous
endocannabinoids



▶ Plant based
cannabinoids



Endocannabinoid System

Endogenous Endocannabinoids

- ▶ AEA (Anandamide) : CB1
- ▶ 2-AG (Arachidonoylglycerol) : agonist CB1, primary ligand for CB2
 - ▶ High levels in CNS
 - ▶ Neuromodulatory effects
 - ▶ Found in human milk

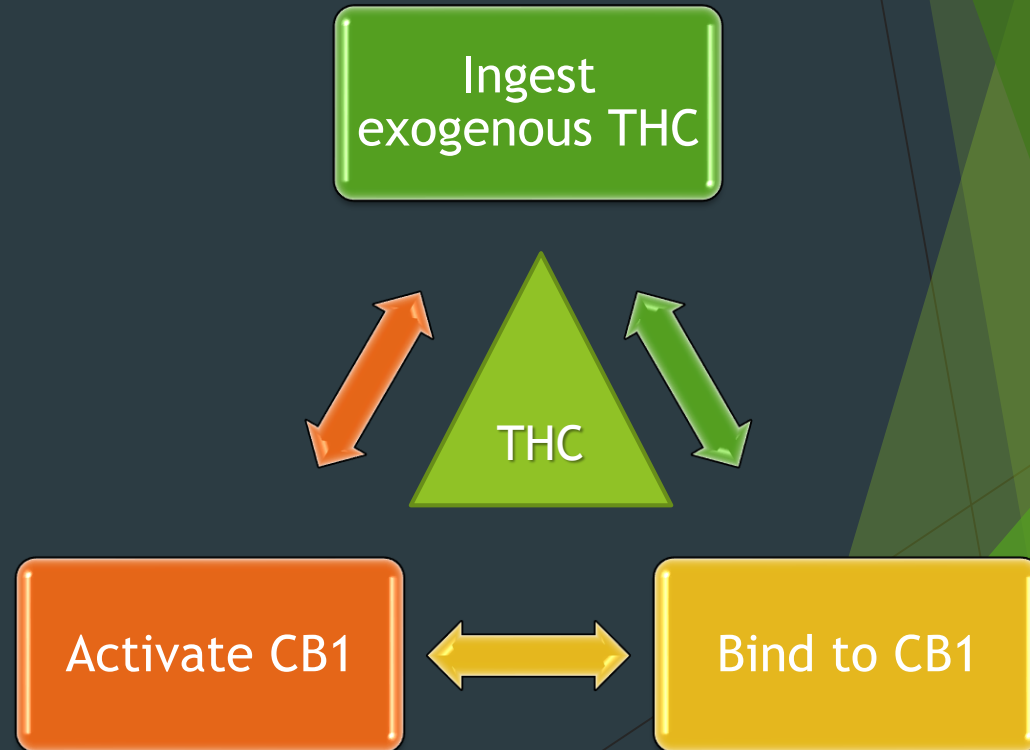
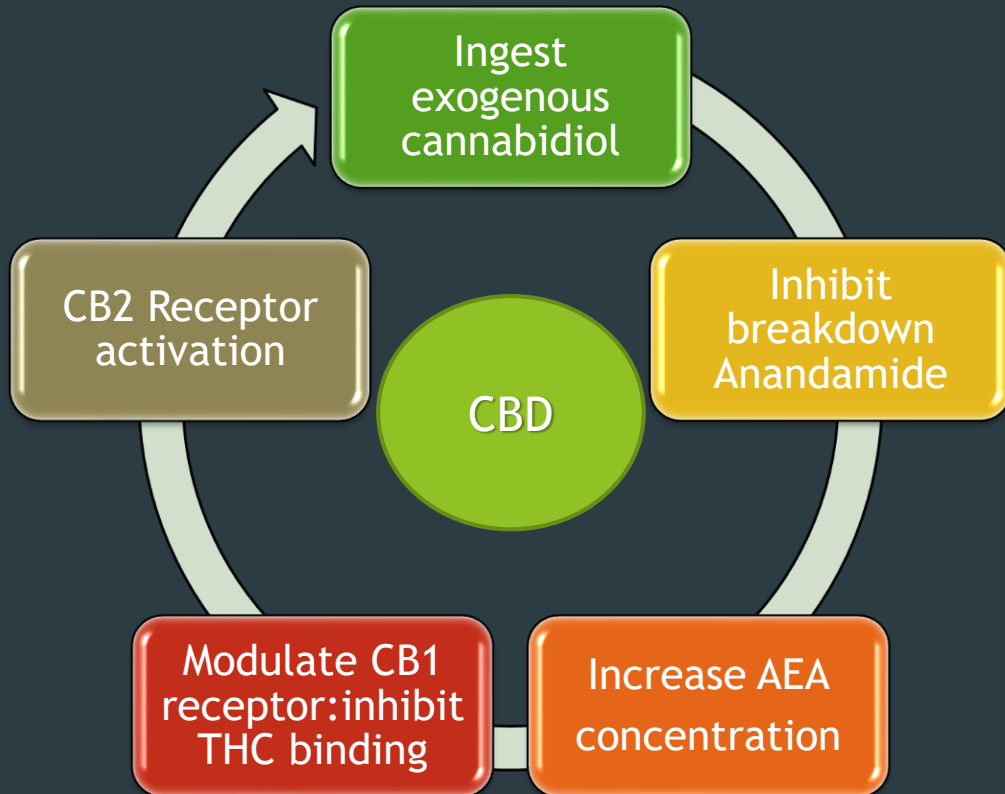
Plant Based Phytocannabinoids

- ▶ 113 (at least) within trichomes (crystals)
- ▶ THC : CB1 potent partial agonist
- ▶ Cannabinol : CB2 potent partial agonist
- ▶ Cannabidiol : CB2 indirect agonist and CB1 negative allosteric modulator



Endocannabinoid System

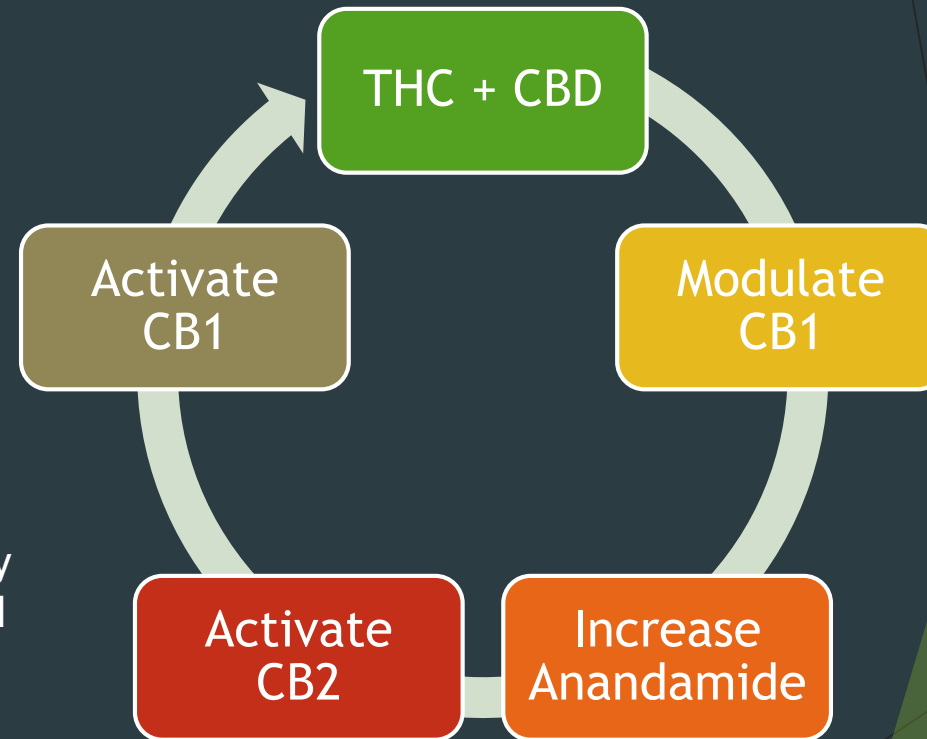
- ▶ THC does directly bind to CB1 receptors
- ▶ CBD does not directly bind to CB1 (negative modulator) and does directly bind to CB2 receptors



Endocannabinoid System

THC + CBD

- ▶ THC is a potent partial agonist of CB1
- ▶ CBD is a negative allosteric modulator of CB1
- ▶ CBD is thus an antagonist against THC, blocking THC from binding to CB1 receptors
- ▶ CBD helps to curb the psychogenic/euphorogenic/psychologically addictive effect of THC > benefit of mixed product: medicinal effect of THC and CBD without “high”



History of Medical Marijuana

▶ 1985

- ▶ Synthetic THC medication “Marinol” (dronabinol) approved by FDA for chemotherapy induced nausea and vomiting

▶ 1992

- ▶ Marinol approved for appetite and weight loss in HIV/AIDS

▶ 2017

- ▶ CBD medication “Epidolex” undergoing clinical trials for rare childhood seizure conditions

▶ 2018

- ▶ THC and CBD are studied as anti-pain medications, especially for neuropathic pain
- ▶ “Sativex” is a CBD-THC combination drug manufactured by the British company CW pharmaceuticals, tested for many psychological conditions but not yet approved for use in the US
- ▶ WHO updated stance on CBD, recommending that it be removed from drug schedules worldwide

▶ 2019

- ▶ Infant arterial ischemic stroke, anti-oncogenic research (glioma, breast cancer), psychiatric diagnoses, concussion treatment...

How Does One Take Medical Marijuana?

▶ Inhalation

- ▶ Joint, Vaporizer > mist
- ▶ Directly enter the bloodstream through lungs
- ▶ 9/2019 JAMA Study “Marijuana Use Examined Among Adults With Medical Conditions” - smoking primary method of administration among adults with and without medical conditions (77.5%).
- ▶ No clear correlation (yet) between marijuana inhalation and lung cancer incidence, however increase incidence and progression of COPD.
- ▶ Possible correlation with bladder CA, testicular CA - very small studies, unclear cofounders (alcohol, nicotine).



How Does One Take Medical Marijuana?

► Oral Consumption

- Caramels
- Lollipops
- Baked Goods
- Bowel absorption, first pass effect, hepatic metabolism.
- THC : CYP2C9, CBD : CYP450 enzyme
- Short gut? IBD? Colon cancer? Liver mets? Agents hepatically metabolized?
- Most likely to result in overdose/adverse reactions > dose!



How Does One Take Medical Marijuana?

▶ Topical Application

- ▶ Lotion, spray, oil, balm, cream
- ▶ Transdermal innovations: lubricants, patches
- ▶ Often mixed with essential oils: cayenne, wintergreen, clove, peppermint
- ▶ Not absorbed into bloodstream, possibly reach peripheral CB2 receptors



How Does One Take Medical Marijuana?

▶ Sublingual Tincture

- ▶ Few drops of liquid under the tongue
- ▶ Primarily CBD products
- ▶ Potential side effects:
 - ▶ Inhibition of hepatic drug metabolism/neutralize activity P450 enzyme
 - ▶ Dry Mouth (CB2 receptors in submandibular glands)
 - ▶ Increase tremor (dose related)
 - ▶ Hypotension (metabolism antihypertensives? Peripheral vasodilation?)



Dosages : Examples

▶ THC Products

- ▶ Edibles 1mg to 100mg THC
 - ▶ Hard Candy 11-20 mg dose
 - ▶ Baked Goods 66-80 mg dose
- ▶ 2.5 - 15mg may impair coordination and alter perception
- ▶ 5mg - 30mg strong euphoria
- ▶ >50mg tachycardia, nausea, allodynia

▶ CBD Products

- ▶ Tincture 1000mg CBD in 20mL, 1 drop contains 5mg CBD
- ▶ Suppositories 50mg CBD

▶ Mixed Products

- ▶ Capsules
 - ▶ 2.5mg : 120mg THC : CBD, one capsule po TID

Dravet Syndrome and Lennox-Gastaut Syndrome: sublingual ingestion 200-300mg CBD daily x 4 months

FDA vs. DEA

Food and Drug Administration

- ▶ Government agency operating under the United States Department of Health and Human Services (HHS). Primarily responsible for regulating medical products and tobacco, foods and veterinary medicine, and global regulatory operations and policy.
- ▶ *“The FDA is aware that marijuana or marijuana-derived products are being used for a number of medical conditions including, for example, AIDS wasting, epilepsy, neuropathic pain, treatment of spasticity associated with Multiple Sclerosis.”*

Drug Enforcement Administration

- ▶ United States federal law enforcement agency under the United States Department of Justice, tasked with combating drug smuggling and distribution within the United States. Lead agency for domestic enforcement of the Controlled Substances Act, sharing concurrent jurisdiction with the Federal Bureau of Investigation, Immigration and Customs Enforcement, U.S. Customs and Border Protection, and the Department of Homeland Security. DEA has sole responsibility for coordinating and pursuing US drug investigations both domestic and abroad.

DEA Schedules

SCHEDULE 2

- ▶ Schedule II is a classification of the Federal regulatory status of a class of medications and other drugs. It is a subclass of substances that have some medicinal value in treating certain conditions, but also carry a high potential for dependence and addiction.

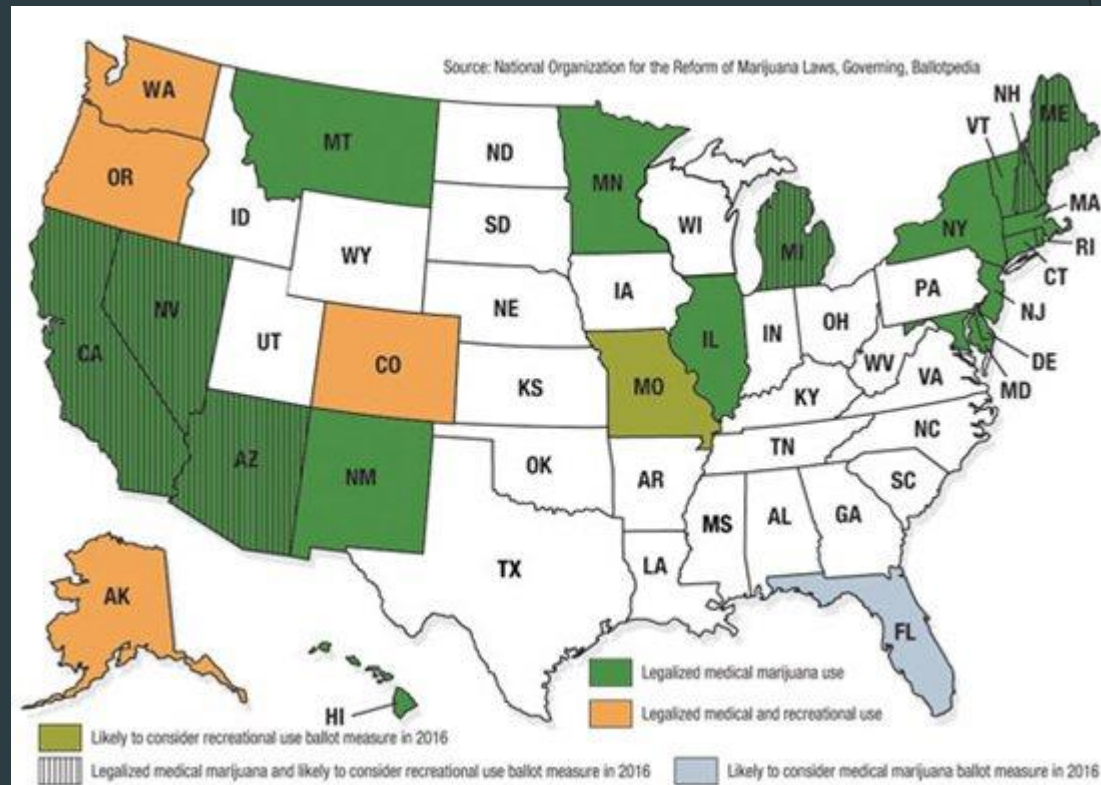
SCHEDULE 3

- ▶ The drug has a potential for abuse less than the drugs in schedules 1 and 2. The drug has a currently accepted medical use in treatment in the United States. Abuse of the drug may lead to moderate or low physical dependence or high psychological dependence.

1999 Marijuana drug classification changed from schedule 2 to schedule 3

Where is it legal?

- ▶ Medical Marijuana is legal in 33 states and the District of Columbia
- ▶ States that allow restricted use only include:
 - ▶ Alabama
 - ▶ Georgia
 - ▶ Iowa
 - ▶ Kentucky
 - ▶ Mississippi
 - ▶ Missouri
 - ▶ North Carolina
 - ▶ South Carolina
 - ▶ Wisconsin
 - ▶ Wyoming



How Does a Patient Get Medical Marijuana?

- ▶ Written recommendation from a licensed physician in a state where it is legal.
- ▶ Patient must have a qualifying condition for medical marijuana use.
- ▶ Each state has it's own list of qualifying conditions.
- ▶ Required to have a medical marijuana ID card.
- ▶ Once you have a card you may purchase from a dispensary.



Patient ID Card



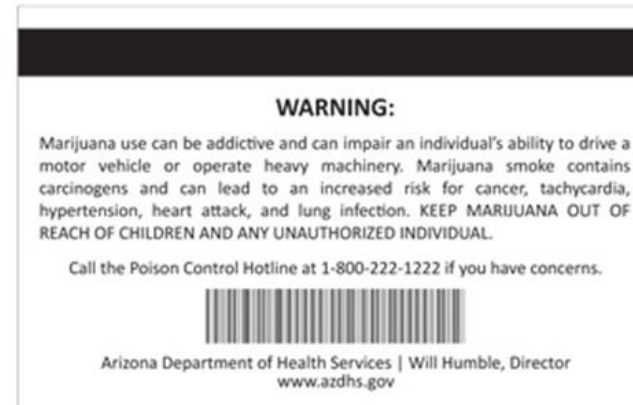
Caregiver ID Card

Ultraviolet Security Image

Under a black light, the ADHS logo (without the copper sunburst) is revealed in the center of the card.

Clear Laminate Hologram

The words "Arizona Medical Marijuana Program" are printed across the card on three separate lines within the clear laminate.*



Back of ID Cards

Qualifying Conditions Arizona

Cancer

Glaucoma

HIV/AIDS

HCV

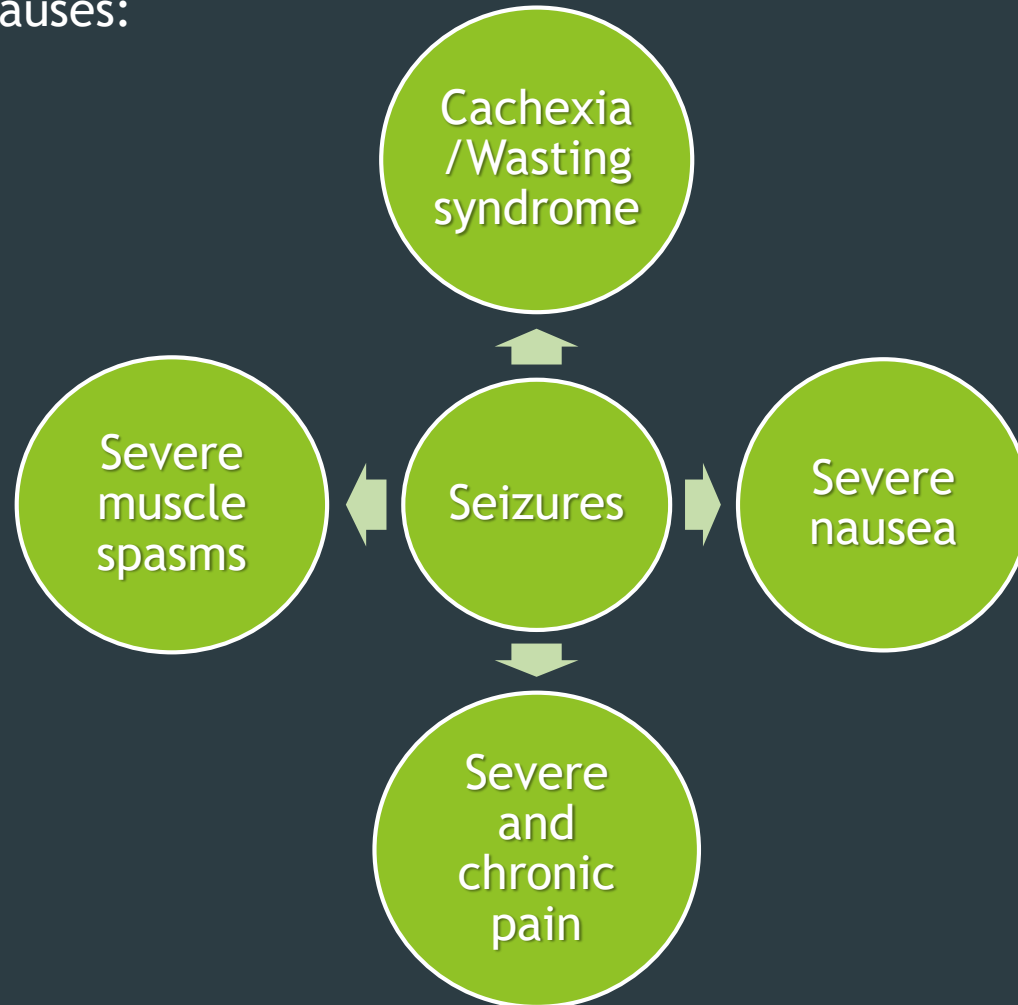
ALS

Crohn's Disease

Alzheimer's Disease

Qualifying Conditions Arizona

- ▶ A chronic or debilitating disease, medical condition or the treatment of such a disease that causes:



Physician Obligation to Patient

- ▶ The law specifies requirements for issuing written certifications for patients for the medical use of marijuana. A physician is required to:
 - ▶ Have made/confirmed a diagnosis of a debilitating medical condition
 - ▶ Have established a medical record for the patient and maintain the patient's medical record
 - ▶ Have conducted an in-person physical examination of the qualifying patients within 90 days appropriate to the patient's presenting symptoms
 - ▶ Have reviewed the patient's medical records for the past 12 months, including response to conventional medications and therapies

Physician Obligation to Patient, cont.

- ▶ Have reviewed the patient's profile on the Arizona Board of Pharmacy Controlled Substances Prescription Monitoring Program database
- ▶ Have explained the potential risks and benefits of the medical use of marijuana to the patient and legal guardian if indicated
- ▶ Have disclosed to the patient any professional relationship provider may have with a referred dispensary
- ▶ Attest that the patient is likely to receive therapeutic or palliative benefit from the use of medical marijuana
- ▶ Additional requirements from physician for patient under the age of 18.

Rules and Regulations

- ▶ **AZ Statutes Governing the Arizona Medical Marijuana Program**
- ▶ **Arizona Revised Statutes + Arizona Medical Marijuana Rules = Arizona Medical Marijuana Program**
 - ▶ A.R.S Title 36 Chapter 28.1, 2019: rules to certify and regulate independent 3rd party laboratories
 - ▶ Certify and regulate laboratories
 - ▶ November 1 2020, marijuana dispensaries must test marijuana using department (Az Dept of Health Services) certified laboratory
- ▶ Dynamic development of policy and regulations.
- ▶ With card, citizen can purchase up to 2.5 ounce of marijuana every 2 weeks.
- ▶ Recreational marijuana use remains illegal in AZ.
- ▶ Arizona Department of Health Services website for details.

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▶ Thank you!
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