

The background is a solid dark blue color. In the four corners, there are decorative white line-art elements that resemble circuit traces or neural network connections. These lines are thin and connect to small white circles at various points.

# CANNABIS: MEDICAL, LEGAL, AND UNKNOWN

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# CANNABIS HISTORY

- Use dates back 8,000 years
- First European settlers brought hemp to the U.S. and South America as a crop
- Late 1800s: Cannabis medicines emerge/cannabis smoking becomes popular in Paris
- 1906: Pure Food and Drug Act requires accurate labeling of medicines
- 1910: Harrison Narcotics Act: Cannabis is not included
- 1930s: Federal campaign against marijuana begins



4 Fl. oz. No. 598

**FLUID EXTRACT  
CANNABIS, U. S. P.**

**(AMERICAN CANNABIS)**

Fluid Extract of American Cannabis was introduced to the medical profession by us. The Cannabis we use is grown in our own botanical gardens.

**ALCOHOL, 80 PER CENT.**

**POISON**

Strength, physiological and therapeutic action the same as that of Cannabis Indica.

MANUFACTURED **MAY 25 '33**

STANDARDIZED (BY PHYSIOLOGICAL ASSAY)

**A POWERFUL SEDATIVE AND NARCOTIC.**

ANTIDOTES—Tannic Acid; evacuation of stomach by use of tube; Strychnine.

Average dose of the Fl. Extract—1½ minims (0.1 cc.).

**FORMULA**

STRUCTURE CANNABIS	(AMERICAN CANNABIS)	AVOID
Fl. Ext. Cannabis, U. S. P.	1½ fl. oz.	50 cc.
Alcohol, sufficient to make	12 fl. oz.	500 cc.
Average dose of Tracture, 12 minims.		

3020688

**PARKE, DAVIS & CO.**  
DETROIT, MICH., U. S. A.

# CANNABIS HISTORY

- Use dates back more than 5,000 years
- First European settlers brought hemp to the U.S. as a crop
- Late 1800s: Cannabis medicines emerge
- 1906: Pure Food and Drug Act requires accurate labeling of medicines
- 1910: Harrison Narcotics Act: Cannabis is not included
- 1930: Harry Anslinger begins campaign against marijuana



*“  
MARIJUANA  
IS THE MOST  
VIOLENCE-  
CAUSING DRUG  
IN THE HISTORY*



There are 100,000 total marijuana smokers in the US, and most are Negroes, Hispanics, Filipinos and entertainers. Their Satanic music, jazz and swing, result from marijuana usage. This marijuana causes white women to seek sexual relations with Negroes, entertainers and any others.

— *Harry J. Anslinger* —

**AZ QUOTES**

# Mystery of the Strange Mexican Weed

*American and Mexican Authorities Seek to Curb  
Growing Use of Dread Marihuana Drug That Stirs Its  
Victims to Atrocious Deeds of Violence*

*Daring  
Drug  
Expose!*

*Horror  
Shame  
Despair!*



# MARIHUANA

**WEED WITH ROOTS IN HELL**

NOT RECOMMENDED FOR CHILDREN



*SMOKE  
THAT  
GETS IN  
YOUTH'S  
EYES!*



*WHAT  
HAPPENS  
AT  
Marihuana  
PARTIES?*

**WEIRD ORGIES  
WILD PARTIES  
UNLEASHED PASSIONS!**





# CANNABIS HISTORY

- 1937: Marijuana Tax Stamp act
- 1970: Cannabis is placed in Schedule I of the Controlled Substances Act
- 1996: Cannabis legalization begins on the state level

# TIMETABLE OF CANNABIS LEGALIZATION IN THE US

- 1996-1998: California, Oregon and Washington legalize medical marijuana
- 2012: California and Washington legalize recreational cannabis
- 2013: Illinois legalizes medical marijuana
- 2019: Illinois legalizes recreational marijuana

# CANNABIS

- Species:
  - Sativa (stimulating)
  - Indica (sedating)
- Cannabinoids:
  - > 100
    - Psychoactive:  $\Delta^9$ -THC
    - Cannabidiol (CBD)

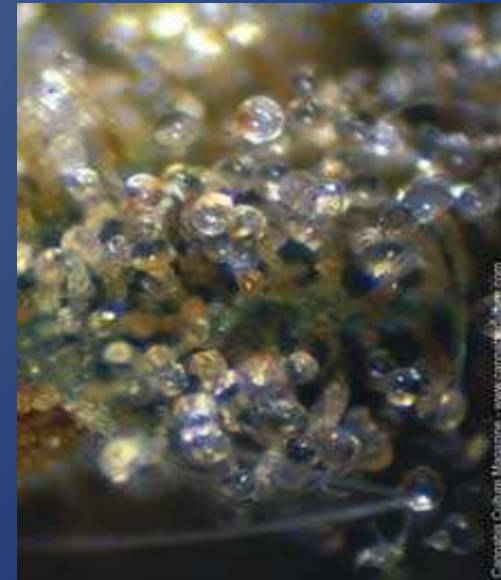
# ENDOCANNABINOIDS

- Endocannabinoid receptors
  - CB<sub>1</sub> (THC)
  - CB<sub>2</sub> (CBD)

# CANNABIS (HEMP/LOW THC)



# CANNABIS (FLOWER/MARIJUANA/WEED)



TRICHOMES

# HASHISH

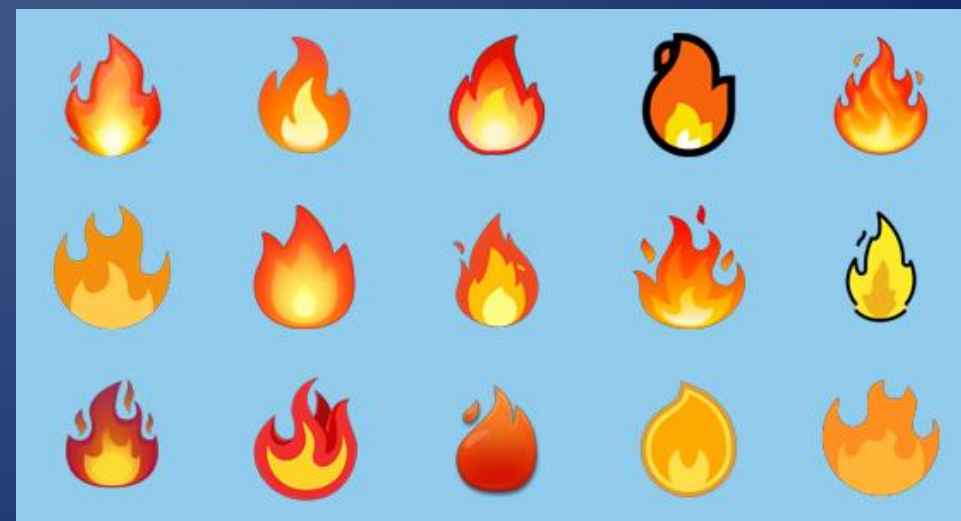


kif





# HASH OIL



# SHATTER



# BUDDER



# WAX



# VAPE CARTRIDGE







# CANNABIS OVERVIEW

- Addiction potential low to moderate
- Tolerance develops to some symptoms of intoxication
- Physical dependence withdrawal symptoms mild
- Immediate and long-term physical toxicity potential appears moderate to low
- Immediate psychiatric impairment potential low to moderate/chronic psychiatric impairment may be moderate for adolescents
- Cognitive Impairment: Low to moderate in acute cases, unknown in chronic cases



# CANNABIS (DESIRED EFFECTS)

- euphoria
- excitation/stimulation
- relaxation
- altered perception (slowing) of time
- changes in spatial perception
- intensification of sensory stimuli
- hilarity/indiscriminate laughter
- increased *libido* (sex drive)

# CANNABIS (UNDESIREE EFFECTS)

- Short-term memory impairment
- Impaired verbal skills/communication ability
- Depression
- Anxiety (More likely with high THC levels)

# CANNABIS (UNDESIREE EFFECTS)

- Mental clouding
- Confusion
- Panic (More likely with high THC levels)
- Hallucinations
- Delusions
- Cannabis hyperemesis syndrome

# NEUROPSYCHIATRIC ADMISSION TO ED RELATED TO CANNABIS USE (*ANNALS OF EMERGENCY MEDICINE*, OCTOBER 28, 2021)

- Acute anxiety (37.5%)
- Suicidal ideation (18.4%)
- Depression (16.1%)
- Hallucinations (9.5%)
- Mania (5.9%)
- Seizures (5.5%)
- Psychosis (4.6%)
- Paranoia (4.5%)

# CANNABIS (UNDESIRE EFFECTS)

- Mental clouding
- Confusion
- Panic (More likely with high THC levels)
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# CURRENT RESEARCH ON THE HEALTH EFFECTS OF CANNABIS

**NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE**

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Substantial evidence:
  - Association between long-term cannabis smoking and worse respiratory symptoms and more frequent chronic bronchitis episodes  
**(Marijuana smoking most likely causes breathing problems and bronchitis)**

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Moderate evidence:
  - *Cessation* of cannabis smoking and improvements in respiratory symptoms (**If you quit smoking marijuana, your breathing problems could get better**)



# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- *No statistical association between cannabis smoking and the incidence of lung cancer (There is no evidence of a connection between smoking marijuana and lung cancer).*
- *No statistical association between cannabis use and the incidence of head and neck cancers (There is no evidence of a connection between smoking marijuana and those cancer either)*

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Limited evidence:
  - Statistical association between current, frequent, or chronic cannabis smoking and non-seminoma-type testicular germ cell tumors (There is some evidence of a connection between smoking marijuana and testicular cancer).

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Limited evidence:
  - Association between occasional cannabis smoking and an increased risk of developing chronic obstructive pulmonary disease (COPD) when controlled for tobacco use (Even if people don't smoke tobacco, there is a possibility that they will develop COPD)

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Insufficient evidence
  - To support or refute a statistical association between cannabis smoking and asthma development or asthma exacerbation (It's unknown whether marijuana smoking either causes or worsens asthma).
  - Esophageal, prostate, cervical, bladder, penile, anal cancer, non-Hodgkin lymphoma (It's unknown whether marijuana smoking causes those illnesses)

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- There exists a paucity of data on the effects of cannabis or cannabinoid-based therapeutics on the human immune system (There isn't enough research to say one way or the other).
- Insufficient data to draw conclusions concerning the effects of cannabis smoke or cannabinoids on immune competence (Not enough research).

# CANNABIS AND COVID-19

- Users of marijuana were more likely than those not using drugs to acquire a breakthrough COVID infection (*World Psychiatry*, October 2021) (?)

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Limited evidence to suggest that regular exposure to cannabis smoke may have anti-inflammatory activity (Cannabis may have anti-inflammatory properties).
- Insufficient evidence to support or refute a statistical association between cannabis or cannabinoid use and adverse effects on immune status in individuals with HIV (There is not enough research to say one way or the other)

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Smoking cannabis during pregnancy is linked to lower birth weight in the infant
- The relationship between smoking cannabis during pregnancy and other pregnancy and childhood outcomes is unclear.



# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Recent cannabis use impairs the performance in cognitive domains of learning, memory, and attention. **Recent use may be defined as cannabis use within 24 hours of evaluation.**
- A limited number of studies suggest that there are impairments in cognitive domains of learning, memory, and attention in individuals **who have stopped smoking cannabis (Some research suggests that things can get better, but this is not known for sure).**

# CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- **Cannabis use during adolescence is related to impairments in subsequent academic achievement and education, employment and income, and social relationships and social roles (Teens should not smoke marijuana).**

## ADOLESCENTS, CANNABIS AND CARDIOVASCULAR DISEASE

- Marijuana Use and Stress Cardiomyopathy in the Young (*Cureus*, October 2021)
  - Higher risk of cardiovascular disease in adolescents Vs adults
  - Marijuana use is linked to SC in a distinct cohort of younger individuals and is associated with significant morbidity despite younger age and a more favorable cardiac risk factor profile compared to SC in non-users of Marijuana.
  - The data also raises significant questions regarding the safety of marijuana use in older individuals with pre-existing cardiovascular diseases.

## ADOLESCENTS, CANNABIS AND CARDIOVASCULAR DISEASE

- Marijuana Use and Stress Cardiomyopathy in the Young (*Cureus*, October 2021)
  - Our study is retrospective in design and thus cannot establish causation.
  - We cannot tell based on this database whether marijuana was inhaled or orally ingested by the users.
  - This database does not allow the determination of the quantity of marijuana used.

## CANNABIS RESEARCH FINDINGS (NATIONAL ACADEMIES OF SCIENCE, ENGINEERING AND MEDICINE 2017)

- Cannabis use prior to driving increases the risk of being involved in a motor vehicle accident (Don't drive high).
- In states where cannabis use is legal, there is increased risk of unintentional cannabis overdose injuries among children (Children often eat edibles).

The slide features a dark blue background with white, stylized circuit-like lines in the corners. These lines consist of straight paths that branch out and terminate in small circles, resembling a network or data flow diagram. The lines are positioned in the top-left, top-right, bottom-left, and bottom-right corners, framing the central text.

# CANNABIS USE AND COGNITIVE IMPAIRMENT

# EFFECTS OF ACUTE CANNABIS INTOXICATION ON COGNITIVE FUNCTIONING

- Short-term memory impairment
- Distractibility
- Difficulty holding more than one thought in mind
- Confusion

# EFFECTS OF CHRONIC CANNABIS USE ON COGNITIVE FUNCTIONING

- Verbal and visuospatial learning
- Former heavy users (abstinent average of 2.5 years) displayed milder impairment
- Implications for treatment?



# THE CANNABIS POTENCY PROBLEM

- Marijuana for research only available from U.S. government's marijuana farm
- Government marijuana averages 6% THC
- Street marijuana (and marijuana in dispensaries) can reach 30% THC or more



**(ILLINOIS) COMPASSIONATE USE OF MEDICAL  
CANNABIS PILOT PROGRAM ACT**

## WHY GET A MEDICAL MARIJUANA CARD WHEN CANNABIS IS LEGAL?

- Priority service at dispensaries/cannabis stores
- No sales tax
- Desire to identify as a medical consumer

# MEDICAL MARIJUANA CARD

- Physician certifies that patient has qualifying condition
- Fingerprinting
- Photo
- Criminal background check
- Application to Illinois Dept of Public Health
- Good for two years

# PRESCRIPTION VS CERTIFICATION

- Patient is not prescribed medical cannabis
- Physician certifies that patient has one of the qualifying conditions

# MEDICAL MARIJUANA CARD

- Physician certifies that patient has qualifying condition
- Fingerprinting
- Photo
- Criminal background check
- Application to Illinois Dept of Public Health
- Good for two years

# MEDICAL MARIJUANA ACT: QUALIFYING CONDITIONS

- **Cancer**
- **Glaucoma**
- **Positive status for HIV**
- **Acquired immune deficiency syndrome/AIDS**
- **Hepatitis C**
- **Amyotrophic lateral sclerosis (ALS/Lou Gerig's Disease)**

# MEDICAL MARIJUANA ACT: CONDITIONS

- **Crohn's disease**
- **Agitation of Alzheimer's disease**
- Cachexia/wasting syndrome
- **Muscular dystrophy**
- **Severe fibromyalgia**
- **Spinal cord disease, including but not limited to arachnoiditis**



# MEDICAL MARIJUANA ACT: CONDITIONS

- Tarlov cysts
- Hydromyelia
- Syringomyelia
- **Rheumatoid arthritis**
- Fibrous dysplasia

# MEDICAL MARIJUANA ACT: CONDITIONS

- **Spinal cord injury**
- **Traumatic brain injury**
- **Post-concussion syndrome**
- **Multiple Sclerosis**
- **Arnold-Chiari malformation and Syringomyelia**
- **Spinocerebellar Ataxia (SCA)**

# MEDICAL MARIJUANA ACT: CONDITIONS

- Myoclonus
- Dystonia
- Reflex Sympathetic Dystrophy, RSD (Complex Regional Pain Syndromes Type I),
- Causalgia, CRPS (Complex Regional Pain Syndromes Type II),
- Neurofibromatosis

# MEDICAL MARIJUANA ACT: CONDITIONS

- Polyneuropathy
- Sjogren's syndrome
- **Lupus**
- Interstitial Cystitis
- Myasthenia Gravis

# MEDICAL MARIJUANA ACT: CONDITIONS

- Hydrocephalus
- Nail-patella syndrome
- **Residual limb (Phantom limb) pain**

# MEDICAL MARIJUANA ACT: CONDITIONS

- **Seizures** (including those characteristic of epilepsy)
- **Post-traumatic stress disorder (PTSD)**
- **Opioid alternative program:** Patients who would otherwise be prescribed an opioid can now choose to seek relief with medical cannabis and are eligible to apply for a 90-day renewable medical cannabis card



Journal of  
*Clinical Medicine*

October 25, 2019

**Medical Cannabis for Older Patients—  
Treatment Protocol and Initial Results**

- Older adults may benefit from cannabis treatment for various symptoms such as chronic pain, sleep difficulties, and others, that are not adequately controlled with evidence-based therapies.
- However, currently, there is a dearth of evidence about the efficacy and safety of cannabis treatment for these patients
- Of the respondents, 84.8% reported some degree of improvement in their general condition

# PROBLEMS SINCE LEGALIZATION

- Colorado:
  - More ER visits
    - Edibles 0.32% of sales, but 11% of ER visits
    - Children who consume their parents' cannabis
    - People with mental illness who consume cannabis
    - Cannabis hyperemesis
    - Visitors to Colorado: 50% higher rate of ER visits compared to residents
    - Higher THC levels
  - Fires and explosions due to people trying to make cannabis concentrates
  - Increase in auto accidents/fatalities unclear
  - Increase in petty crime



# PROBLEMS SINCE LEGALIZATION

JAMA Pediatrics July 2019

(*JAMA Pediatr.* 2019;173(9):879-881.  
doi:10.1001/jamapediatrics.2019.1720)

- Adolescent experimentation and frequent use down in states that have legalized cannabis
- No change in states that have legalized medical cannabis



HOWEVER, AMONG ADOLESCENTS WHO DO USE CANNABIS, RATES OF CUD MAY BE TWICE AS HIGH AS AMONG ADULTS



# CANNABIS USE DISORDER TREATMENT

- Cannabis dependence (CUD) is real
- Research suggests 10-30% of users have at least a mild CUD
- There are cannabis withdrawal symptoms
- Current approaches:
  - Motivational enhancement therapy (MET)
  - Cognitive behavioral therapy (CBT)
  - Contingency management
  - Group treatment may be more effective

**(NIDA: Evidence-Based Approaches to Drug Addiction Treatment)**



## CANNABIS USE DISORDER: REASONS FOR USE

- Anxiety (GAD)
- Panic disorder
- Depression
- Insomnia
- Pain
- Low libido
- Boredom
- Socialization



## CANNABIS: REASONS FOR QUITTING

- Spending too much money
- Significant other objects
- Trouble with memory/concentration
- Cannot cut down on use
- Use at inappropriate times
- Cannot get enough done during the day
- Coughing/respiratory symptoms
- Legal problems (DUI, etc.)
- Spiritual or religious reasons
- Burning holes in clothing
- My hair and clothes smell/eyes red



## CANNABIS: REASONS FOR QUITTING

- I have to leave my house or someone else's in order to smoke
- To prove to myself or others that I can quit
- To get or keep a job
- To do better in life
- Because I have children now
- To get my children back
- I experience withdrawal symptoms when I stop



# CANNABIS WITHDRAWAL SYMPTOMS

- Craving (No medications available to curb craving)
- Feelings of anger, irritability, and/or aggressiveness
- Nervousness or anxiety
- Sleep disturbances
- Increased dreaming (often vivid)



# CANNABIS WITHDRAWAL SYMPTOMS

- Decrease in appetite
- Restlessness
- Depression
- **Possible:**
  - Abdominal pain
  - Fever
  - Chills
  - Sweating
  - Headache
  - Tremor or shakiness
- Peak at 2-6 days/Persist ~ 14 days

# STRATEGIES FOR MANAGING CANNABIS WITHDRAWAL

Meditation

Progressive  
relaxation

Exercise

Reading

Positive self-  
talk

Family/friend  
support



# ASSESSMENT COMPONENTS

Incidence

Recency

Service  
utilization



## CANNABIS TREATMENT INTERVENTIONS

- Little research on what strategies work best with clients with CUD
- No medications have shown promise in treating CUD
- For those in treatment, relapse rates are high (At 6 months and 1 year, 55-85%)
- Harm reduction an alternative to abstinence



# CANNABIS TREATMENT INTERVENTIONS

- CBT

- A classification of mental health counseling founded in the 1960s by Dr. Aaron Beck
- Teaches recovering addicts to find connections between their thoughts, feelings, and actions and increase awareness of how these things impact recovery
- Provides training on coping skills



# CANNABIS TREATMENT INTERVENTIONS

## • MET

- Based on the principles of motivational interviewing
- Addresses the client's ambivalence about quitting and/or entering treatment
- Avoids argumentation
- Uses client's self-motivational statements
- Successful in engaging clients in treatment
- May be limited to 4-5 sessions



# CANNABIS TREATMENT INTERVENTIONS

- CM

- Identifies contingencies\*
- Provides rewards for pre-determined behaviors
- Most often combined with CBT or MET

\* A future event or circumstance which is possible but cannot be predicted with certainty.

## CONTINGENCIES

Clean urine drop(s)

Attendance at group or individual counseling

Attendance at 12-step or other support group



# CANNABIS TREATMENT INTERVENTIONS

- CM

- Identifies contingencies\*
- Provides rewards for pre-determined behaviors
- Most often combined with CBT or MET

\* A future event or circumstance which is possible but cannot be predicted with certainty.

# HOW LONG SHOULD TREATMENT LAST?



NIDA recommends a minimum of 90 days



Recovery check-ups recommended



Client may return for more intensive treatment if relapse occurs





## CANNABIS TREATMENT CONSIDERATIONS

- Be mindful of withdrawal symptoms
- Keep in mind level of CUD (mild, moderate, severe)
- Client may minimize consequences when compared to others in group
- Other group members may minimize consequences of cannabis use, difficulty in quitting
- Elicit reasons for quitting in individual and groups sessions



## CANNABIS TREATMENT CONSIDERATIONS

- Cutting down may be easier than with other drugs
- Client may not want to stop drinking or using other drugs
- Relapse rates historically as high as other drugs



## RELAPSE PREVENTION

- Get ride of cannabis
- Get rid of paraphernalia
- Stop associating with people who use cannabis
- Avoid places where cannabis is used or sold
- Develop sober relationships
- Use sober coping strategies
- Attend support groups
- Develop interests that are incompatible with cannabis use

JRW Behavioral Health Services



THANK YOU FOR BEING HERE TODAY!  
DOWNLOAD THESE SLIDES AT [WWW.RANDALLWEBBER.COM](http://WWW.RANDALLWEBBER.COM)