

# Marijuana

## Module 4

**ALLIED TRADES ASSISTANCE PROGRAM**

PREVENTATIVE EDUCATION: SUBSTANCE USE DISORDER



# **Marijuana**

- Pot
- Grass
- Weed
- Reefer
- Herb
- Mary Jane
- MJ

**Whatever you call it, marijuana is  
the nations most commonly used  
illicit drug**



# **MARIJUANA...The nations most commonly used illicit drug**

22.2 million users in the past month according to the 2014  
National Survey on Drug Use and Health (NSDUH).

# **DID YOU KNOW?**

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According to a 2015 National Survey on Drug Use and Health:

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Ages 12 or older 44%

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Ages 12 - 17 15.7%

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Ages 18 - 25 52.7%

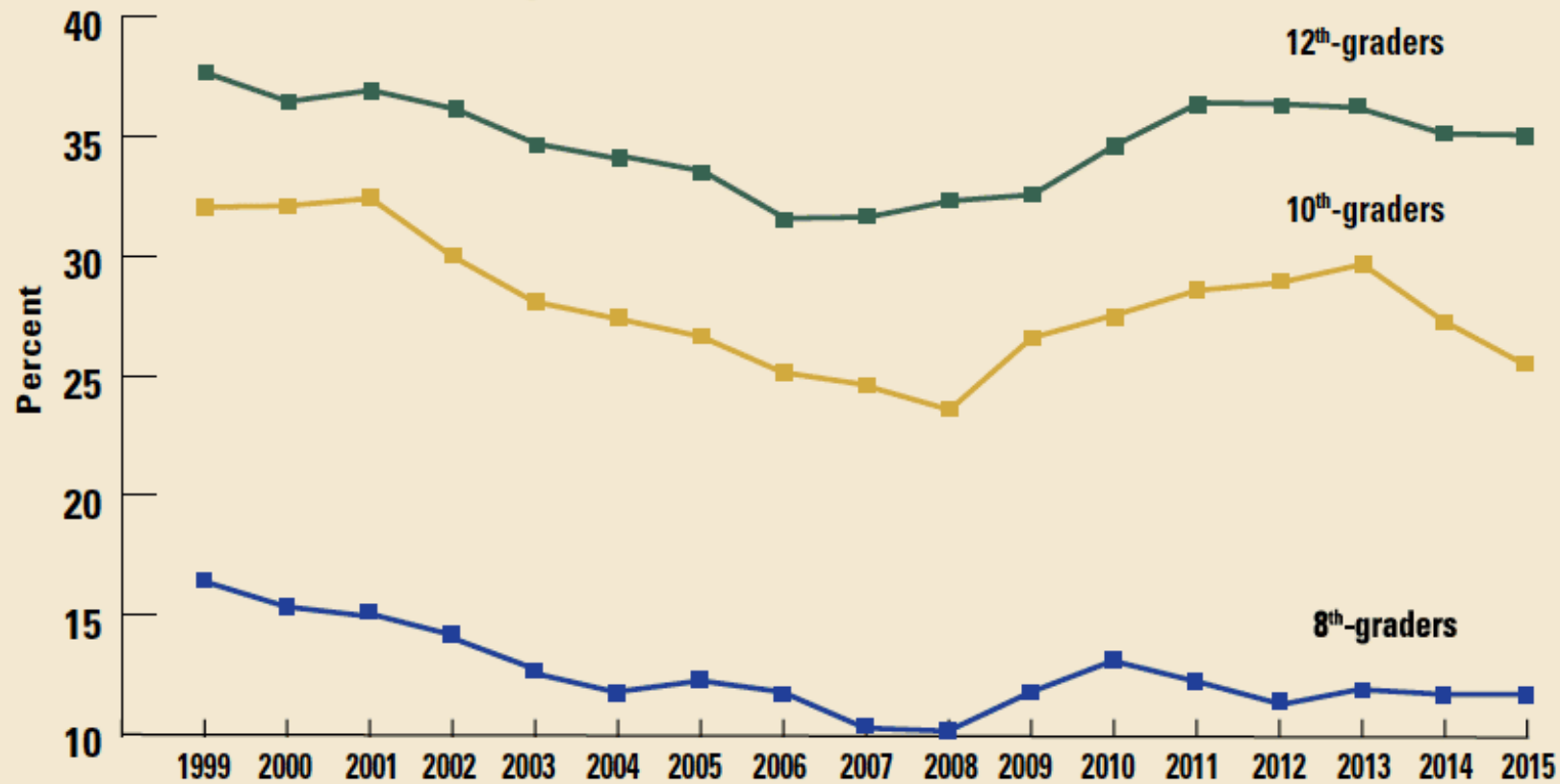
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Ages 26 or older 46%

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Have tried Marijuana at least once in their lifetime.

## Long-Term Trends in Annual\* Marijuana Use Among 8<sup>th</sup>-, 10<sup>th</sup>-, and 12<sup>th</sup>-Graders



*\*use in the past 12 months*

Source: University of Michigan, 2015 Monitoring the Future Survey.

## **DID YOU KNOW?**

Medical emergencies, when marijuana use was reported, have also increased. The Drug Abuse Warning Network (DAWN), a system for monitoring the health impact of drugs, estimated that in 2011, there were nearly 456,000 drug-related emergency department visits in the United States in which marijuana use was mentioned in the medical record (a 21 percent increase over 2009). About two-thirds of patients were male and 13 percent were between the ages of 12 and 17.

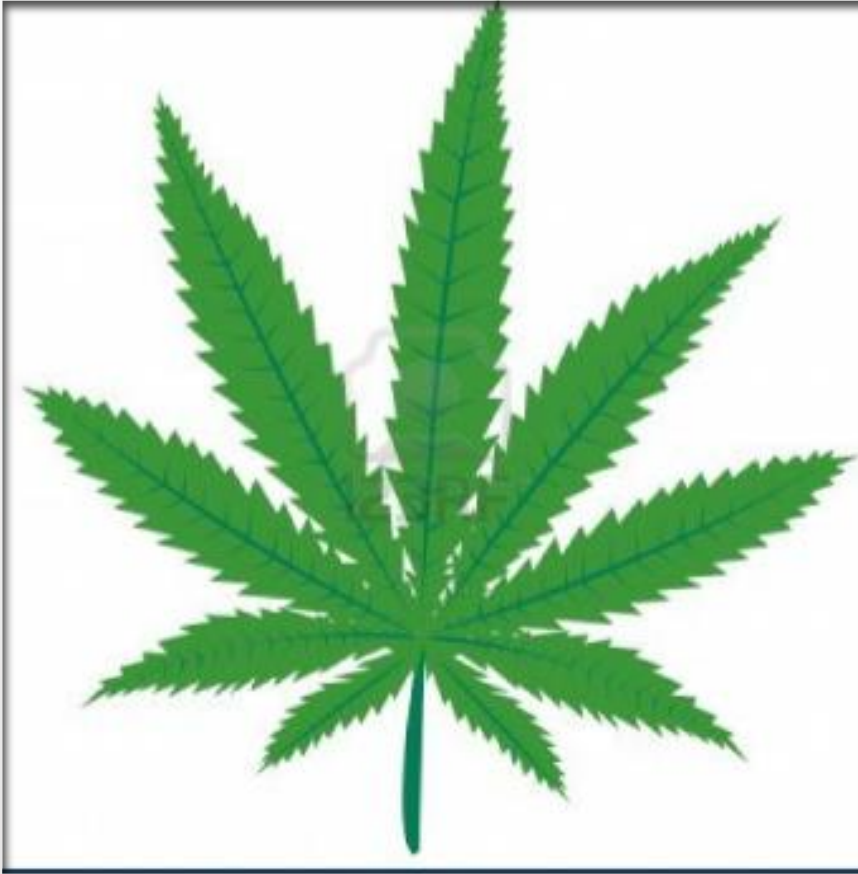




When Marijuana is smoked, its active ingredient, THC, travels throughout the body, including the brain, to produce its many effects. THC attaches to sites called Cannabinoid Receptors on nerve cells in the brain, affecting the way those cells work.

Cannabinoid receptors are abundant in parts of the brain that regulate movement, coordination, learning And memory, higher cognitive functions such as judgement and pleasure.

# What is MARIJUANA?

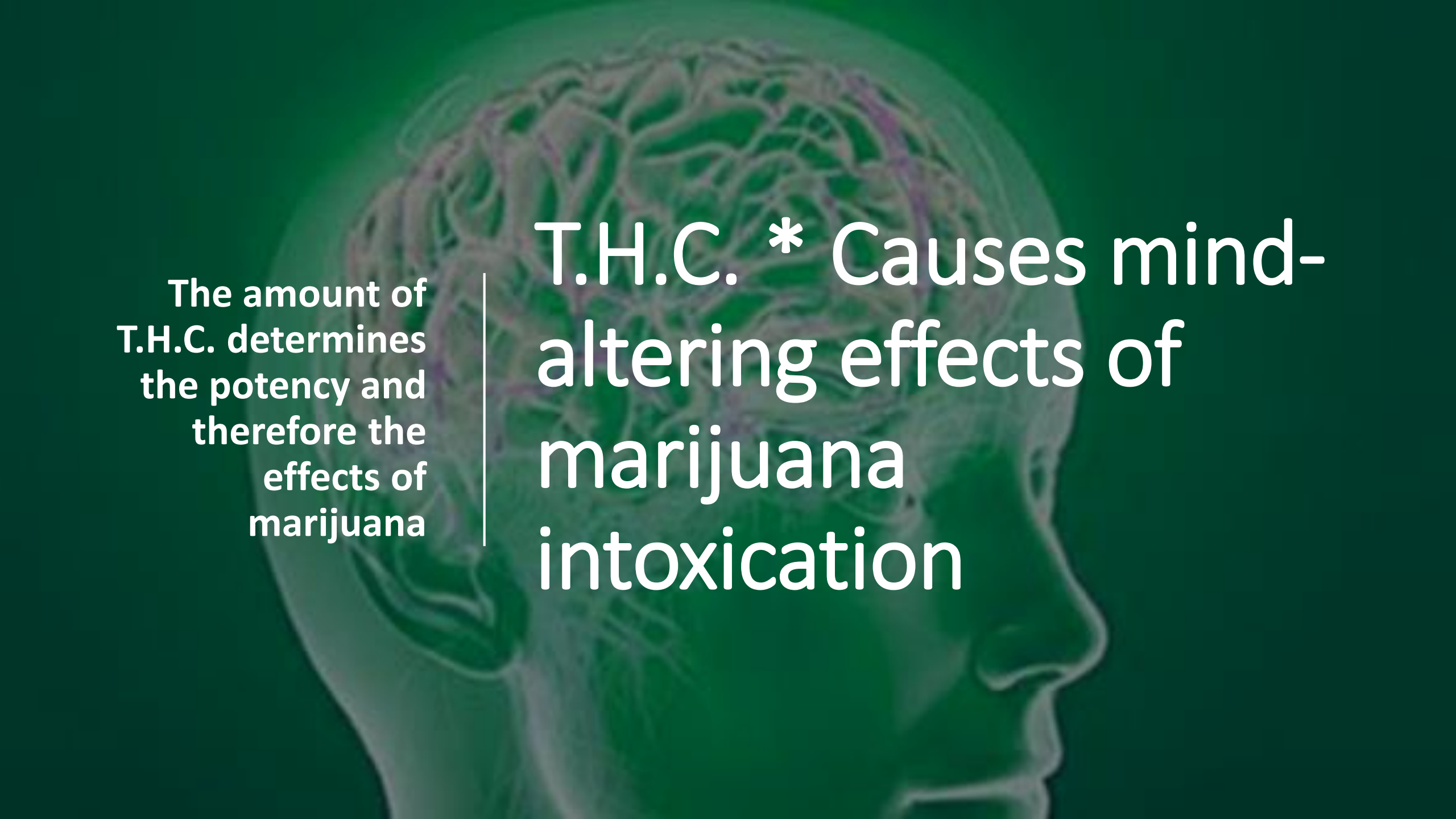


THE HEMP PLANT

**MJ is a greenish-gray mixture of dried and shredded leaves, stems, seeds and flowers of cannabis sativa**

The major active chemical in MARIJUANA is Delta-9 Tetra Hydro Cannabinol ( T.H.C. )





The amount of  
T.H.C. determines  
the potency and  
therefore the  
effects of  
marijuana

T.H.C. \* Causes mind-  
altering effects of  
marijuana  
intoxication

Hashish - pure resin  
removed from the  
surface of leaves and  
stems (7-14% T.H.C.)

Ganja - from the tops of  
plants with pistillate  
flowers - female plants  
(7-8% T.H.C.)

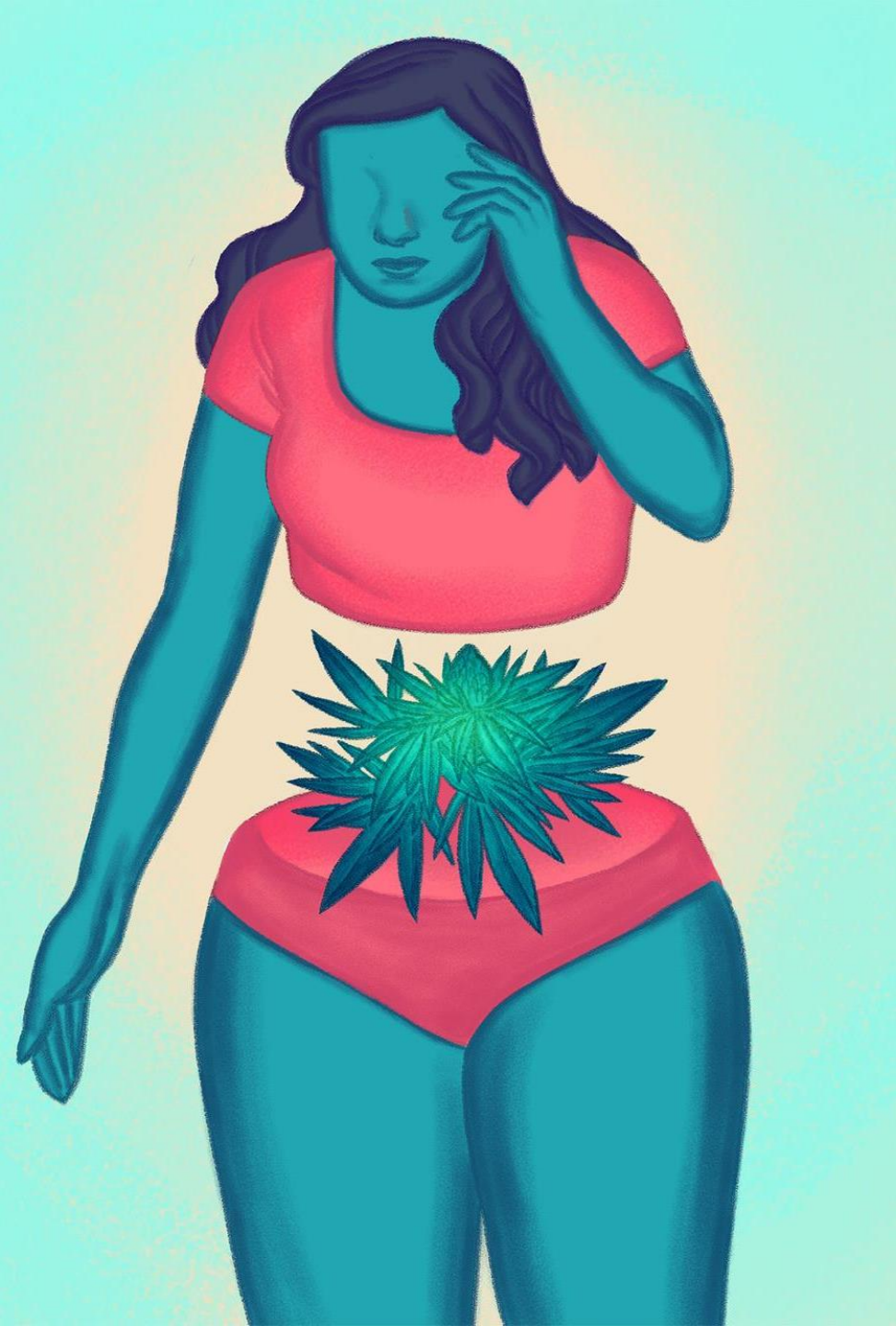
Sinsemilla - hybrid  
plant - without seeds  
(10-11% T.H.C.)

# Potent Preparations:

# When Marijuana is smoked:

- THC and other chemicals in the plant pass from the lungs into the bloodstream, which rapidly carries them throughout the body and to the brain. The user begins to experience their effects almost immediately.
- Effects may vary dramatically among different users, include heightened sensory perception (e.g., brighter colors), laughter, altered perception of time, and increased appetite.





# When Marijuana is Consumed:

If marijuana is consumed in foods or beverages, these effects are somewhat delayed—usually appearing after 30 minutes to 1 hour—because the drug must first pass through the digestive system.

Eating or drinking marijuana delivers significantly less THC into the bloodstream than smoking an equivalent amount of the plant. Because of the delayed effects, users may inadvertently consume more THC than they intend to.

# Other effects of Marijuana use:

Pleasant experiences with marijuana are by no means universal. Instead of relaxation and euphoria, The user may experience:

- Anxiety
- Fear
- Distrust
- Panic



These effects are more common when too much is taken, the marijuana has an unexpectedly high potency, or a user is inexperienced. People who have taken large doses of marijuana may experience an acute psychosis (which includes hallucinations, delusions, and a loss of the sense of personal identity.)

These unpleasant but temporary reactions are distinct from longer-lasting psychotic disorders, such as schizophrenia, that may be associated with the use of marijuana in vulnerable individuals.

You can start to build a tolerance to marijuana. Tolerance describes an adaptation by the brain to a drug in which higher doses of the drug are required to obtain the effect of the initial dose.



- Impaired short-term memory
- Impaired attention, judgment, and other cognitive functions
- Impaired coordination and balance
- Increased heart rate
- Anxiety, paranoia
- Psychosis (uncommon)

## Health consequences of Marijuana ACUTE (present during intoxication):

- PERSISTANT (lasting longer than intoxication)
- Impaired learning and coordination
- Sleep problems

# Health Consequences of Marijuana

Health consequences of  
Marijuana LONG-TERM  
(potentially permanent effects)

- Can lead to addiction
- Gateway drug? (altered reward system)
- Increases risk of chronic cough, bronchitis, emphysema
- Cognitive impairment including - memory, learning, and impulse control
- Potential reduction in IQ
- Difficulty making decisions
- Potentially increased risk of anxiety, depression, and amotivational syndrome
  - Amotivational syndrome is a psychological condition associated with diminished inspiration to participate in social situations and activities, with episodes of apathy caused by an external event, situation, substance (or lack of), relationship (or lack of), or other cause.

| FACT.

Workers that smoke marijuana are more likely to have problems on the job:

- Increased absences
- Tardiness
- Accidents
- Workers Comp Claims

# Absorption

When smoked, T.H.C. is rapidly absorbed into the blood and distributed first to the brain. Then, it is re-distributed to the rest of the body .

So, within 30 minutes, much is gone from the brain.





The Psychological and Cardiovascular effects occur together usually 5-10 minutes

The T.H.C. remaining in the blood has a half life of about 19 hours but metabolites are formed in the liver and have a half life of 50 hours

After 1 week, 25% to 30% of T.H.C. and its metabolites may remain in the body SINGLE USE

Complete Elimination of a large dose of T.H.C. and its metabolites may take 3-4 weeks! In some instances, even longer.

# Marijuana vs. Tobacco

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Marijuana smoke contains 50% to 70% more carcinogenic hydrocarbons than tobacco

Marijuana also produces high levels of an enzyme that converts certain hydrocarbons into their carcinogenic form. This may ultimately produce Cancer Cells.



**Marijuana  
Smokers  
have many  
of the same  
respiratory  
problems  
that  
tobacco  
users  
experience:**

Daily cough

Phlegm production

Acute chest illness

Risk of lung infections

Obstructed airways

# **Marijuana as medicine**

There are two FDA-approved, THC-based medications, dronabinol (Marinol®) and nabilone (Cesamet®), prescribed in pill form for the treatment of nausea in patients undergoing cancer chemotherapy and to stimulate appetite in patients with wasting syndrome due to AIDS.



Medications like these, which use purified chemicals derived from or based on those in the marijuana plant, are generally considered by researchers to be more promising therapeutically than use of the whole marijuana plant or its crude extracts.



Development of drugs from botanicals such as the marijuana plant poses numerous challenges. Botanicals may contain hundreds of unknown, active chemicals, and it can be difficult to develop a product with accurate and consistent doses of these chemicals.

Use of marijuana as medicine also poses other problems such as the adverse health effects of smoking and THC-induced cognitive impairment.





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An additional concern with "medical marijuana" is that little is known about the long-term impact of marijuana use by people with health- and/or age-related vulnerabilities to whom it is dispensed—such as older adults or people with cancer, AIDS, cardiovascular disease, multiple sclerosis, or other neurodegenerative diseases.



Further research will be needed to determine whether people whose health has been compromised by disease or its treatment (e.g., chemotherapy) are at greater risk for adverse health outcomes from marijuana use.



# Dronabinol



Dronabinol is useful for treating a variety of medical conditions including:

- Treatment of nausea in cancer chemotherapy patients
- To stimulate appetite in patients with wasting due to AIDS
- For pain and spasticity due to multiple sclerosis
- Treatment for glaucoma

## **Legalization of Medical marijuana in the US**

Here are states with medical marijuana (as of November 2016):

Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington



# PROS OF LEGALIZATION

Boost in Revenue

More Effective  
Criminal Justice  
and Law  
Enforcement

Less Money to  
Support Organized  
Crime.

Safety Controls

Wider Access for  
Medicinal Use

Medical Benefits  
for Cancer Patients

Personal Freedom

Reduced Street  
Justice Related to  
Drug Disputes

Loss of Business for  
Drug Dealers  
(Including  
Terrorists).

# CONS OF LEGALIZATION

Addictive nature

Altered perception

Gateway Drug Status (opens the individual to try other drugs)

Increase in Stoned Driving and Related Cases

Increased Chances of the Drug Falling into the Hands of Children

Danger of Second-Hand Smoke to Bystanders

Damage to the Brain

Poor Lung Health

Risk of Getting Heart Disease

Poor Mental Health



The image features a dark gray background with three overlapping circles in two shades of blue. A horizontal white band runs across the middle of the image, containing the text "YOU BE THE JUDGE...".

YOU BE THE JUDGE...



If you or someone you know is suffering from substance use or mental health issues, reach out to someone for assistance.

-Your EAP can help—

[www.alliedtrades-online.com](http://www.alliedtrades-online.com)

# REFERENCES

<http://www.drugabuse.gov/publications/research-reports/marijuana>

<https://www.nlm.nih.gov/medlineplus/druginfo/meds/a607054.html>

<http://mic.com/articles/126303/where-is-marijuana-legal-in-the-united-states-list-of-recreational-and-medicinal-states#.SHOXzZd8r>

<http://nyln.org/19-primary-pros-and-cons-of-legalizing-weed>

[https://en.wikipedia.org/wiki/Amotivational syndrome](https://en.wikipedia.org/wiki/Amotivational_syndrome)

Video Resource:

[www.youtube.com/watch?v=t6FWHNNFzww&sns=em](http://www.youtube.com/watch?v=t6FWHNNFzww&sns=em)

A new study finds that heavy marijuana use by adults could have long-term effects on the brain. What kinds of effects? WSJ's Jason Bellini has #TheShortAnswer.