



# Medical Marijuana for the Treatment of Opioid Use Disorder?



Donna Eget, DO



CDC:  
Treatment of  
OUD

?

Is THC a  
recommended  
treatment for OUD?

---

## CDC: Treatment of OUD

Counseling

Medication

Medication Assisted Treatment

Inpatient Treatment

Medications for treatment of  
Opioid Use Disorder:

METHADONE

BUPRENORPHINE

NALTREXONE

---

# NO!

THC is not listed as  
an approved  
medication for the  
treatment of OUD!

? State approval versus  
federal approval

---

# History of Medical Marijuana in Pennsylvania

April 17, 2016

Governor Tom Wolf

Senate Bill 3

17 Medical Conditions

---

ALS  
AUTISM  
CANCER  
CROHN'S DISEASE  
DAMAGE TO CNS WITH SPASTICITY  
EPILEPSY  
GLAUCOMA  
HUNTINGTON'S DISEASE  
IBD  
INTRACTABLE SEIZURES  
MS  
NEUROPATHY  
PARKINSON'S DISEASE  
POSITIVE FOR HIV  
PTSD  
SEVERE INTRACTABLE PAIN  
SICKLE CELL DISEASE

Additional six diagnoses: total of 23

Anxiety

Dyskinetic & Spastic Movement  
Disorders

Neurodegenerative Diseases

***Opioid Use Disorder***

Terminal Illness

Tourette's

---

ANXIETY

CANCER

EPILEPSY

GLAUCOMA

NEUROPATHY

POSITIVE FOR HIV

SEVERE INTRACTABLE PAIN

SICKLE CELL DISEASE

What defines a treatment?

What are the goals of treatment?

In the case of THC, what are the benefits of THC in each of these diseases?

---

What benefits  
might THC  
have in OUD?





# THC Receptors: cannabinoid CB1R and CB2R

## CB1R is CNS

CB2R is found in lower amounts  
receptors also found in GI,  
Immune, Reproductive cells

Pleasure

Memory

Concentration

Movement

Coordination

Sensory and Time perception

---

# Marijuana's Effects on the Brain

## HYPOTHALAMUS

Controls appetite, hormonal levels and sexual behavior

## BASAL GANGLIA

Involved in motor control and planning, as well as the initiation and termination of action

## VENTRAL STRIATUM

Involved in the prediction and feeling of reward

## AMYGDALA

Responsible for anxiety, emotion and fear

## BRAIN STEM AND SPINAL CORD

Important in the vomiting reflex and the sensation of pain

## NEOCORTEX

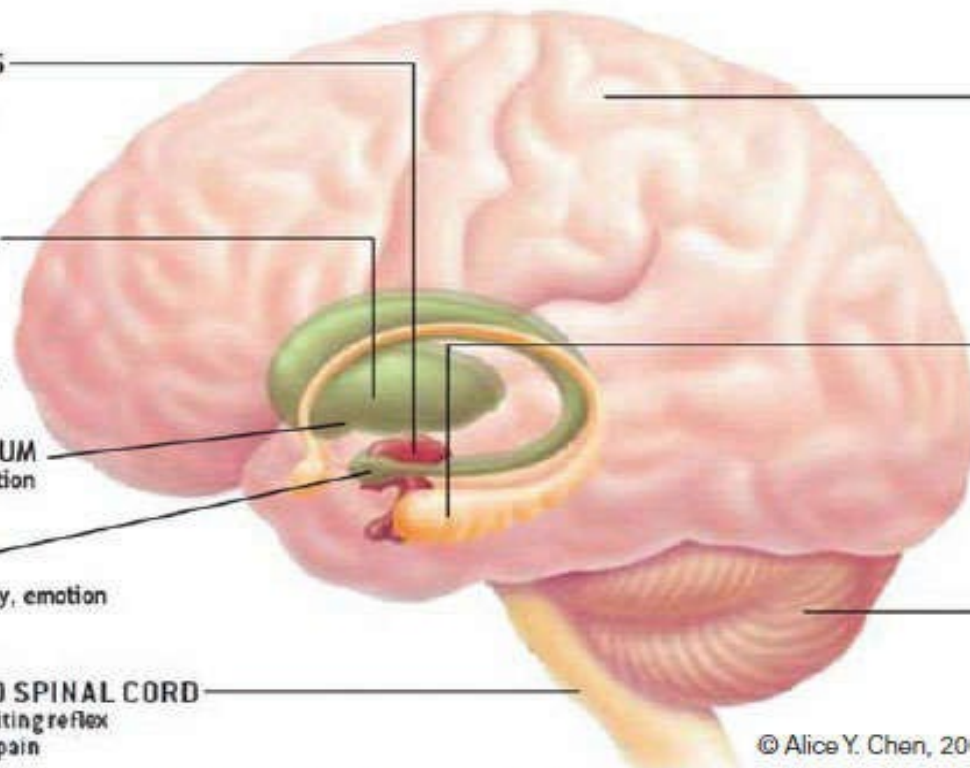
Responsible for higher cognitive functions and the integration of sensory information

## HIPPOCAMPUS

Important for memory and the learning of facts, sequences and places

## CEREBELLUM

Center for motor control and coordination



© Alice Y. Chen, 2004. Adapted from *Scientific American*.

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 judgment, and pleasure.

ANXIETY

CANCER

EPILEPSY

GLAUCOMA

NEUROPATHY

POSITIVE FOR HIV

SEVERE INTRACTABLE PAIN

SICKLE CELL DISEASE

Decreased:

\* number or duration of panic attacks

\* severity of pain

\* number of seizures

\* intraocular pressure

Increased:

\* appetite

\* quality of life

\* ADLS (activities of daily living)

# Internet Search:

THC for the treatment  
of opioid use disorder

A handful of results:  
Pa.gov “Prescription opioids are risky”

Ad sponsored by Long-acting injectable  
buprenorphine

Veriheal “15 minute doctor  
consultations”

Reset: website for digital therapeutics

Spotlight PA “Patients swear by  
cannabis”

Scholarly Articles  
NIH and others

# Internet Search:

Emerging Evidence for  
Cannabis' Role in  
Opioid Use Disorder

9/1/2018 online

Beth Wiese and  
Adrienne Wilson-Poe

Shortcomings of current  
treatment

Relative safety of cannabis

Close proximity of cannabis  
and opioid receptors in the  
brain

Recommend further study!

---

# Internet Search:

Cannabidiol for the reduction of cue-induced craving and anxiety in drug-abstinent individuals with heroin use disorder: a double-blind randomized placebo-controlled trial

American Journal of Psychiatry, 2019  
Yasmin L. Hurd, et al.

CBD administration

Acute (1,2 and 24 hours)

Relative safety of cannabis,

Short term (3 days)

Protracted (7 days)

Reduction of cravings and anxiety produced by drug cues

Recommend further study!

---

# Internet Search:

Therapeutic potential of  
opioid/cannabinoid combinations in  
humans: Review of the Evidence

2020 European  
Neuropsychopharmacology

Shanna Babalonis and Sharon Walsh

Review of literature

Conclusion: “despite anecdotal and correlational reports suggesting a benefit of cannabis on reducing opioid overdose, there is no strong data supporting this contention...data do not support the role of cannabinoids for opioid replacement or opioid-sparing effects when treating OUD...”

What are the goals of MAT?

Ultimate Question:

SAMHSA,  
Medication-Assisted  
Treatment

1. Improve Patient Survival
  2. Increase Retention in Treatment
  3. Decrease illicit opioid use and other criminal activity among people with SUD
  4. Increase patients' ability to gain and maintain employment
  5. Improve birth outcomes among women who have SUD and are pregnant
-



# Conclusions:

Some patient have reported substituting THC for opioids

THC may help reduce anxiety which indirectly reduces opioid use

THC may help reduce pain which indirectly reduces opioid use

THC may have other unstudied benefits with relation to OUD

If patients didn't use THC, they might use higher doses of opioids

1. Improve Patient Survival
2. Increase Retention in Treatment
3. Decrease illicit opioid use and other criminal activity among people with SUD
4. Increase patients' ability to gain and maintain employment
5. Improve birth outcomes among women who have SUD and are pregnant

Some patient have reported substituting THC for opioids

THC may help reduce anxiety which indirectly reduces opioid use

THC may help reduce pain which indirectly reduces opioid use

THC may have other unstudied benefits with relation to OUD

If patients didn't use THC, they might use higher doses of opioids

# Patient thoughts:

Does THC help with  
opioid use?

Yes!

Absolutely!

No doubt!

---

Then why haven't  
you cut back on  
opioid use?

What are your thoughts?

---

Then why haven't  
you cut back on  
opioid use?

Well...

I'd be worse without THC

Addicts need something...

---

# Gateway Drug:

THC was once labeled the “Gateway drug” and shown to increase response to other drugs and increase use of other drugs and ETOH

Current thinking is that THC is the first step for at risk people...

But if THC helps OUD, why do people progress to opioids?

---

# DOES THC USE REDUCE OPIOID USE IN PATIENTS WITH OUD?

No.

Or, at least, not very well.

140 patients using Buprenorphine

60 using THC

4 have used THC to reduce dose of  
Buprenorphine

Eventually...

---

1. Improve Patient Survival
2. Increase Retention in Treatment
3. Decrease illicit opioid use and other criminal activity among people with SUD
4. Increase patients' ability to gain and maintain employment
5. Improve birth outcomes among women who have SUD and are pregnant

Does THC Meet Goals of Treatment?

1. Intuitively, Yes
2. Intuitively, Yes
3. Absolutely Yes
4. Absolutely Yes
5. No

CONCLUSIONS:

Does THC help OUD?

I think so!



I THINK SO

What do you  
think?

---