



Cincinnati Children's Hospital Medical Center  
SBIRT Lecture Series

# Cannabis Use throughout the Lifespan: A Review of Current Research

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# Top Considerations for Cannabis Use & Mental Health throughout the Lifespan

# THC Potency & Methods of Use



# Cannabis Potency

1960's

Early 1980's

Now Averaging

2-3%

4-5%

19.6%

**MANY STRAINS 23-33%**



# Potency in Various Forms

Flower



Concentrates



Edibles



THC levels up to **97%**.

# Changes in Perceptions & Patterns of Use



# Perception of Harmfulness

8<sup>th</sup> Graders

69.8%

10<sup>th</sup> Graders

59.5%

12<sup>th</sup> Graders

52.4%

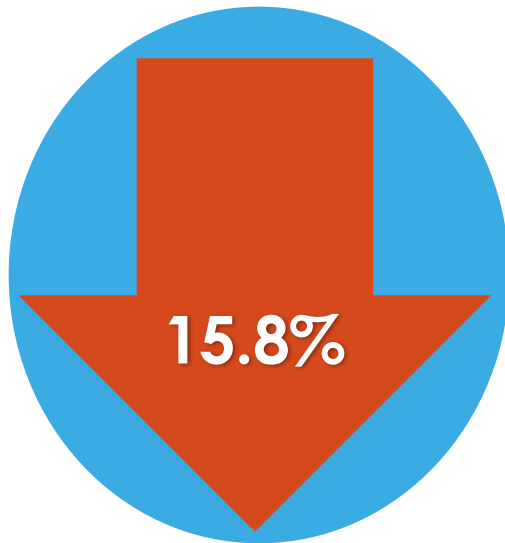
2009

University of Michigan, 2009 Monitoring the Future Study

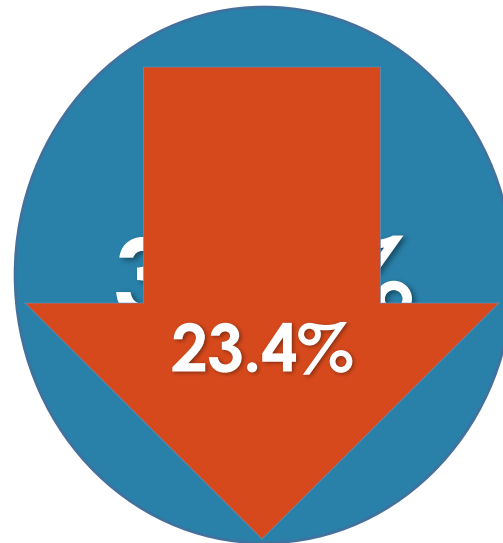


# Perception of Harmfulness

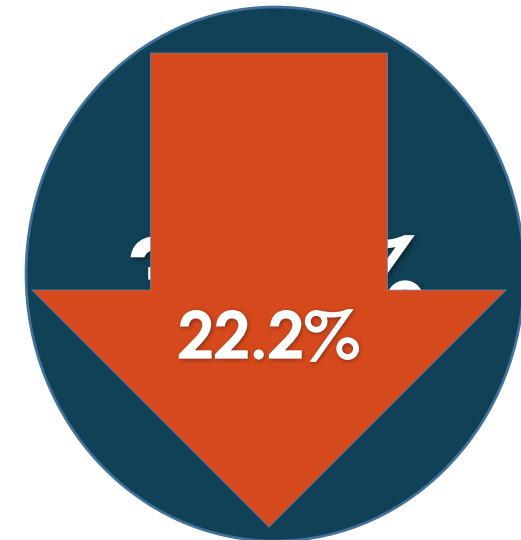
8<sup>th</sup> Graders



10<sup>th</sup> Graders



12<sup>th</sup> Graders



**2019 - 20**

*University of Michigan, 2020 Monitoring the Future Study*





# Perceptions of Risk Impact Patterns of Use

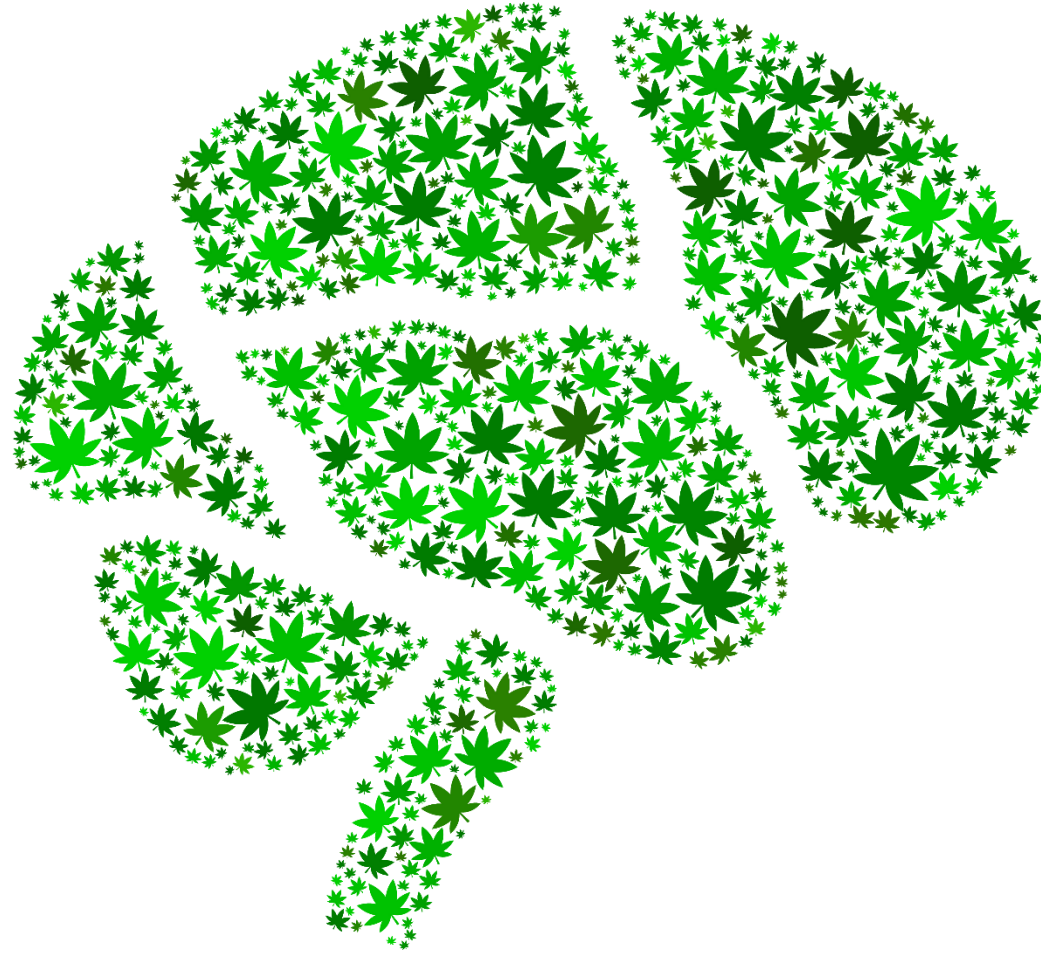
Among people aged 12 or older in 2020, **17.9% (or about 49.6 million people)** reported using cannabis in the past 12 months.

According to the most recent Monitoring the Future Survey, **college students are using cannabis at record high rates**, and alcohol at record low rates.

# How does Cannabis Use impact the Brain?



Impact on



The Brain



# How does Cannabis Affect the Brain?



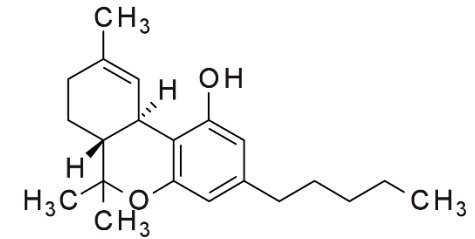
In 1988 Discovered Both interact  
with Cannabinoid Brain Receptors

## Mechanisms of Action

### THC

*Delta-9-  
tetrahydrocannabinol*

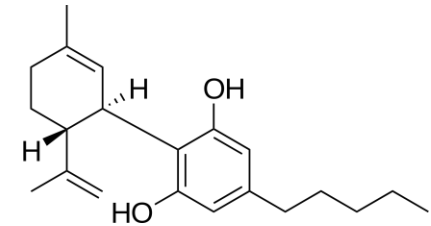
*Psychoactive ingredient*



### CBD

*Cannabidiol*

*Much less psychoactive ingredient*



# Endocannabinoid System

Regulates activity  
of  
most  
neurotransmitters.





# Cannabinoid Receptors Are Located Throughout the Brain and Regulate:



- Brain Development
- Memory & Cognition
- Motivational Systems & Reward
- Appetite
- Immunological Function
- Reproduction
- Movement Coordination
- Pain Regulation & Analgesia





How can Cannabis Use impact the development of substance use disorders?



# Cannabis & Substance Use Disorders

Approximately 3 out of 10 cannabis users will meet the criteria for cannabis use disorder

1 in 6 who start in adolescence will struggle with a cannabis use disorder

Adolescents are 2-4 times as likely to have developed a use disorder within 2 years of use

Most studies conducted on the impact of cannabis use rely upon low-potency THC products

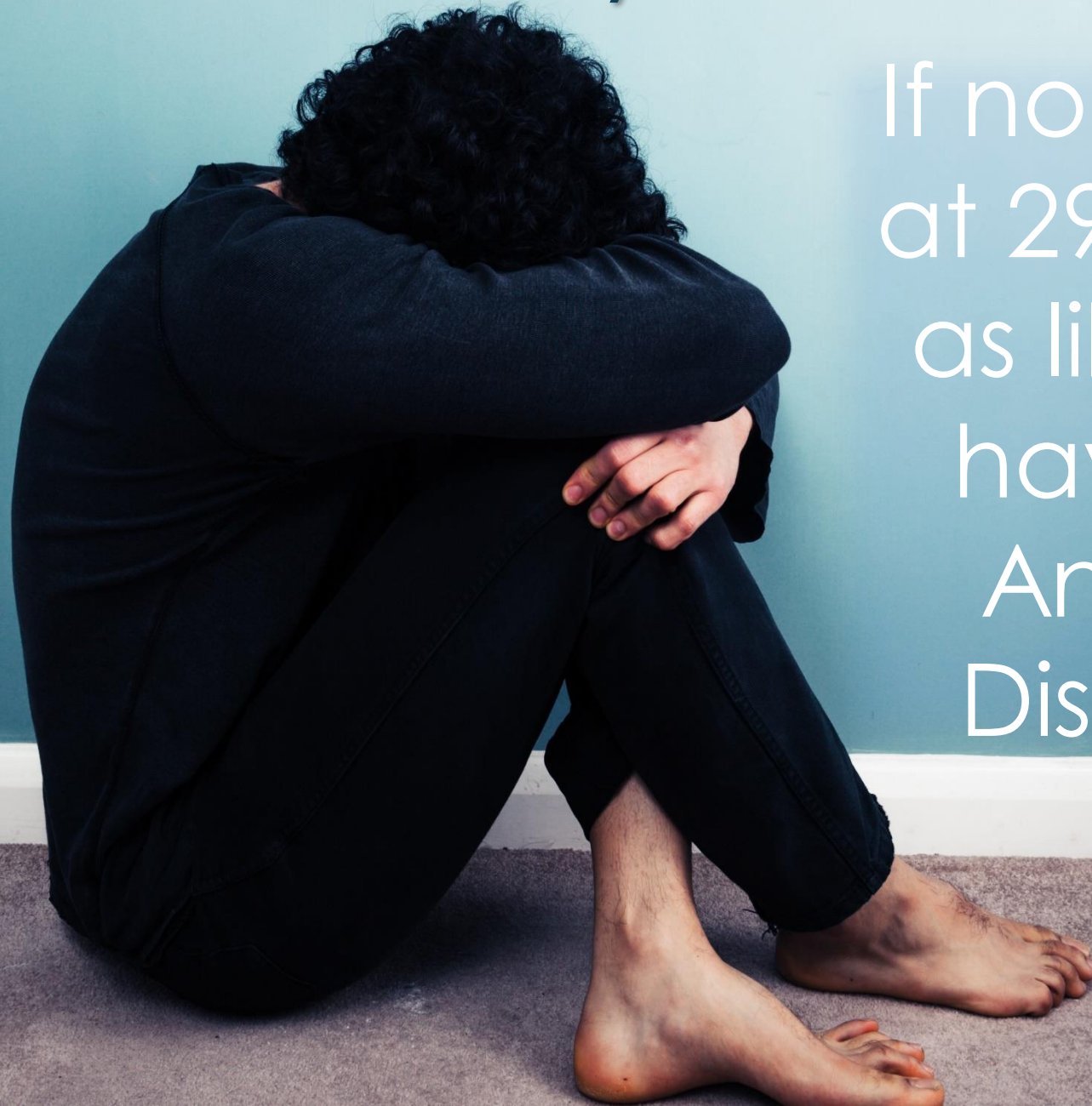
# How does Cannabis Use impact Mental Health & Wellness



# Anxiety

Adolescent  
weekly users  
are 2.5 x as  
likely to have  
Anxiety  
Disorder at  
age 29

If non-using  
at 29, still 2x  
as likely to  
have an  
Anxiety  
Disorder





A woman with dark hair tied back, wearing a light-colored bathrobe, is shown in profile from the chest up. She is looking out a window, with her hands clasped near her chin. The lighting is soft and natural, coming from the window. The background is a plain, light-colored wall.

# Cannabis Use & Depression

**Cannabis users who started prior to age 18 were:**

- **1.4x more likely to experience depression**
- **1.5x more likely to experience suicidal thoughts**
- **3.46x more likely to attempt suicide than peers who did not use prior to age 18**

*(Gobbi G, Atkin T, Zytynski T, et al., 2019)*



# Depression and Suicide

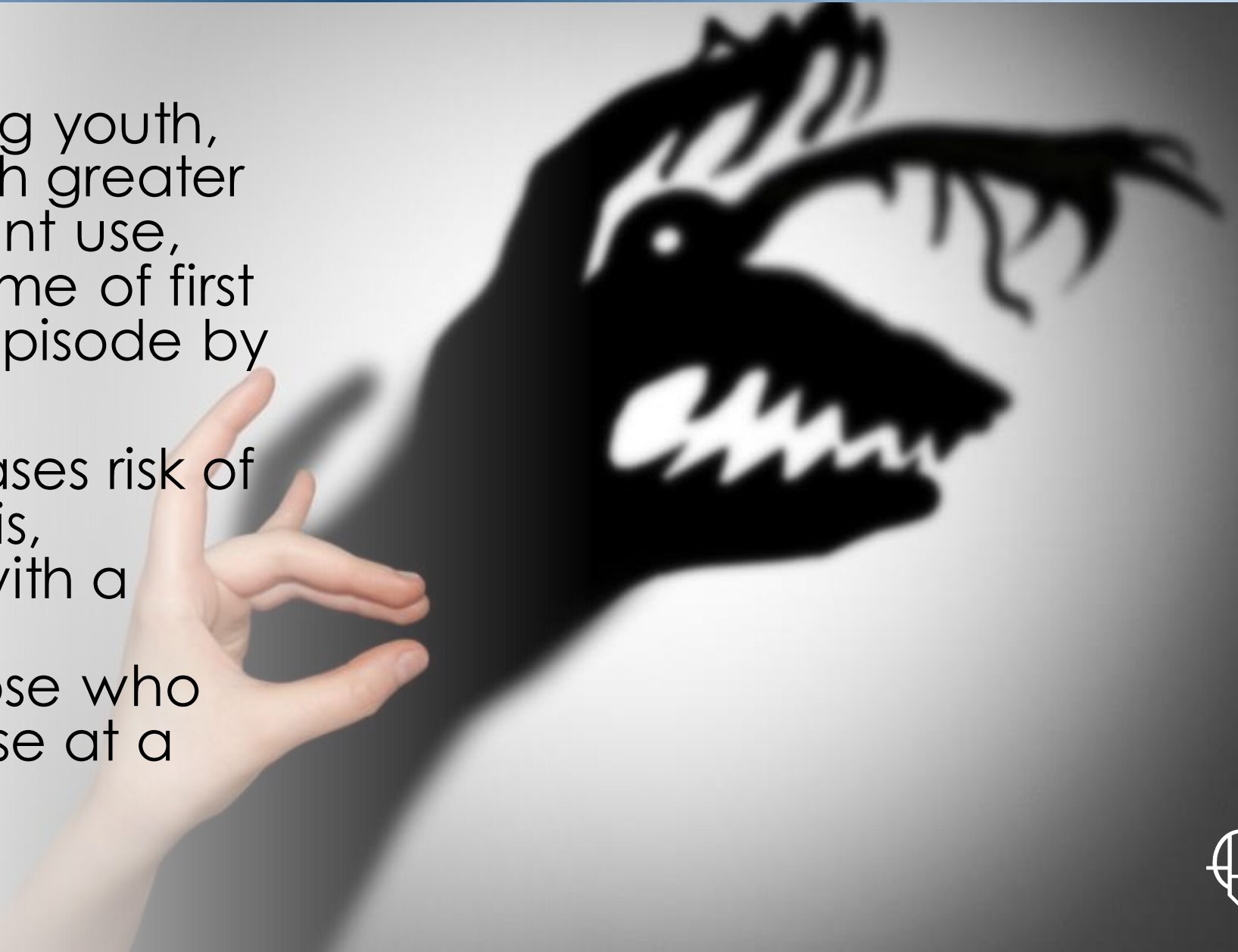
- Individuals with depression are at increased risk of cannabis use, with a particularly strong increase in daily or near-daily cannabis use.
- Early and frequent cannabis use are associated with an increased likelihood of Major Depressive Disorder as well as suicidal thoughts and behaviors.
- For older adults & those in late middle age, those who used marijuana and other drugs had higher odds of experiencing suicidal thoughts than non-users.





## Impact on Psychosis

- Cannabis use among youth, when combined with greater potency and frequent use, may advance the time of first onset of psychotic episode by 2 to 6 years.
- Cannabis use increases risk of developing psychosis, especially in those with a preexisting genetic vulnerability and those who initiated cannabis use at a young age.





What can we do to address these  
risks? The role of SBIRT



A woman with dark hair, wearing a pink button-down shirt, is looking attentively at a client. The client has blonde hair tied in a ponytail and is wearing a blue and red plaid shirt. The client is holding their head in their hand, suggesting a moment of reflection or stress. The woman is holding a pen and a notepad, ready to take notes. The background is a blurred office or clinical setting.

Listen and learn more about your client's beliefs and cannabis use behaviors.



Communicate **empathy**, even if  
you disagree.



A young man with short dark hair, wearing a bright yellow hoodie over a grey shirt, is sitting on a couch. He is looking towards the left of the frame with a warm, attentive smile. His hands are clasped together in his lap. In the foreground, the back of a person's head and shoulders are visible, out of focus, suggesting a conversation. The background is a softly lit room with a bookshelf and a framed picture on the wall.

Evaluate their choices in the  
context of their goals & values.

# Evidence-Based Practice: Sharing Information

**Ask what your client knows about the topic**

**Ask permission to share what you know**

**Provide the information (the 30 second version)**

**Ask your client what they think about the information that you shared**



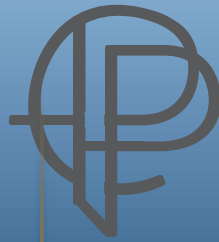




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Thank you for joining us!



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