

The Real Deal: Connection Between Vaping, Cannabis Use, and Mental Health

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**Transforming
Mental Health**

What's the problem?

3.6 million US Youth

1 in 5

High School Students



1 in 20

**Middle School
Students**



Making the News

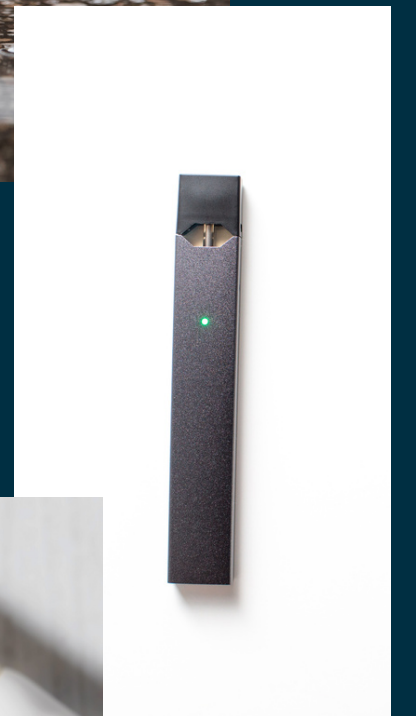


Fast Facts

- **Most e-cigarettes contain nicotine**
- **Nicotine is highly addictive and can harm adolescent brain development, which continues into the early to mid-20s**
- **E-cigarettes can contain other harmful substances besides nicotine**
- **Young people who use e-cigarettes may be more likely to smoke cigarettes in the future**

What are e-cigarettes?

E-cigarettes are electronic devices that heat a liquid and produce an aerosol, or mix of small particles in the air.



PROP 31

©CBS13 NEWS

38% OF EXPECTED VOTES

PROPOSITION 31

Prohibit the Retail Sale of Certain Flavored Tobacco Products.

YES

63%

3,260,817

NO

37%

1,952,981



HEADLINES TION WINS WORLD RECORD \$2.04 BILLION POWERBALL JACKPOT

4:34 44°

What is Vaping?

use of an e-cigarette is referred to as "vaping"



Vaping and e-cigarettes does NOT = cannabis use

The e-cigarette aerosol that users breathe from the device and exhale can contain harmful and potentially harmful substances, including:

- Nicotine
- Ultrafine particles that can be inhaled deep into the lungs
- Flavorings such as diacetyl, a chemical linked to a serious lung disease
- Volatile organic compounds
- Cancer-causing chemicals
- Heavy metals such as nickel, tin, and lead
- Labelling is not always accurate when they say nicotine free

How are youth getting it?

- **Social media marketplace**
- **unknown sources, risk of contamination and counterfeit products**



Who's more at risk to use?

- Non-Hispanic American Indian or Alaska Native (AI/AN) students
- Those identifying as lesbian, gay or bisexual
- Those identifying as transgender
- Those reporting severe symptoms of psychological distress
- Those with low family affluence
- Those with low academic achievement

Isn't Vaping Water Vapor Harmless?



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Fact: Most e-cigarettes contain nicotine

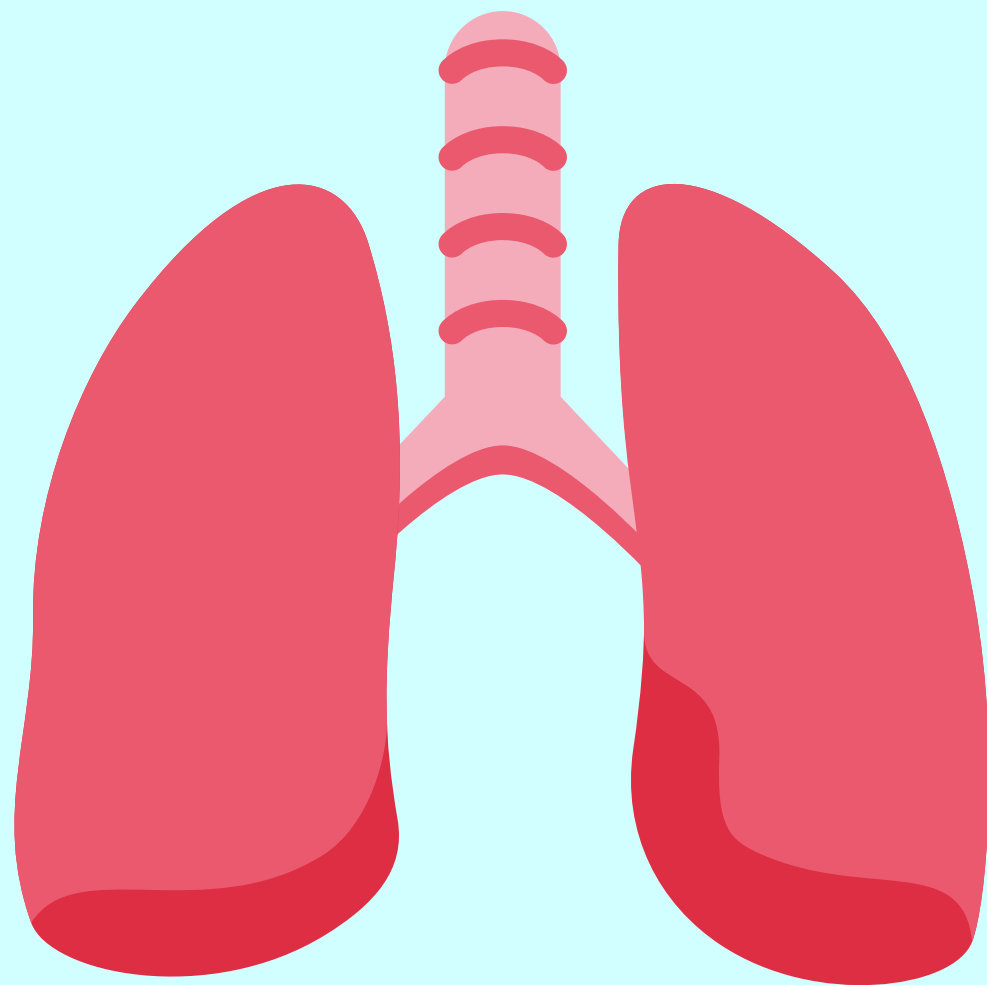
- **A CDC study found that 99% of the e-cigarettes sold in assessed venues in the United States contained nicotine.**
- **Some vape product labels do not disclose that they contain nicotine, and some vape liquids marketed as containing 0% nicotine have been found to contain nicotine.**

Hospitalizations Related to Vaping

- Lung disease
- Burns
- Asthma



Lung Injury associated with Vaping/E-cigarettes



- In 2019 there was an outbreak of lung injury and deaths related to vaping, e-cigarette use
- The rates have declined due to removal of Vitamin E acetate from e-cigarettes but cases still occur
- Risk is highest with unregulated products and youth should not be using products they are purchasing from unknown sources due to this risk

Why is Nicotine Unsafe for Youth?



- Amount of nicotine is higher than cigarettes
- Addictive substance
- Nicotine withdrawal
- Effect on BP, HR
- Nicotine poisoning

Is there a relationship between nicotine use and mental health?

- The most common reason U.S. middle and high school students give for trying an e-cigarette is “a friend used them.”
- The most common reason youth give for continuing to use e-cigarettes is “I am feeling anxious, stressed, or depressed.”

Nicotine Withdrawal

- irritability, restlessness, feeling anxious or depressed, trouble sleeping, problems concentrating, and craving nicotine.



Developing Brain



Brains develop until the age of 25 so the use of substances in youth can have an impact on brain development

**Children who
vape are more
likely to smoke**



Is vaping safer than smoking cigarettes?

- E-cigarettes expose users to fewer harmful chemicals than burned cigarettes.
- But burned cigarettes are very dangerous, killing half of all people who smoke long-term.
- The use of any tobacco product, including e-cigarettes, is unsafe for young people.

Does vaping help youth quit smoking?



There are other nicotine replacement options available
and talking to your pediatrician is a great place to start



Cannabis



What is Cannabis?

Cannabis refers to a group of three plants with psychoactive properties, known as Cannabis sativa, Cannabis indica, and Cannabis ruderalis.



Cannabis is made up of more than 120 components, which are known as cannabinoids.

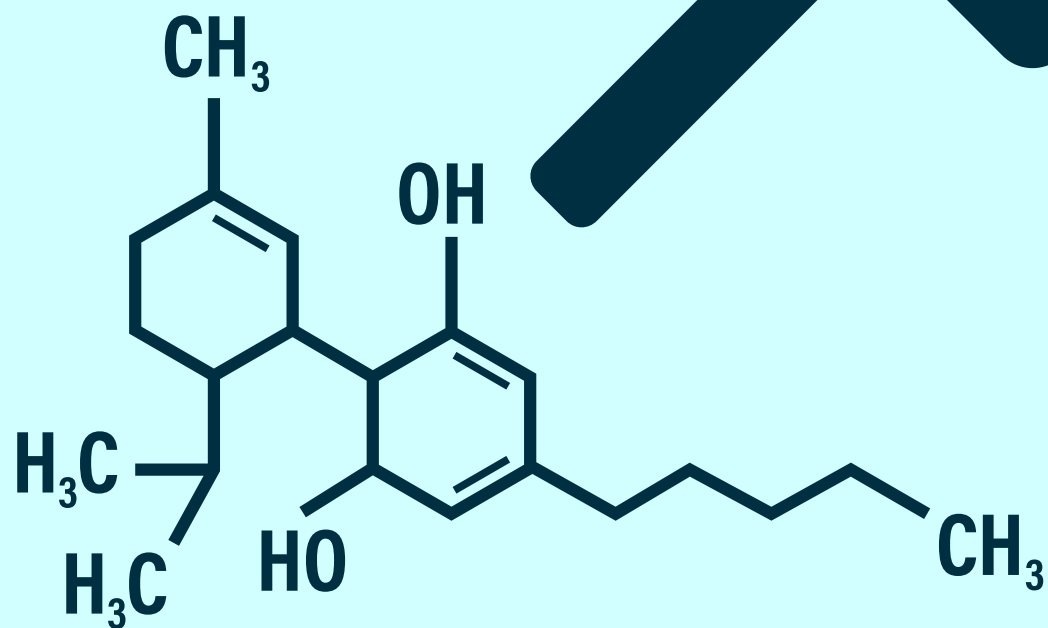
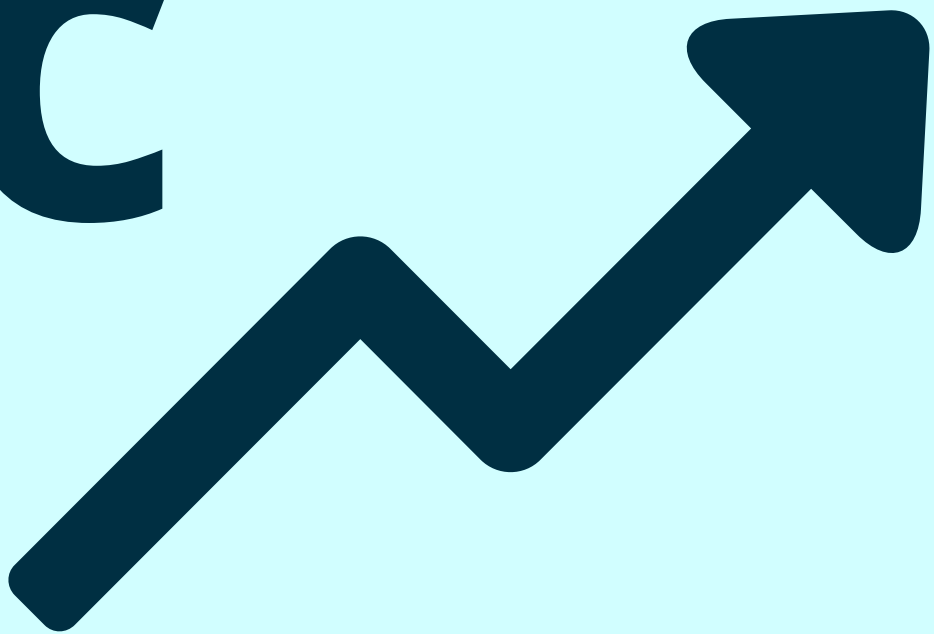
THC-the main psychoactive compound in cannabis
CBD - psychoactive but not responsible for the "high"

Cannabis

Cannabis (marijuana, weed, pot, bud, green, herb or flower), hash, extracts (honey oil, phoenix tears, shatter), edibles

Cannabis Over the Years

THC



420

Shatter



Sparking Up

Dabbing

Who's using?

Female students, LGBTQ+ students, were more likely than their peers to engage in every substance use behavior than their peers
Females are using more cannabis and vaping than Males .

YBRS 2021 Results CDC

How to Recognize Intoxication

- Red eyes
- Dry mouth
- Giddiness
- Highly sensitive to sight and sound
- increased appetite
- Altered perception
 - time and events

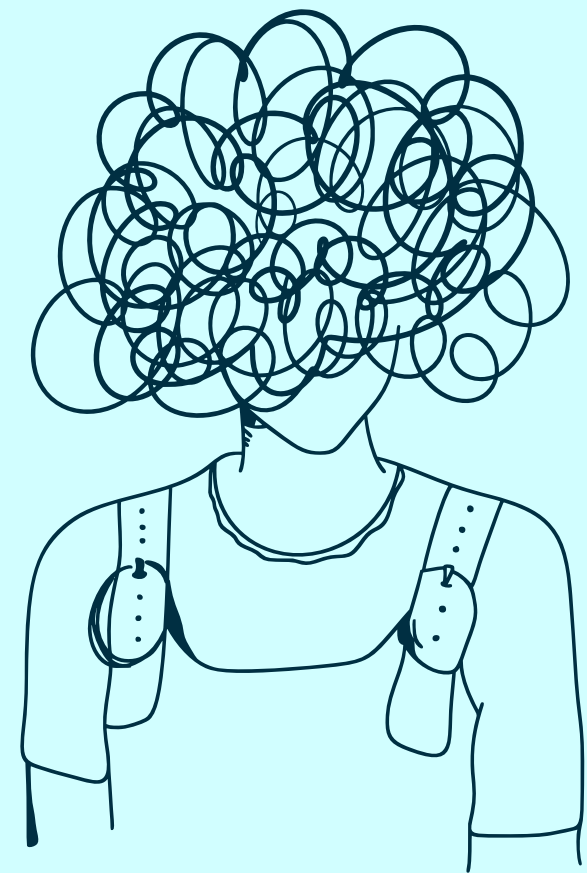


- Coordination issues
- Delayed reaction time
- Nausea
- Lethargy
- Anxiety
- Increased heart rate
- Decreased blood pressure
- Paranoia



Short Term Effects of Use

- School difficulties
- Problems with memory and concentration
- Increased aggression
- Car accidents
- Use of other drugs or alcohol
- Risky sexual behaviors
- Worsening of underlying mental health conditions including mood changes and suicidal thinking
- Increased risk of psychosis
- Interference with prescribed medication

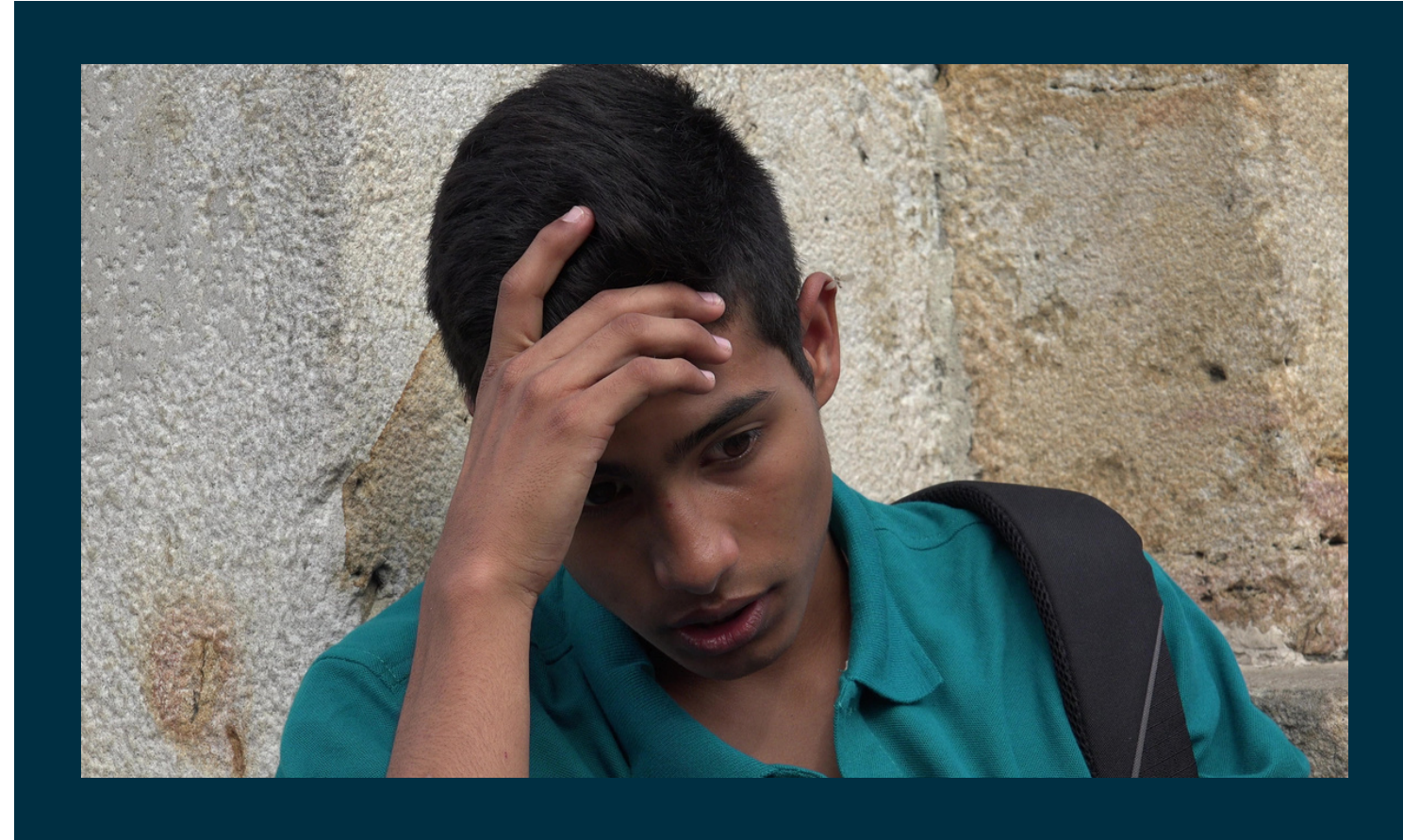


Long term effects

- Cannabis Use Disorder
- The same breathing problems as smoking cigarettes (coughing, wheezing, trouble with physical activity, and lung cancer)
- Decreased motivation or interest which can lead to decline in academic or occupational performance
- Lower intelligence
- Mental health problems, such as schizophrenia, depression, anxiety, anger, irritability, moodiness, and risk of suicide

Impact on learning

- **Difficulty thinking and problem-solving**
- **Problems with memory and learning**
- **Reduced coordination**
- **Difficulty maintaining attention**
- **Problems with school and social life**

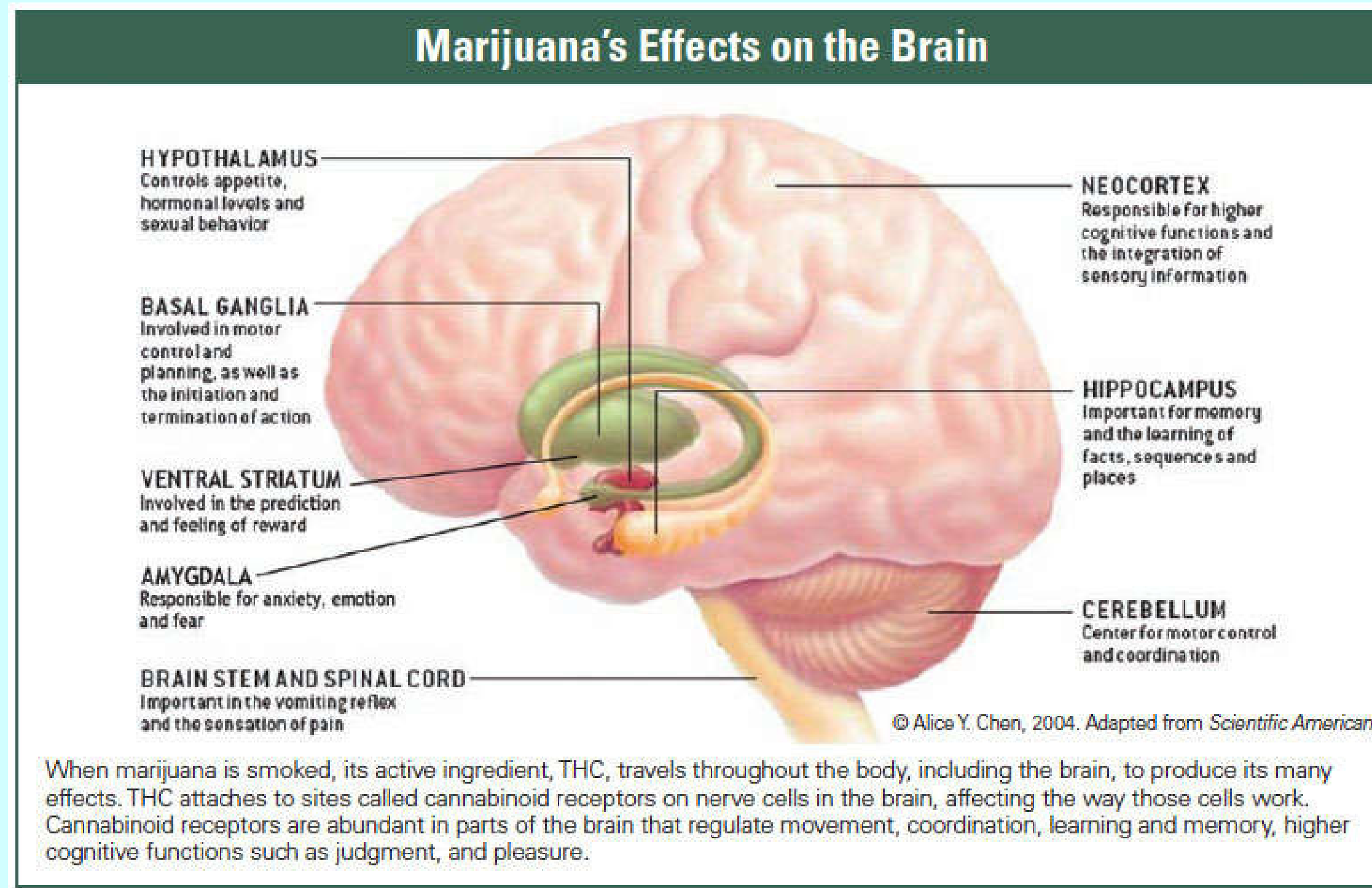


Compared with teens who do not use marijuana, teens who use marijuana are more likely to quit high school or not get a college degree

Impact on the BRAIN

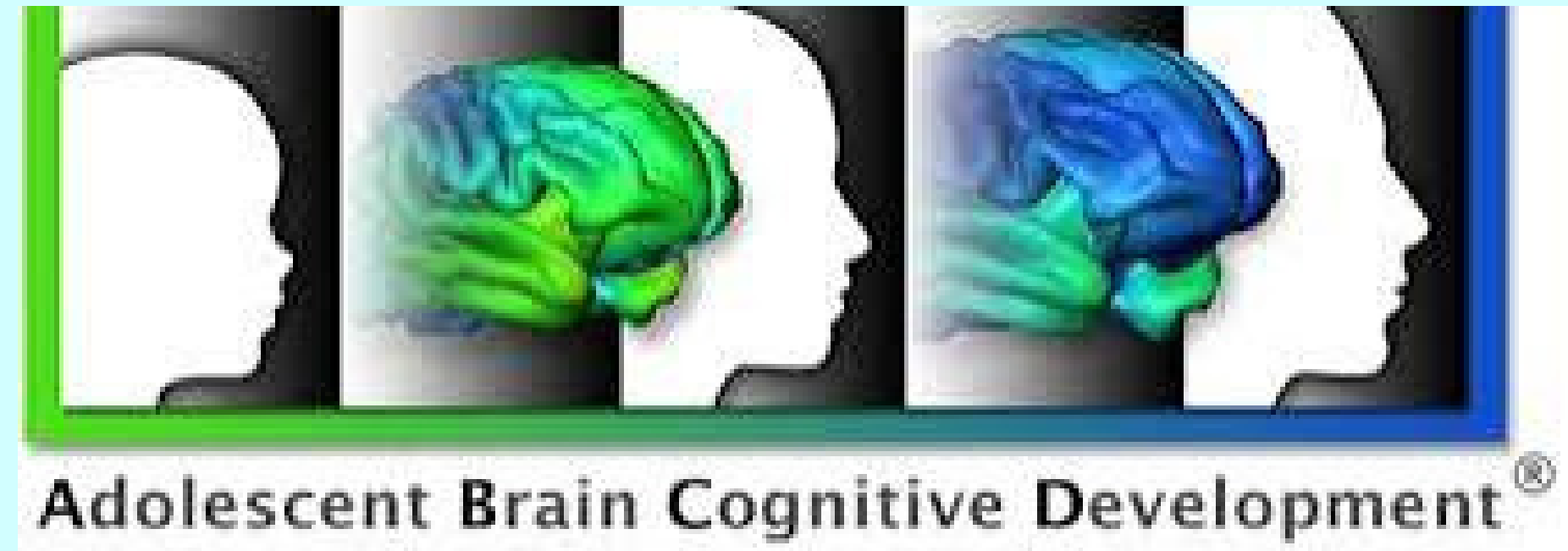
- More memory and learning problems than those who don't use cannabis in their teens. (unclear if permanent).
- People who start using cannabis in their teens may also have a higher risk for mental health issues later in life, including schizophrenia. But experts still aren't sure how strong this link is.

NIH Depiction of Brain Effects



Ongoing Research

- **loss of IQ points when started young**
- **verbal memory**
- **mixed studies on structural changes**



Cannabis Mental Health Impact

- linked to depression and social anxiety
- temporary psychosis
- association with Schizophrenia and earlier age and higher amount of cannabis use*



Cannabis and Psychosis



1. Cannabis induced psychosis
2. Increased risk/association with Schizophrenia

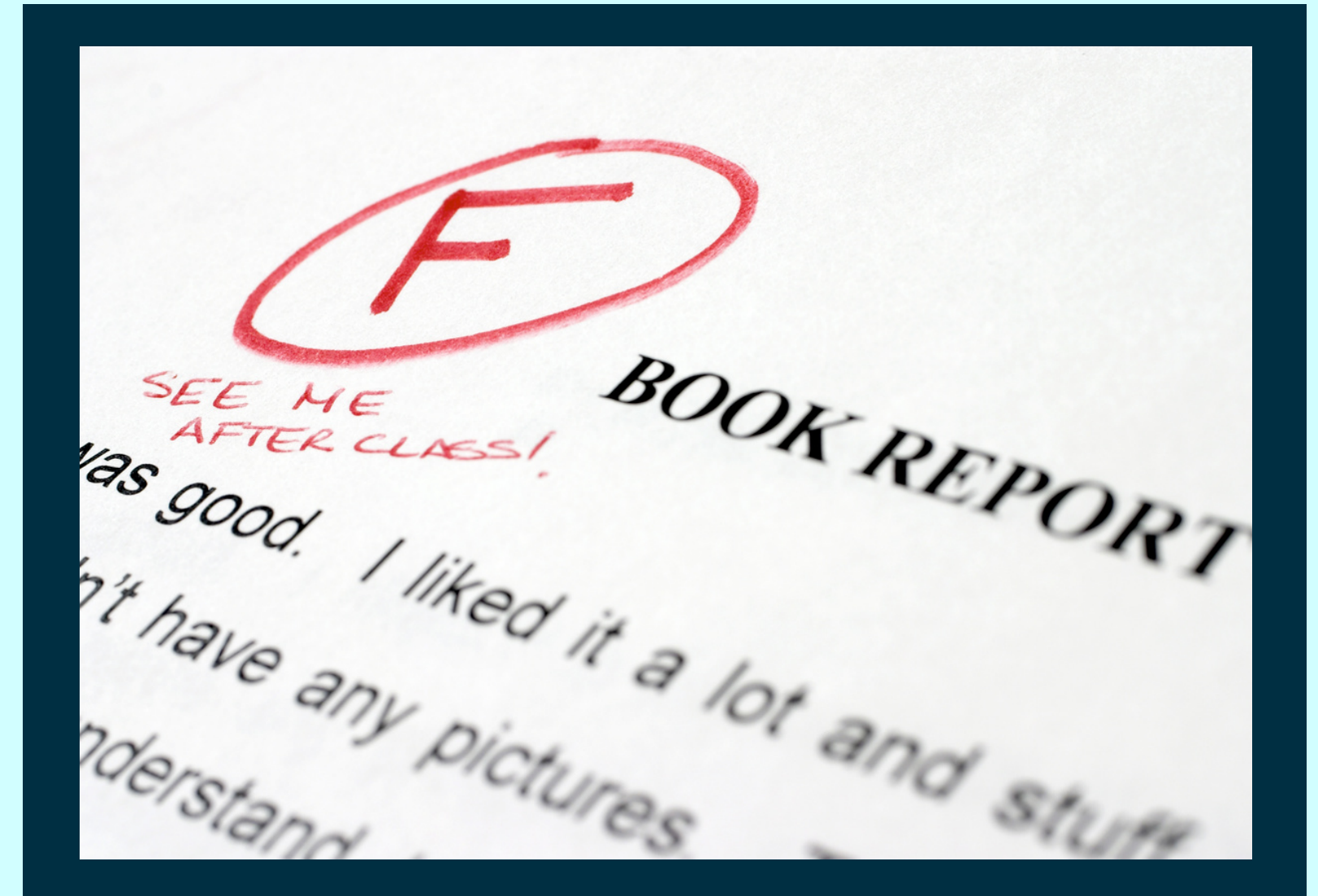
Addiction Risk

- 30% of those who use marijuana may have some degree of marijuana use disorder.
- People who begin using marijuana before the age of 18 are four to seven times more likely to develop a marijuana use disorder than adults

Risk factors for Cannabis Use Disorder

There is moderate evidence for:

- frequency of cannabis use
- oppositional behaviors
- a younger age of first alcohol use
- nicotine use, parental substance use
- poor school performance
- antisocial behaviors, and
- childhood sexual abuse



Cannabis Use Disorder

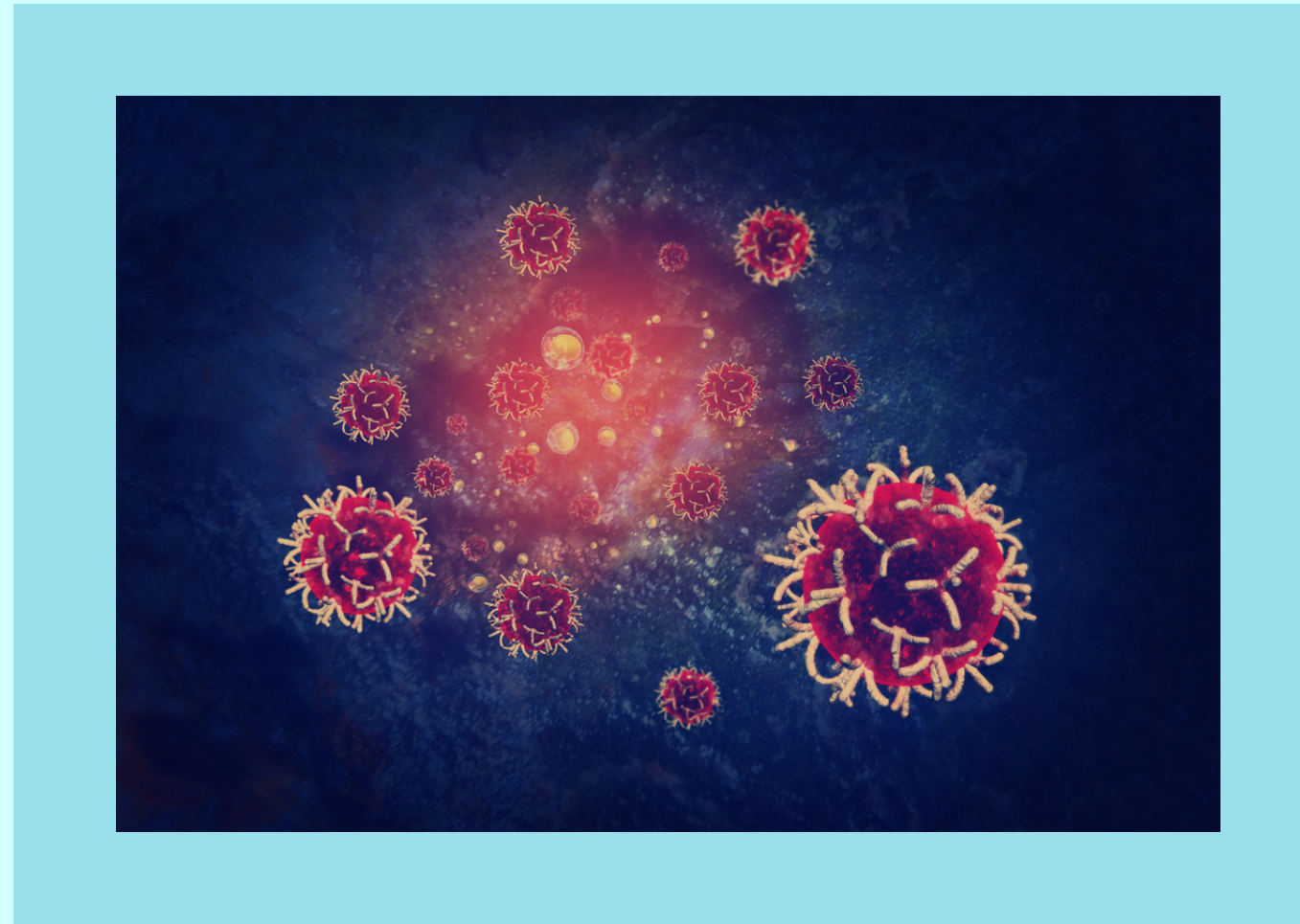
A problematic pattern of cannabis use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

1. Cannabis is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control cannabis use.
3. A great deal of time is spent in activities necessary to obtain cannabis, use cannabis, or recover from its effects.
4. Craving, or a strong desire or urge to use cannabis.
5. Recurrent cannabis use resulting in a failure to fulfil major role obligations at work, school, or home.
6. Continued cannabis use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of cannabis.
7. Important social, occupational, or recreational activities are given up or reduced because of cannabis use.
8. Recurrent cannabis use in situations in which it is physically hazardous.
9. Cannabis use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by cannabis.
10. Tolerance, as defined by either of the following:
 - a. A need for markedly increased amounts of cannabis to achieve intoxication or desired effect.
 - b. A markedly diminished effect with continued use of the same amount of cannabis.
11. Withdrawal, as manifested by either of the following:
 - a. The characteristic withdrawal syndrome for cannabis (refer to DSM-5 for further details).
 - b. Cannabis (or a closely related substance) is taken to relieve or avoid withdrawal sympt

Cannabinoid Hyperemesis Syndrome

A condition marked by recurrent bouts of severe nausea, vomiting, and dehydration. This syndrome has been found to occur in persons under 50 years of age and with a long history of marijuana use. Cannabinoid Hyperemesis Syndrome can lead sufferers to make frequent trips to the emergency room, but may be resolved when a person stops using marijuana.

Cancer Link



There is a clear link between marijuana use in adolescence and increased risk for an aggressive form of testicular cancer (nonseminomatous testicular germ cell tumor) that predominantly strikes young adult males

Media Depictions



Medical Marijuana

There is very limited research supporting use of medical marijuana in children or teens for most conditions.

In most states that allow medical marijuana, the marijuana is not regulated and therefore is not checked for ingredients, purity, strength or safety.

There is no evidence that medical marijuana is any safer than other marijuana.

CBD

CBD is only FDA-approved in children for specific forms of epilepsy and in adults for chemotherapy induced nausea and vomiting. It is a prescription product.

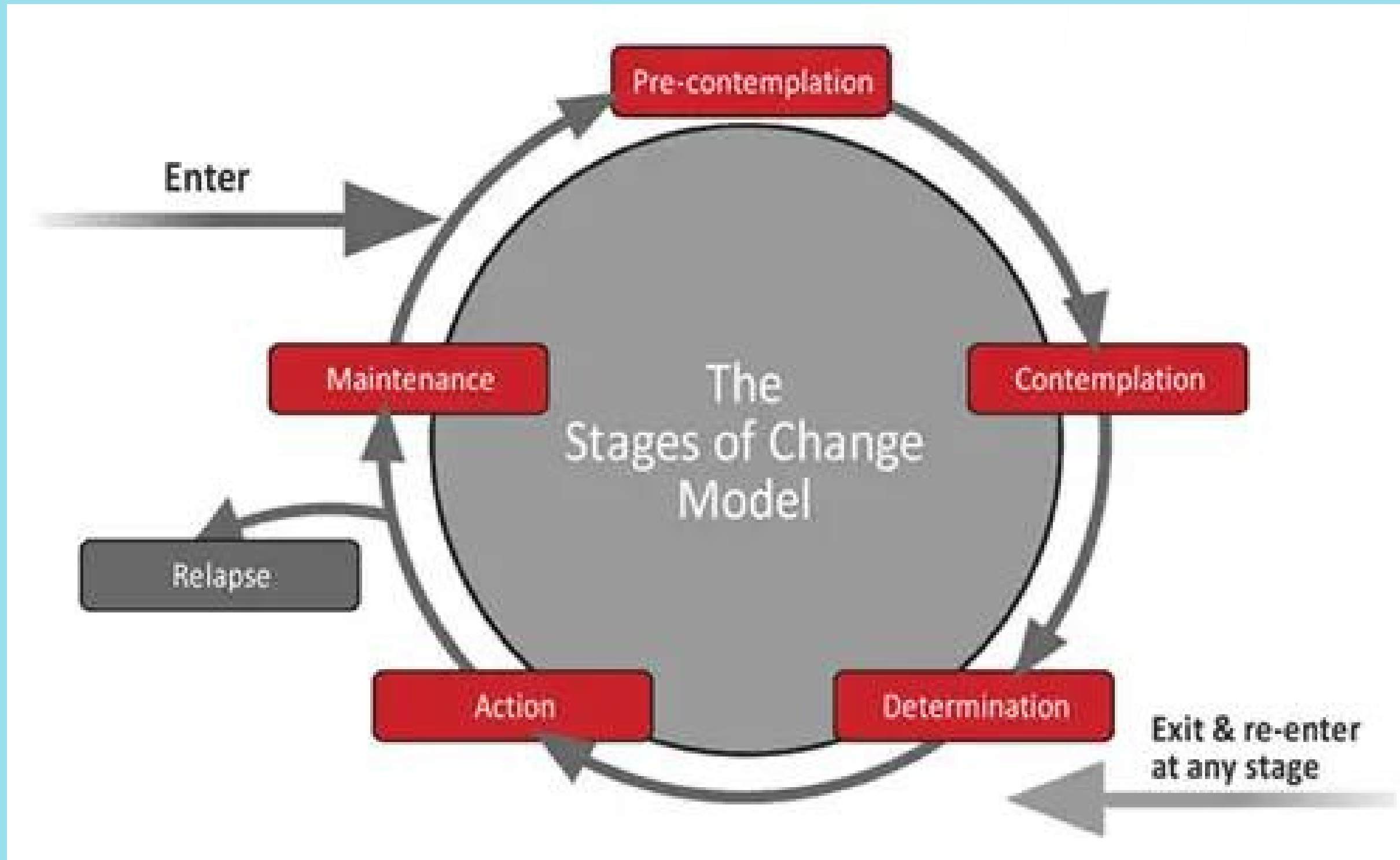


Ongoing research into other mental health conditions but at this time not enough evidence to recommend

How to Talk to Youth



Stages of Change



How to Help Someone Stop

- be present and remember relapses are part of recovery
- find support, school counsellor, pediatrician, addiction services
- there are medications to help with nicotine and cannabis craving
- be present and try to not be punitive

Motivational Interviewing

- Express Empathy
- Develop Discrepancy
- Avoid Argumentation
- Roll with Resistance
- Support Self-efficacy



Example of MI process

- How can I help you with ____?
- Help me understand ____?
- How would you like things to be different?
- What are the good things about ____ and what are the less good things about it?
- When would you be most likely to ____?
- What do you think you will lose if you give up ____?

Parental Use and Abuse

Important to examine your own attitudes and use

- for child the risks are different as their brain is developing
- Hard to ask your child to stop if you are using at home

How to Get More Help

School support

Pediatrician

Youth Addiction Services

Child Psychiatry

**THANK
YOU**