



Photo by Brady Knoll: <https://www.pexels.com/>

Driving Through the Fog: What you need to know about cannabis and driving safety

Pat Aussem, LPC, MAC, MBA

Partnership to End Addiction



- **National non-profit**
- **Support for families anywhere along the substance use continuum**
- **Effective treatment**
- **Advocacy**
- **Change culture**

Discussion topics

- What is the impact of marijuana (cannabis) use on driving?
- What are the signs of impairment?
- How does law enforcement test for marijuana?
- What are the risks of combining alcohol and marijuana?
- Are there exemptions for medical marijuana and driving?
- A special note about teens
- Resources

Why care?

- Drug use among fatally injured drivers who were tested for drugs rose from 25% in 2007 to 42% in 2016, and marijuana presence more than doubled in this time frame.

Reported Drug Use Among Fatally Injured Drivers From 2007 to 2016.
According to FARS Data, Cannabinoid Use Doubled Between 2007 and 2016.

Fatally Injured Drivers		
	Tested and Drug Positive	Tested and Cannabinoid Positive
2007	25%	8%
2008	27%	10%
2009	32%	11%
2010	33%	11%
2011	35%	11%
2012	37%	13%
2013	38%	14%
2014	38%	14%
2015	42%	16%
2016	42%	18%

It's complicated...impaired or have marijuana in the body



Signs of impairment

- Slowed reaction time
- Drowsiness
- Altered time and distance perception
- In lane weaving
- Difficulty with divided attention
- Problems with route planning, decision making, and risk taking, or a combination of all



Ways to test for impairment

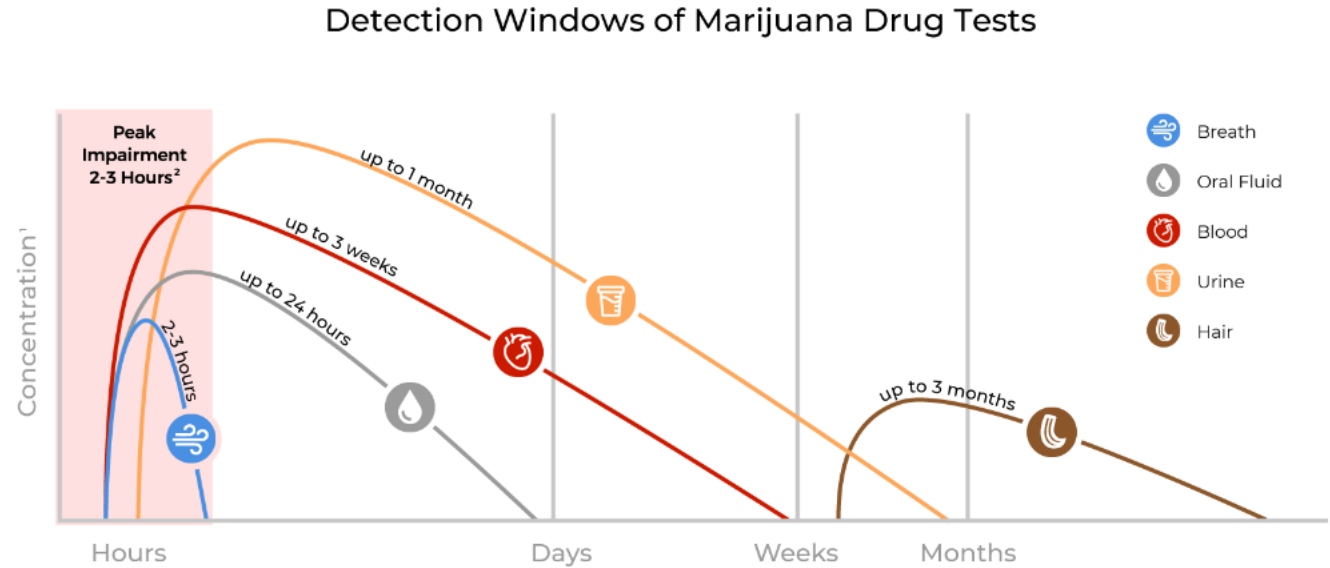
What is the Tetrahydrocannabinol (THC) equivalent to Blood Alcohol Concentration (BAC) when it comes to impairment?



.08 BAC ???

Methods of testing

- Blood and urine tests
- Breathalyzers
- Oral fluid tests
- Drug recognition experts

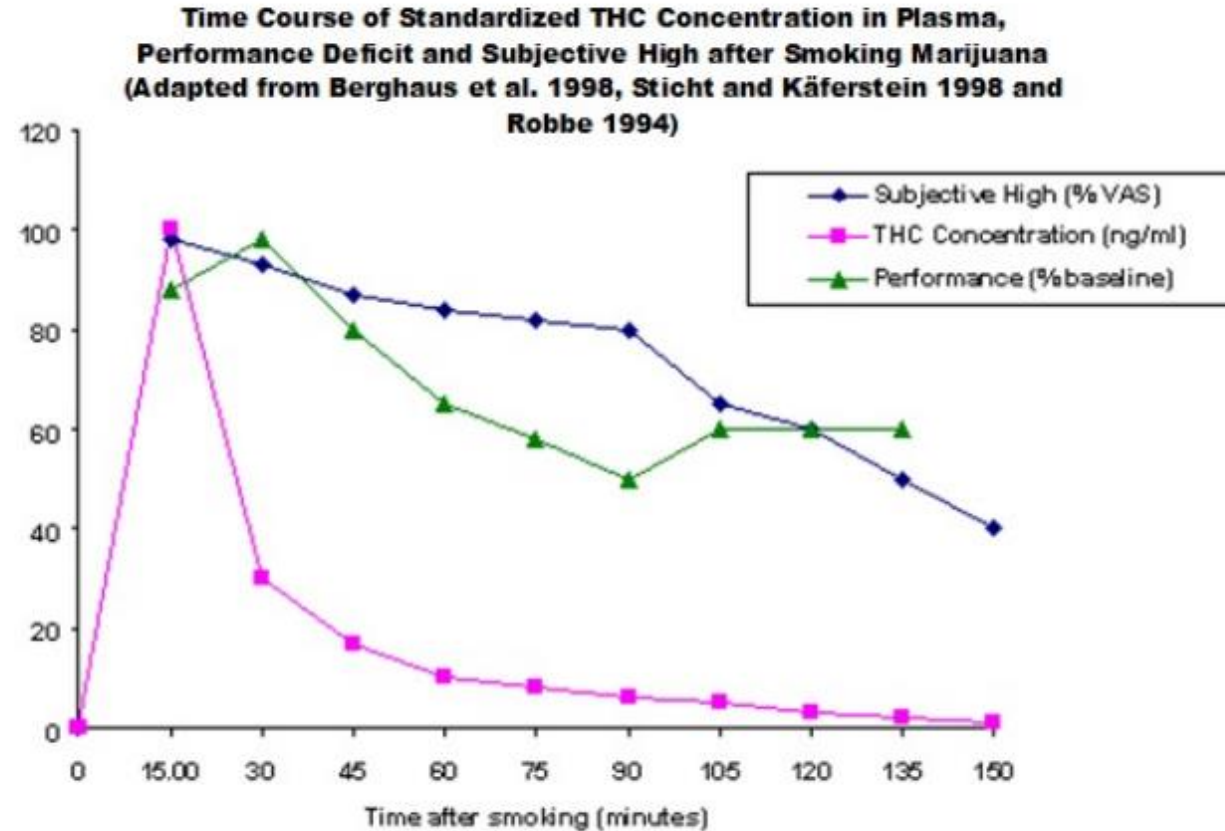


¹ THC, the psychoactive ingredient in marijuana, is detected in breath, oral fluid, and blood. THC-COOH, a metabolite of THC, is detected in urine and hair.

² April 2014 National Highway Traffic Safety Administration's "Drugs and Human Performance Fact Sheet."

Marijuana detection window using breath: Lynch et al. Correlation of Breath and Blood Δ^9 -Tetrahydrocannabinol Concentrations and Release Kinetics Following Controlled Administration of Smoked Cannabis, Clinical Chemistry, July 2019.

Blood levels of THC vs. impairment



Alere DDS2 Oral Fluid Mobile Device



- Swab the mouth
- Get results in 5 minutes
- Tests for relatively recent use
- Used for probable cause

Hound Labs breathalyzer waitlisted

A FAIR marijuana test has never been possible. **Until now.**

Drug tests that analyze oral fluid, hair, blood, and urine can only tell whether someone used marijuana at some point in the past – hours, days, weeks, or months ago – long after the workday has ended.

The key to a fairer test is the ability to measure very recent marijuana use within several hours of smoking that may impact performance during the workday. That's why the HOUND® CANNABIS BREATHALYZER is a fairer test – it only measures very recent cannabis use.



What Does a Drug Recognition Expert do?

- 1) Breath alcohol results
- 2) Interview of arresting officer
- 3) Preliminary exam & first pulse
- 4) Eye examination
- 5) Divided attention tests
- 6) Vital signs and 2nd pulse



What Does a Drug Recognition Expert do continued?



- 7) Dark room exam
- 8) Muscle tone
- 9) Injection sites and 3rd pulse
- 10) Statements and observations
- 11) Analysis and opinion
- 12) Toxicology exam



State impairments laws

THC (Tetrahydrocannabinol) impairment limits

- Vary by state:
 - *Zero tolerance*: 12 states allow no detectable amount of THC
 - *Per se laws*: 5 states prohibit driving with a detectable amount of THC in the body e.g., = or > 2 to 5 nanograms of delta-9 THC per milliliter of whole blood
 - *Permissible inference*: in Colorado only = 5 nanograms/milliliter
 - *Under the influence (Driving Under the Influence of Drugs)*: the person must be under the influence or affected by THC

Source: <https://www.ncsl.org/research/transportation/drugged-driving-overview.aspx>

States advertising safe driving



<https://www.codot.gov/safety/impaired-driving/druggeddriving>



Drivers' sense of impairment

National Advanced Driving Simulator – need for more research



Drivers' perception of impairment



- 191 regular consumers
- Placebo, 5.9% or 13.4% Delta 9 THC
- THC group > placebo
- No difference in impairment after 4.5 hours

BUT

- Most THC drivers felt unimpaired after 1.5 hours

Source: Marcotte TD, Umlauf A, Grelotti DJ, et al. Driving Performance and Cannabis Users' Perception of Safety: A Randomized Clinical Trial. *JAMA Psychiatry*. 2022;79(3):201-209. doi:10.1001/jamapsychiatry.2021.4037

How long should you wait before driving?

Smoking:



Wait at least six hours after smoking up to 35 mg of THC before driving or biking. If you've smoked more than 35 mg, wait longer.

Eating or drinking:



Wait at least eight hours after eating or drinking up to 18 mg of THC before driving or biking. If you've consumed more than 18 mg, wait longer.



Alcohol and marijuana $1+1=3$

Alcohol and cannabis use



The combination of alcohol and marijuana compromised people's driving skills to a greater degree than either substance alone.

Source: Sarah M. Simmons et al, The effects of cannabis and alcohol on driving performance and driver behavior: a systematic review and meta-analysis, *Addiction* (2022). [DOI: 10.1111/add.15770](https://doi.org/10.1111/add.15770)

What drivers are saying who drink and use marijuana vs. those who use marijuana only

- 2021 AAA research:

No seatbelt



18% vs. 16%

Run red light



48% vs. 38%

Speeding



55% vs. 46%

Text & drive



53% vs. 31%

Why is driving under the influence of cannabis and alcohol likely underreported?



“I’m prescribed a medical marijuana card. Since it’s prescribed I can drive while under the influence of my medication, right?”

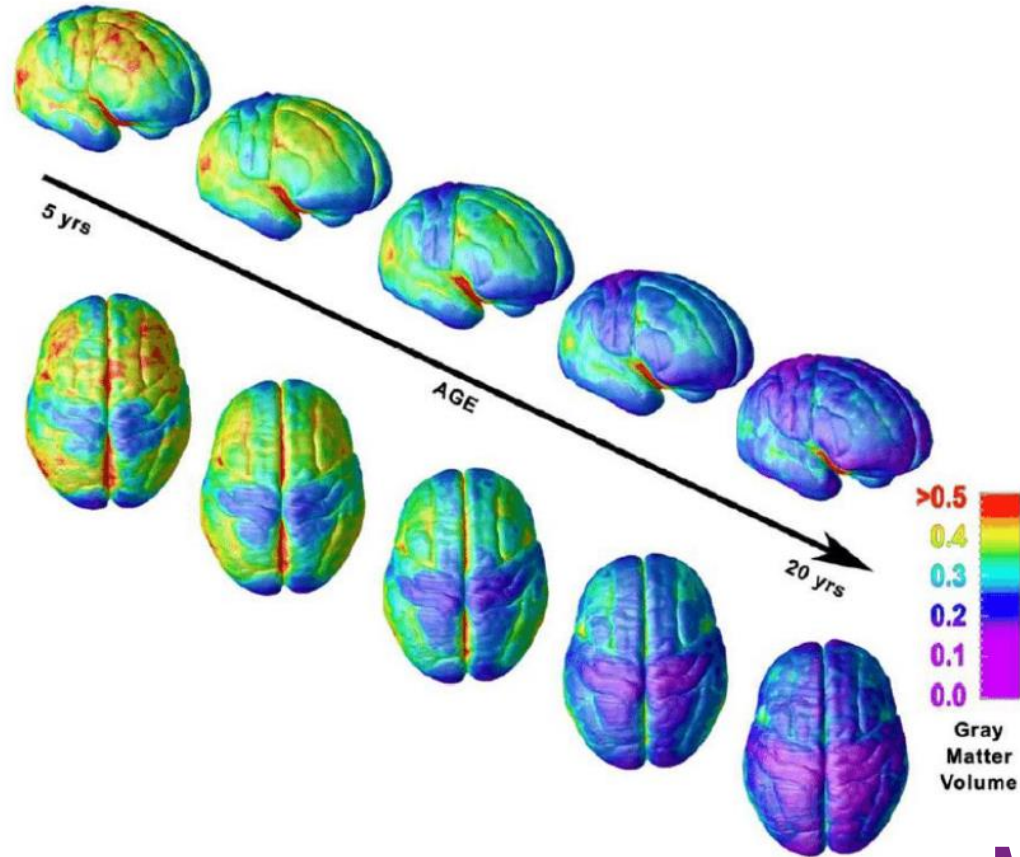




A word about teens

Growing an adult brain

Age 5



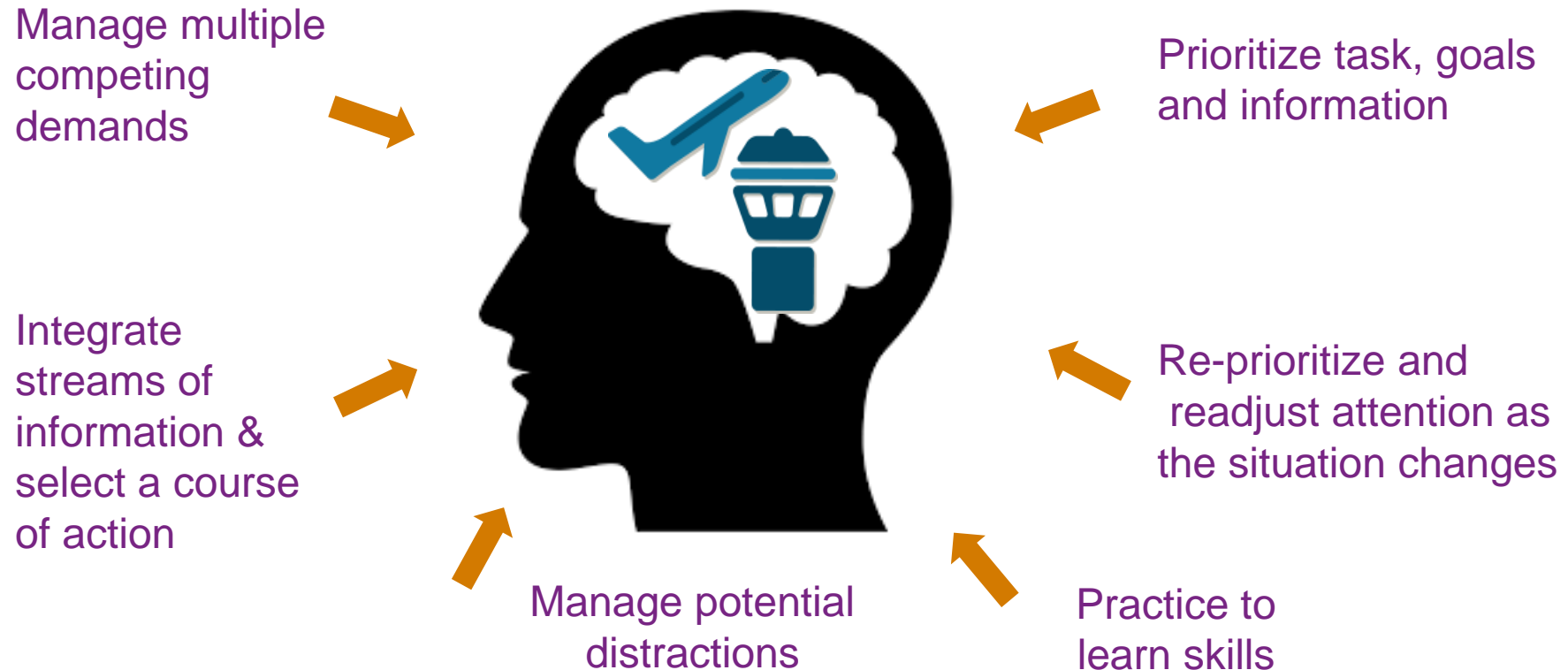
Mid 20's

The parts of the brain responsible for judgment, decision making, memory, and controlling impulses continue to develop well into one's 20s, creating a perfect storm for adolescent risk:

- More likely to take risks, like experimenting with substances
- The developing brain is more easily damaged by these substances
- More likely to develop a substance use problem when they use them

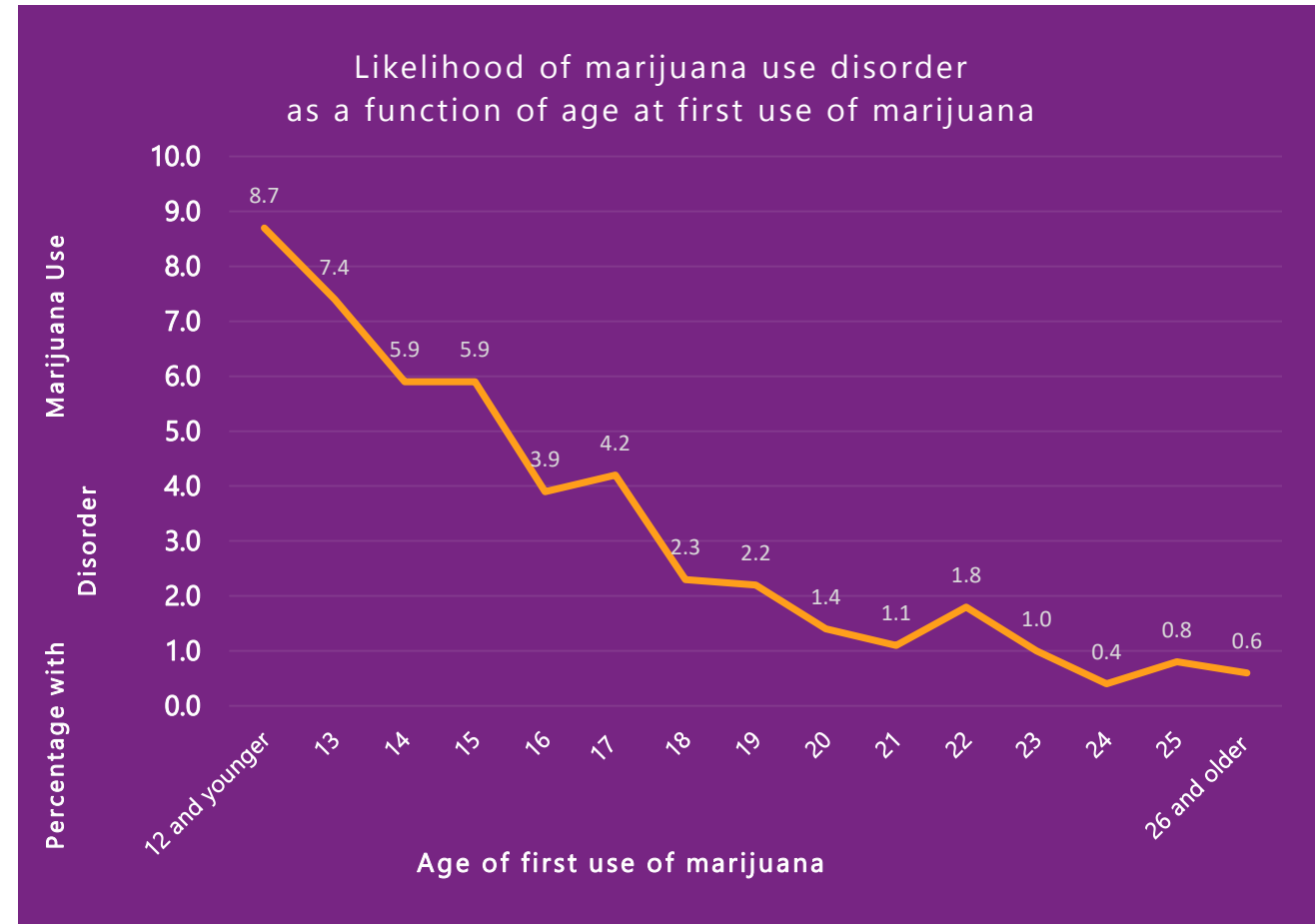
Our body's air traffic control system

Optimal brain health is like a superior air traffic control system.
Brain efficiency increases **3000%** between adolescence and mid-20's.



Early use increases the risk of addiction

- Individuals in late adolescence and early adulthood who use marijuana are at the highest risk of developing a marijuana use disorder, or addiction
- People who begin use before age 18 are 4-7 times more likely to develop a marijuana use disorder than those who begin using in adulthood



Short-term effects

- Relaxation
- Euphoria or feeling happy
- Impaired motor skills, affecting driving and increasing injury risk
- Problems with memory and learning
- Impaired judgment, increasing the likelihood of risky sexual behaviors and criminal acts
- Panic attacks
- Paranoid thoughts
- Hallucinations and other symptoms of psychosis

What Can Parents & Other Caregivers Do?

- Have conversations – “What do kids say about driving and marijuana use?” “What are the risks of getting into a car with someone who is high?”
- Share your expectations
- Model healthy behaviors
- Consider less risky options: ride-sharing, public transportation, a designated driver

Key takeaways

- Marijuana can impair driving
- THC levels in the body do not equate to impairment
- Don't mix it with other substances
- Wait or use alternative transportation
- For minors – delay, delay, delay
- More research is needed



Resources for Families

Partnership helpline



- Bilingual specialists provide support, guidance and resources
- Personalized plan for your family
- Schedule a call via email, text, Facebook Messenger

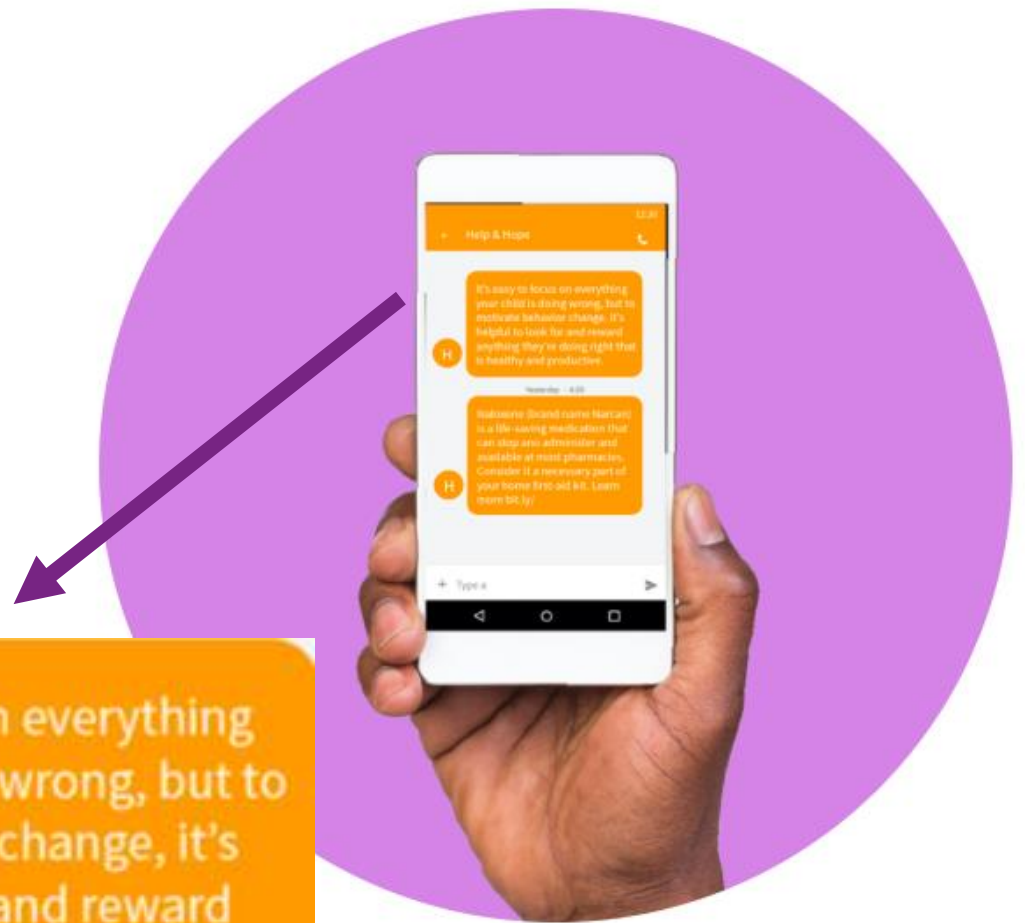


“You were a safety net when I felt like I was drowning. You had resources to suggest and knew just what to say. Thank you for being there.”

Help & Hope

- Text “join” to 55753
- Answer a few questions
- Get messages of support, encouragement and resources
- Chat to reach helpline

It's easy to focus on everything your child is doing wrong, but to motivate behavior change, it's helpful to look for and reward anything they're doing right that is healthy and productive.



Skill-building program



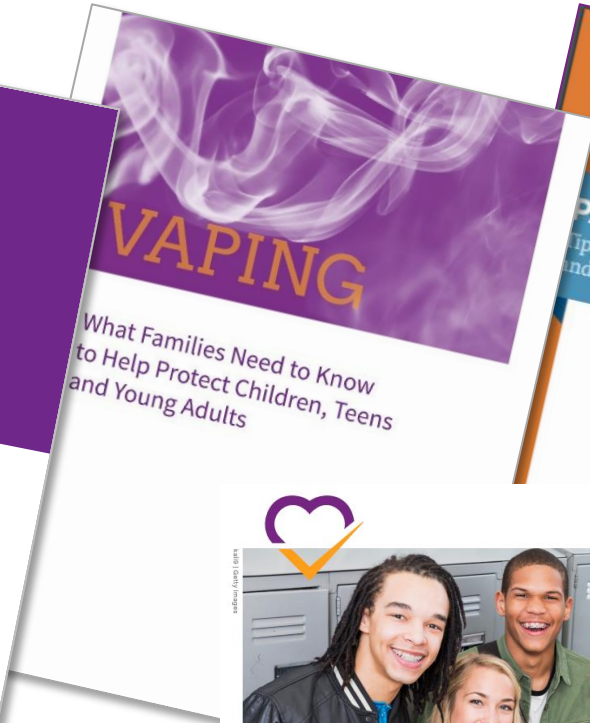
- Ten 15-minute online lessons:
 - “Why”
 - Responding rather than reacting
 - Having good conversations
 - Encouraging healthy behaviors
 - Setting limits
 - Using consequences

drugfree.org



MARIJUANA TALK KIT
What you need to know to talk with your teen about marijuana

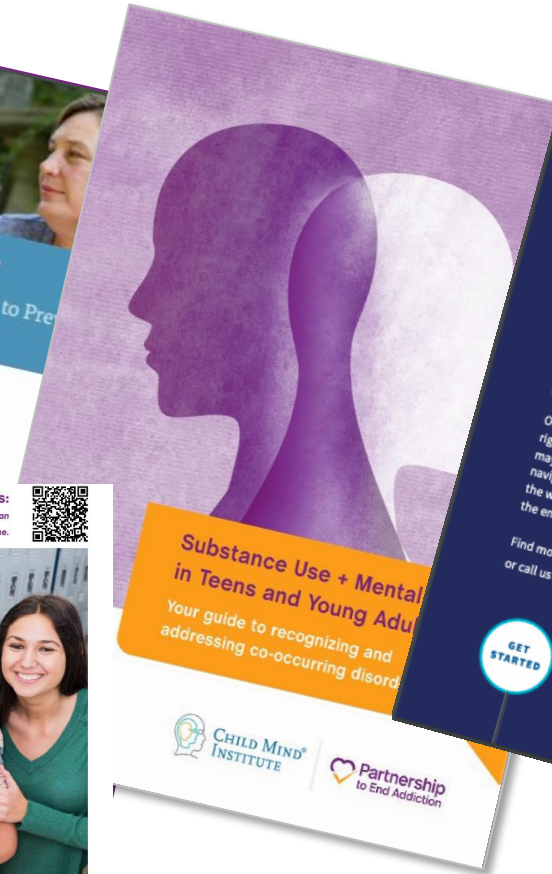
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VAPING
What Families Need to Know to Help Protect Children, Teens and Young Adults



PARENT TALK KIT
Tips for Talking and What to Say to Prevent Drug and Alcohol Abuse



Substance Use + Mental Health
Your guide to recognizing and addressing co-occurring disorders

CHILD MIND INSTITUTE

Partnership to End Addiction



Your Child's Treatment Roadmap

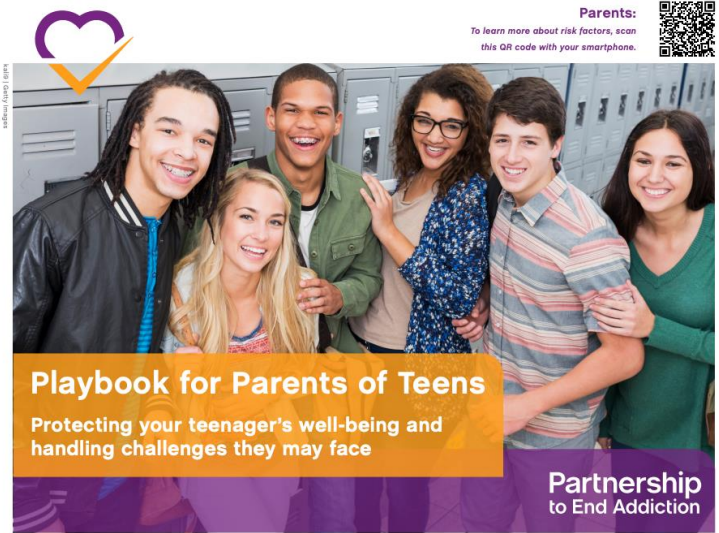
The road to recovery isn't the same for everyone. There are many options to consider for your son, daughter, or loved one.

Our guide outlines key steps to help you make the right choice for your child and your family, which may come in the form of formal treatment. As you navigate, please know that we're here to help along the way with information, support and guidance for the entire family.

Find more information at drugfree.org or call us at 1.855.DRUGFREE

GET STARTED


Partnership for Drug-Free Kids



Playbook for Parents of Teens
Protecting your teenager's well-being and handling challenges they may face

Partnership to End Addiction

Parents: To learn more about risk factors, scan this QR code with your smartphone.



Peer parent coaching

- Trained peer parent coach
- Five one-hour sessions
- Work on problems
- Develop skills
- Share resources



Online Support Community



- Hour-long zoom meetings
- Led by peer parent coach
- Specific topics:
 - Understanding substance use
 - Communication skills
 - Self-care
 - Using rewards and consequences

Accessing resources

- Go to **drugfree.org**
- Enroll in online learning at **drugfree.org/skills-building**
- Text **connect to 55753** for a helpline specialist and peer parent coach.
- Text **join to 55753** to sign up for Help & Hope by Text
- Text **loss to 55753** if you've lost a child to substance use



Start learning

Ready to start this skill-building course?

Get started





Pat Aussem

paussem@toendaddiction.org

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Behavioral Health Awareness Series

If you are an Evernorth or Cigna customer and have questions about Substance Use treatment or about your benefits and how to use them, please contact:

Stephanie Gissal - 800.274.7603 x398516

Alex Turner - 800.274.7603 x513597

Wanda Russell – 800.274.7603 x342063