

HAYS CALDWELL COUNCIL

A PROGRAM OF **CENIKOR** FOUNDATION

The Why Behind Substance Use and Misuse Disorder

By Elyse Greenamyre and Donna McCain

www.cenikor.org; <http://www.cenikor.org/locations/san-marcos/>

For Healthy Tips for a Drug-Free Life text DRUGFREETX ENGL to 468-311 or LIBREDEDROGAS ESPL 468-311.

What We'll Talk About:

- ❖ Risk And Protective Factors
- ❖ Adverse Childhood Experiences
- ❖ Co-occurring Disorders
- ❖ Warning Signs
- ❖ How to Talk to Peers
- ❖ Drug Facts and Trend
- ❖ Treatment and Recovery



Risk factors can influence drug use and misuse in several ways. The more risks a child is exposed to, the more likely the child will use or misuse drugs.

Some risk factors may be more powerful than others at certain stages in development, such as peer pressure during the teenage years; just as some protective factors, such as a strong parent-child bond, can have a greater impact on reducing risks during the early years.

An important goal of prevention is to change the balance between risk and protective factors so that protective factors outweigh risk factors.

Risk Factors

(characteristics associated with a higher likelihood of negative outcomes.)

Domain

Protective Factors

(characteristics associated with a lower likelihood of negative outcomes.)

Early Aggressive Behavior

Individual

Self-Control

Lack of Parental Supervision

Family

Parental Monitoring

Substance Abuse

Peer

Academic Competence

Drug Availability

School

Anti-drug Use Policies

Poverty

Community

Strong Neighborhood Attachment

Research-based prevention programs focus on intervening early in a child’s development to strengthen protective factors before problem behaviors develop. **Please note that Risk factors do not determine a child’s destiny.**

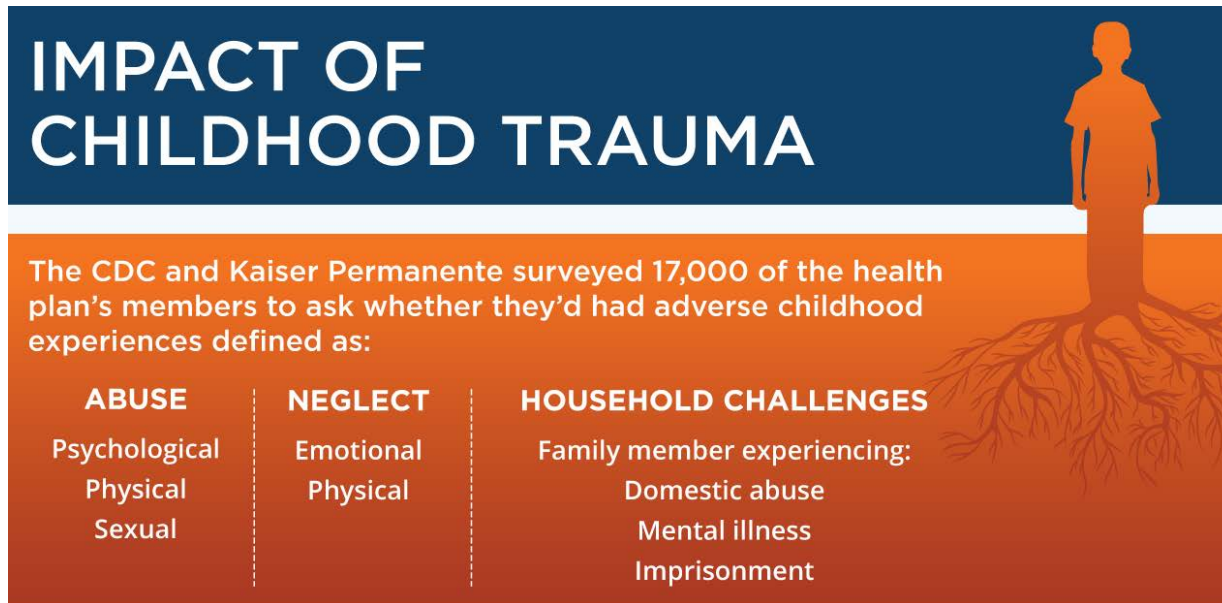


Adverse Childhood Experiences

ACES can also influence substance use or misuse.

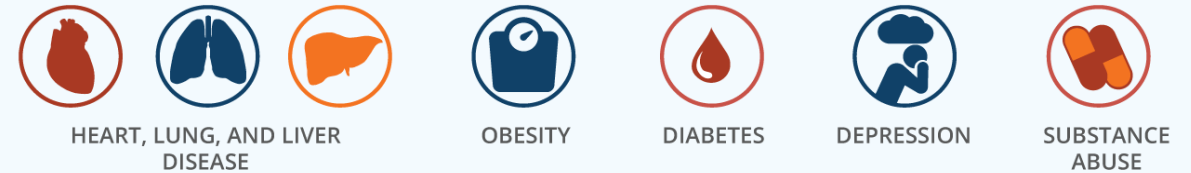
Adverse Childhood experience (ACEs) is the term used to describe all types of abuse, neglect, and other potentially traumatic experiences that occur to people under the age of 18.

Multiple, **chronic or persistent stress can impact a child's developing brain** and has been linked in numerous studies to a variety of high-risk behaviors, chronic diseases and negative health outcomes in adulthood such as smoking, diabetes and heart disease.



What Do We Mean by “Adversity”?

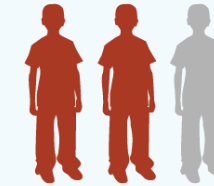
The landmark study found those with adverse childhood experiences were at higher risk for:



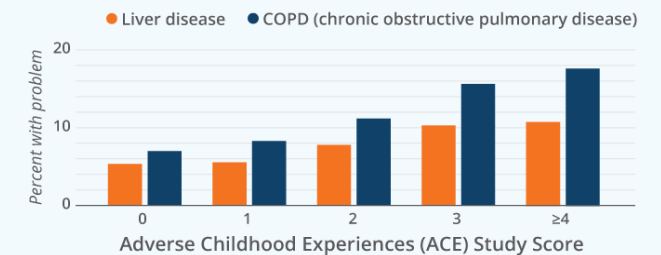
THE STUDY ALSO FOUND

NEARLY TWO THIRDS

of those surveyed experienced at least one event.



The higher the score on ACE survey, the more likely people were to be in poor health:



What can we do to stop the impact of ACES?

Promoting Resilient Environments – Resilience is learning to adapt well in the face of adversity, trauma, tragedy, threats of significant sources of stress. Resilience is learned or developed.

What are Skills/Actions to Create Resilient Environments?

Ability to Attach to others – The ability to give and feel love, to feel safe and secure in relationships.

Safety – changing our approach in understanding another persons' behavior from what's wrong with you to **what happened to you?**

Emotional Regulation – Learning how to recognize and manage our own emotional world as well as understand the emotions in others is critical to feeling whole and healthy.

Basic Needs Met – food, clothing, shelter...

Community Connections - Having loving accepting communities not avoidant of talking about difficult topics, not critical nor punitive, but accepting and compassionate.

Nadine Burke Harris, MD - "The Deepest Well: Healing the Long-Term Effects of Childhood Adversity"

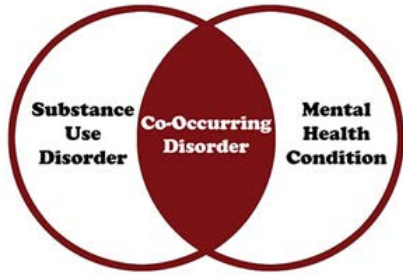
As a pediatrician studied How Childhood Trauma Affects Health Across A Lifetime. She gave the ACE assessments to her patients. When the stress response system is turned off normally, and when a child has safe, stable and nurturing relationships and environments it is healing. When it is not, it changes brain structure. DNA, the developing immune system and hormonal system. Oxytocin buffers stress hormone. Over activity of the stress hormone is leading to neurotoxicity and autoimmune problems.



How to Reverse ACEs?

- Step 1. Raising awareness, Step 2. Routine screening- early intervention. Make sure physicians are trained to identify ACES. Step 3. Take the science to the community. We have to have our own stress response in check.

Sleep, Nutrition, Exercise, Self care, Mental health, Mindfulness, and Healthy Relationships



Co-Occurring Mental Health Issues and Substance Use Disorders (SUDs)

Someone with substance abuse disorder (drugs or alcohol) and mental illness (depression, PTSD, anxiety, OCD, etc.), the diagnosis is called a **co-occurring disorder**. Any combination of mental health disorders and substance abuse or addiction qualifies for this diagnosis (sometimes referred to as a dual diagnosis).

Approximately **358,000 adolescents** (1.5 percent of all adolescents) **had an Substance Use Disorder and an Mental Depressive Episode** in the past year, (2018) **including 288,000 adolescents** (1.2 percent of all adolescents) **who had an Substance Use Disorder and an Mental Depressive Episode with severe impairment**.

In 2018, an estimated **9.2 million adults aged 18 or older** (3.7 percent of all adults) **had both AMI and at least one SUD** in the past year, and **3.2 million adults** (1.3 percent of all adults) **had co-occurring SMI and an SUD** in the past year.

In 2018, substance use was more common among both adolescents and adults who had a mental health issue than among those who did not have a mental health issue.

About **1 in 16 adolescents aged 12 to 17** in 2018 (6.1 percent) with a past year **Mental Depressive Episode** **smoked cigarettes** in the past month ...In addition, **adolescents with an Mental Depressive Episode** were more likely than those without an **Mental Depressive Episode to binge drink** in the past month (8.5 vs. 4.1 percent) and to use **an illicit drug** in the past year (32.7 vs. 14.0 percent).

Trauma

School violence
Bullying/Cyberbullying Accident
Natural Disaster Community violence
Fires Homelessness
Serious illness Combat injury of a loved one
Abuse Crime Neglect
Loss of a loved one
Violence within the family
Living in or escaping from a war zone Economic stress/poverty
Act of terrorism Injury

<http://cctasi.northwestern.edu/family/child-trauma/>

Psychological Trauma and Drug Addiction

- A person is more susceptible to drug addiction if they experience any trauma whatsoever, whether early in life or later.

“...to nurture healthy children and understand what they need, we first have to help them feel safe and connected and allow them time for reflection.”

child and adolescent psychiatrist and neuroscientist Bruce Perry

“We want our children to be healthy, well and productive members of society.

In order for this to happen they must have good mental health.

If children are in distress, we must recognize it and address it quickly.”

- Clifford Beers

At What Age does it start?

Before 18, average age, around 12-13 years old.

THE EARLIER AN INDIVIDUAL STARTS SMOKING, DRINKING OR USING OTHER DRUGS, THE GREATER THE LIKELIHOOD OF DEVELOPING ADDICTION:

Every year that substance use is delayed during the period of adolescent brain development, the risk of addiction and substance abuse decreases.

Substance Use Initiation (new users)

In 2018, the substances with the largest number of recent (i.e., past year) initiates of use or misuse were:

alcohol (4.9 million new users)

marijuana (3.1 million new users)

prescription pain relievers (1.9 million new misusers) and

cigarettes (1.8 million new users).

Perceived Risk from Substance Use

In 2018, more than **4 out of 5 people aged 12 or older perceived great risk of harm from weekly use of cocaine or heroin** (86.5 and 94.3 percent, respectively), while **less than one third** of people (30.6 percent) **perceived great risk of harm from weekly marijuana use.**

About **2 out of 3** people (68.5 percent) **perceived great risk from daily binge drinking**, and nearly **3 out of 4** people (71.8 percent) **perceived great risk from smoking one or more packs of cigarettes per day.**

Why Do Teens Use or Misuse Substances?

Teens engage in drug use for several different reasons:

- ▶ To self-medicate
- ▶ Peer pressure
- ▶ To have fun or get high
- ▶ Boredom
- ▶ To be “cool”

Teen Perception of Drug Use:

- It will never happen to me or I am invincible
- “I know how to handle it” or “I will be OK”
- Marijuana is natural
- I can stop using _____ anytime



Children and teens view
things Emotionally rather
than Intellectually

- E
- I

Talking with Peers about Drugs

1. Become informed yourself.
2. Keep the talks brief, but talk often.
3. Ask questions and listen; don't lecture.
4. Give accurate information and gently correct mistaken ideas.
5. Share your values as well as the facts.
6. Don't try to force agreement; Keep the dialogue open.
7. Provide support material: web sites, articles, videos.
8. Follow up later.

What is Your Anti-Drug?



“Sparks” are those activities and interests that truly engage kids to be their best. Discovering those sparks can help students express their personalities and make unique contributions to the world. Kids who know and develop their Sparks—and who have adults (champions) in their lives to help—have higher grades, better school attendance and physical health, empathy and social competence, concern for the environment, a desire to help others and a sense of purpose. <https://youtu.be/bP89iBasyCE>

The 10 most common sparks among American teenagers

- ▶ Creative Arts
- ▶ Athletics
- ▶ Learning (e.g., languages, science, history)
- ▶ Reading
- ▶ Helping, serving
- ▶ Spirituality, religion
- ▶ Nature, ecology, environment
- ▶ Living a quality life (e.g., joy, tolerance, caring)
- ▶ Animal welfare
- ▶ Leading

A full list of sparks

- | | |
|------------------------------------|---|
| 1. Music: Instrumental | 17. Nature, Ecology, Environment |
| 2. Music: Conducting/Directing | 18. Animals |
| 3. Music: Composition | 19. Computers |
| 4. Music: Performance | 20. Comedy |
| 5. Art | 21. Speech |
| 6. Writing | 22. Spirituality |
| 7. Dance/Movement | 23. Drama, Theater |
| 8. Other Creative Arts | 24. Photography and Film |
| 9. Building and Design | 25. Being Committed to Living in a Specific Way |
| 10. Leadership | 26. Reading |
| 11. Entrepreneurship | 27. Advocacy |
| 12. Sports and Athletics | 28. Family |
| 13. Learning | 29. Outdoor Life |
| 14. Teaching and Instructing | 30. Journalism |
| 15. Relationships | 31. Mechanics, Engineering |
| 16. Serving, Helping, Volunteering | 32. Solving Social Problems |

SPARKS can also be called Natural Highs. Natural Highs are things you enjoy doing that don't include drugs.

Signs - What to Look For



WARNING SIGNS OF TEEN SUBSTANCE USE

Certain symptoms and behaviors are warning signs for substance use in teens, although they may also indicate other problems, such as depression (or bullying).

Warning signs can include:

- Alcohol, smoke or other chemical odors on the child's or their friends' breath or clothing
- Obvious intoxication, dizziness or bizarre behavior
- Changes in dress and grooming
- Changes in choice of friends
- Frequent arguments, sudden mood changes and unexplained violent actions
- Changes in eating and sleeping patterns
- Sudden weight gain or loss
- Loss of interest in usual activities or hobbies
- School problems such as declining or failing grades, poor attendance and recent discipline problems
- Trauma or frequent injuries
- Runaway and delinquent behavior
- Depressed mood or talk about depression or suicide; suicide attempts

Source: www.centeronaddiction.org/addiction-prevention/teenage-addiction

<https://www.centeronaddiction.org/addiction-prevention/teenage-addiction> American Academy of Pediatrics. (2009). "Substance Abuse Prevention"

How Substance Abuse Affects The Developing Brain

Did you know that your **brain develops until the age of 25?**

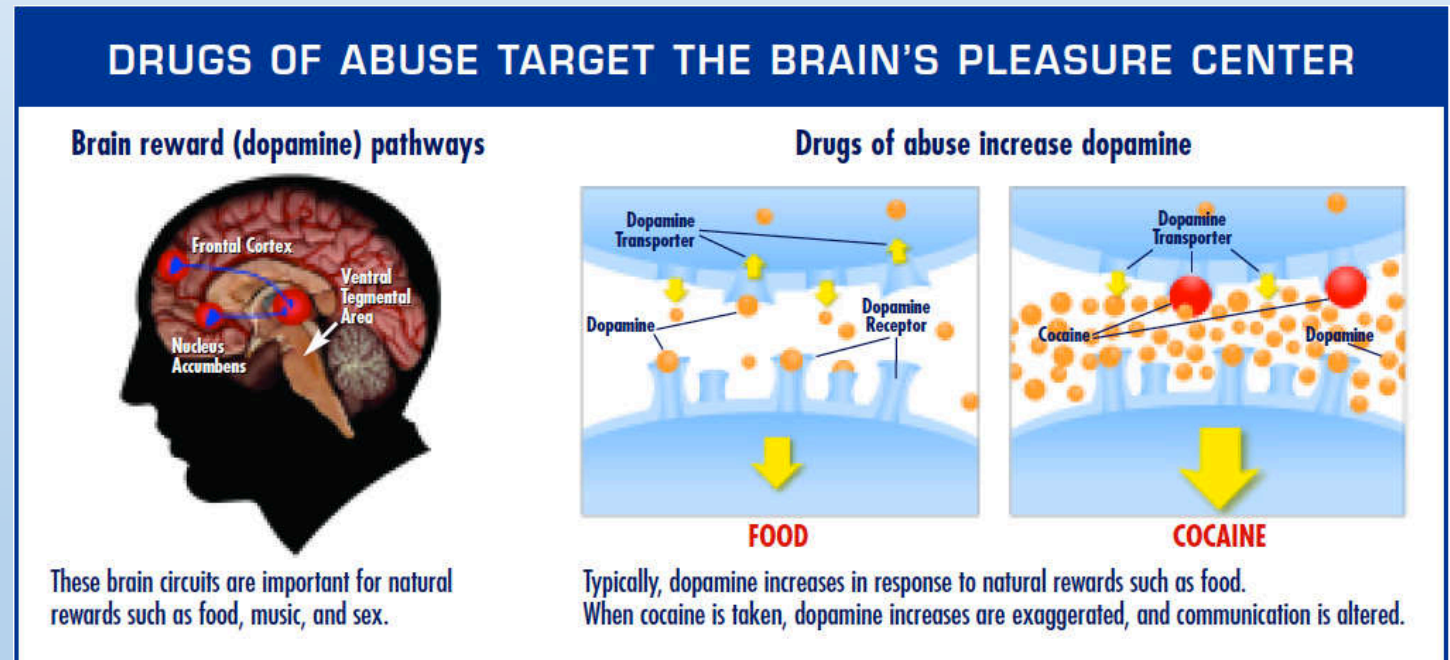
Stimulation of the brains pleasure circuit:

It's a survival mechanism: in the presence of something good, the brain releases four main 'feelgood' chemicals—**endorphin, oxytocin, serotonin, and dopamine**—and in the presence of danger, the 'bad feeling' chemical—**cortisol**—comes in.

- Most drugs of abuse directly or indirectly target the brain's reward system by flooding the circuit with **dopamine**.
- **Dopamine is a neurotransmitter present in regions of the brain that regulate movement, emotion, motivation, and feelings of pleasure.** When activated at normal levels, this system rewards our natural behaviors.
- **Overstimulating the system with drugs, however, produces euphoric effects, which strongly reinforce the behavior of drug use—teaching the user to repeat it.**

What does the prefrontal cortex (the “Executive Center”) control?

- Sound decision making
- Empathy
- Considering consequences
- Regulating emotions
- Self-awareness
- Morality



<https://www.drugabuse.gov> <https://www.psychologies.co.uk/self/how-to-boost-your-natural-feelgood-chemicals.html>

Addiction and the Brain
https://youtu.be/s0bqT_hxMw

So...What else is there to do besides Drugs?

Everything Else!

The goal of prevention is to delay the early onset of substance use.

Let's join together to prevent the use of harmful substances such as vapes, e-cigarettes, alcohol, prescription and recreational drugs that continue to plague teens.

- **Let's make protective factors far outweigh risk factors**
- **Reduce the impact of childhood trauma**
- **Find supportive parents or adults**
- **Build a loving, accepting Community**
- **Develop empathy. Changing your approach to understanding another person's behavior from asking what's wrong with you to what happened to you?**

Treatment and Recovery

What is Treatment?

Treatment helps people stop using the drugs they're addicted to.

Treatment can include talk therapy, medicine, or both. It helps them learn to fight the urges to use drugs again, and it helps them regain control in their lives.

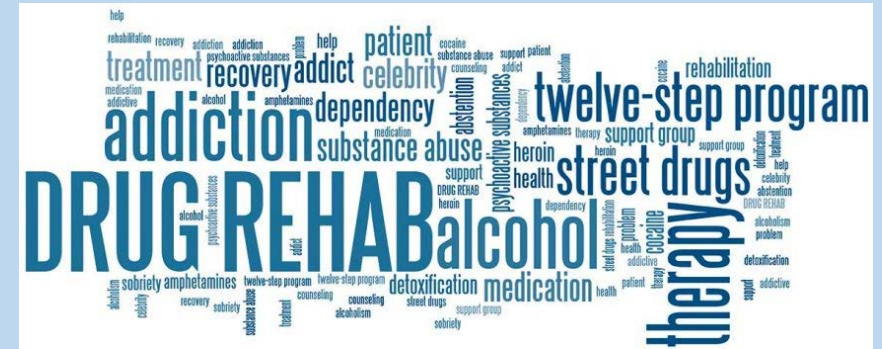
People start taking drugs for different reasons. Sometimes it's because they're upset about personal problems and don't know how to cope. But drugs can make these problems worse.

Treatment can help people work on the problems in their lives, such as family trouble, money trouble, or problems at work.

Drug use can mess up every part of a person's life. So **treatment** needs to work with all areas of your life—your relationships, your work, the way you have fun, and how you deal with problems.

Treatment can help people who are just starting to get addicted. You don't have to be at "rock bottom" for treatment to work.

When someone quits taking drugs and starts learning how to live life without drugs, we say they are "in recovery."



Recovery From Addiction

The drug and alcohol recovery process usually includes 6 steps:

1. Realize that you have a problem with alcohol or drugs and that you need to make a change.
2. Figure out what kind of rehab program is right for you: inpatient, outpatient or 12-Step.
3. Get support from friends, family and other sober people.
4. Maintain your sobriety by controlling triggers and cravings and participating in an aftercare program.
5. Start to build a new life by finding new hobbies, volunteering and setting life goals.
6. Don't get discouraged if you relapse and make a plan to get your recovery back on track.

Source: www.recovery.org



Thank you for your time!

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- ▶ Today's Presenter: Donna McCain, Prevention Specialist, dmccain@Cenikor.org, Elyse Greenamyre , EGreenamyre@Cenikor.org
- ▶ If you would like to schedule a Tobacco, Alcohol, or other Drug presentation, lunch booth or have a curriculum provided in your school contact:
Carla Merritt, LMSW,LCDC,CPS at cmerritt@cenikor.org
- ▶ If you have questions about adolescent treatment, adult treatment, or the Youth Recovery Community program contact:
Carla Merritt, LMSW,LCDC,CPS at cmerritt@cenikor.org

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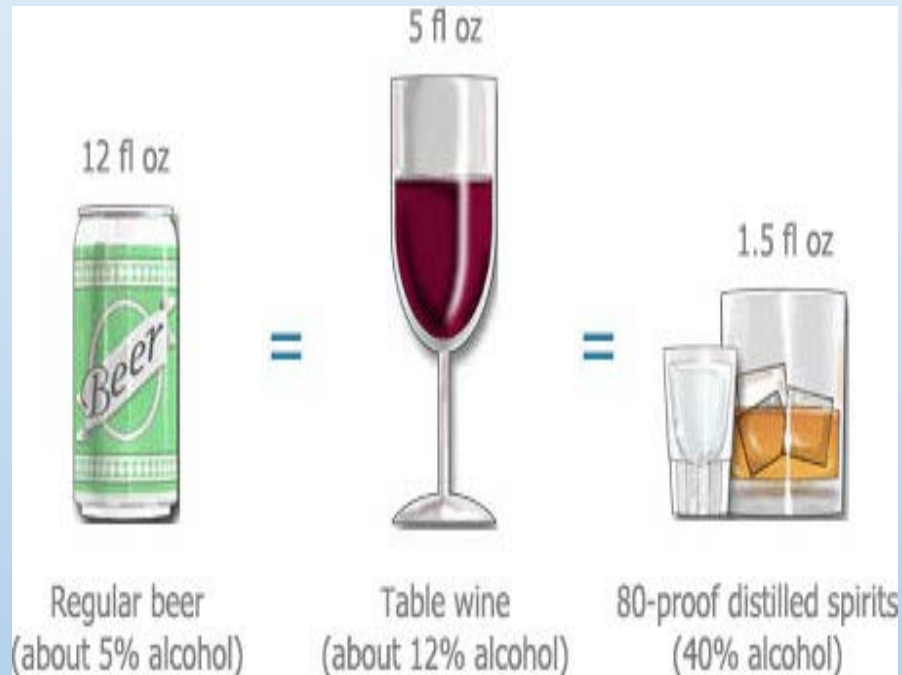
Drug Facts



- Alcohol
- Marijuana/Synthetic Marijuana
- Tobacco/Electronic Cigarettes
- Prescription Drugs/Opioids

Alcohol

Alcohol is a drug contained in beverages such as beer, wine, wine coolers and liquor. It is absorbed through the walls of the stomach and intestines and into the bloodstream. It travels through the blood to the brain. Once it reaches the brain, it depresses or slows down the brain's activity. Alcohol alters a person's perceptions, emotions, movement, vision, and hearing.



What counts as a drink?

Many people are surprised to learn what counts as a drink. In the United States, a "**standard**" drink is any drink that contains about 0.6 fluid ounces or 14 grams of "pure" alcohol. Although the drinks pictured here are different sizes, each contains approximately the same amount of alcohol and counts as a single standard drink.

ALCOHOL CAUSE AND EFFECT

Number of drinks	Blood alcohol	Behavior and symptoms
1-2 drinks	.02-.06%	Reduced inhibitions, impaired judgement, relaxed feeling, increased heart rate
3-4 drinks	.08-.12%	Lower brain function and level of concentration, less aware of surroundings
5-6 drinks	.14-.15%	Impaired coordination, obvious delays in reaction time, clumsiness, talkativeness, impaired vision, judgement is nil
6-8 drinks	.16-.20%	Falling over drunk, obnoxious, loud, clumsy, nauseated, impaired mental functions
8-10 drinks	.20-.30%	May be passed out, unable to walk without help, have tears or rage, double vision, no judgement
10-15 drinks	.30-.50%	If conscious, high degrees of uninhibited behavior, no balance or coordination, death is possible

Source: University of California-Davis

Note: Blood alcohol level depend on many factors, including a person's weight and amount of food in the stomach.

- Most people face serious risk once blood-alcohol levels exceed 0.30.
- About half the population at a level of 0.50 is expected to die.
- There are dozens of factors that affect reactions to alcohol: Male or female, body weight, time of day, your expectations, when you last ate food, etc.

Short Term Effects:

- Slurred speech
- Drowsiness
- Vomiting
- Diarrhea
- Upset stomach
- Headaches
- Breathing difficulties
- Distorted vision and hearing
- Impaired judgment
- Decreased perception and coordination
- Unconsciousness
- Anemia (loss of red blood cells)
- Coma
- Blackouts (memory lapses, where the drinker cannot remember events that occurred while under the influence)

Long Term Health Effects:

- Alcohol poisoning
- High blood pressure, stroke, and other heart-related diseases
- Liver disease
- Nerve damage
- Permanent damage to the brain
- Vitamin B1 deficiency, which can lead to a disorder characterized by amnesia, apathy and disorientation
- Ulcers
- Gastritis (inflammation of stomach walls)
- Malnutrition
- Cancer of the mouth and throat
- Death from Withdrawal

In **Texas**, a person is legally intoxicated and may be arrested and charged with **Driving While Intoxicated (DWI)** with a **.08 BAC** (blood or breath alcohol concentration).

Alcohol Impairment Chart for Females

APPROXIMATE BLOOD ALCOHOL PERCENTAGE									
Drinks	Body Weight in Pounds								
	90	100	120	140	160	180	200	220	
0	.00	.00	.00	.00	.00	.00	.00	.00	ONLY SAFE DRIVING LIMIT
1	.05	.05	.04	.03	.03	.03	.02	.02	IMPAIRMENT BEGINS
2	.10	.09	.08	.07	.06	.05	.05	.04	DRIVING SKILLS SIGNIFICANTLY AFFECTED
3	.15	.14	.11	.10	.09	.08	.07	.06	
4	.20	.18	.15	.13	.11	.10	.09	.08	
5	.25	.23	.19	.16	.14	.13	.11	.10	POSSIBLE CRIMINAL PENALTIES
6	.30	.27	.23	.19	.17	.15	.14	.12	
7	.35	.32	.27	.23	.20	.18	.16	.14	LEGALLY INTOXICATED
8	.40	.36	.30	.26	.23	.20	.18	.17	
9	.45	.41	.34	.29	.26	.23	.20	.19	CRIMINAL PENALTIES
10	.51	.45	.38	.32	.28	.25	.23	.21	

Your body can get rid of approximately one drink per hour.
One 1 1/2 oz. of 80-proof liquor, 12 oz. of beer, or 5 oz. of wine = 1 drink

NOTE: BAC percentages represent how many drinks are in the system at that time—not how many a person has had over any period of time.

Alcohol Impairment Chart for Males

APPROXIMATE BLOOD ALCOHOL PERCENTAGE									
Drinks	Body Weight in Pounds								
	100	120	140	160	180	200	220	240	
0	.00	.00	.00	.00	.00	.00	.00	.00	ONLY SAFE DRIVING LIMIT
1	.04	.03	.03	.02	.02	.02	.02	.02	IMPAIRMENT BEGINS
2	.08	.06	.05	.05	.04	.04	.03	.03	DRIVING SKILLS SIGNIFICANTLY AFFECTED
3	.11	.09	.08	.07	.06	.06	.05	.05	
4	.15	.12	.11	.09	.08	.08	.07	.06	
5	.19	.16	.13	.12	.11	.09	.09	.08	POSSIBLE CRIMINAL PENALTIES
6	.23	.19	.16	.14	.13	.11	.10	.09	
7	.26	.22	.19	.16	.15	.13	.12	.11	LEGALLY INTOXICATED
8	.30	.25	.21	.19	.17	.15	.14	.13	
9	.34	.28	.24	.21	.19	.17	.15	.14	CRIMINAL PENALTIES
10	.38	.31	.27	.23	.21	.19	.17	.16	

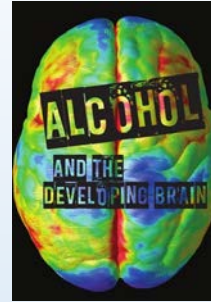
Your body can get rid of approximately one drink per hour.
1 1/2 oz. of 80-proof liquor, 12 oz. of beer, or 5 oz. of wine = 1 drink

Signs and Symptoms of Alcohol Use

- Odor on the breath, Intoxication, Difficulty focusing, Glazed appearance of the eyes, Changes in normal behavior, Smell of alcohol on their breath, Bloodshot eyes, and Withdrawn.

Impact of alcohol on the developing brain

The brain doesn't fully develop until age 25.



Alcohol affects two crucial parts of the brain which are vulnerable when a teenager is developing. This can result in irreversible brain changes that can impact decision making, personality, memory and learning.

Prefrontal lobe

The prefrontal lobe is important for planning, judgement, decision making, impulse control and language.

Research with heavy drinking adolescents' shows that these young people have smaller prefrontal lobes

Hippocampus

The hippocampus is responsible for memory and learning.

Studies of adolescents show that heavy and extended alcohol use is associated with a 10% reduction in the size of the hippocampus. may be poisonous to the nerve cells of the hippocampus causing them to be damaged or destroyed.³ It also shows that the function of the hippocampus is uniquely sensitive to alcohol at this time and that alcohol

The earlier a person starts drinking alcohol (drinking at levels that are likely to cause injury or ill-health)³, the greater the risk of changing the development of the brain. This can lead to problems with memory and learning, and increases the risk of having alcohol-related problems later in life.^{8>/sup>}

What about the future?

Alcohol can affect a child's brain which continues to develop until their early twenties. Alcohol can negatively impact on a young person's problem solving skills and performance at school, as well as potentially affecting their body, mood and mental health.⁹

MIXING OPIATES WITH ALCOHOL

ENTERHEALTH
ADDICTION TREATMENT



- Mixing alcohol and opiates is dangerous in several ways, including the fact that each increases the negative effects of the other.
- Alcohol increases the depressant effects of opiates, while opiates can increase the body's rate of absorption of alcohol – enhancing alcohol's sedative properties.
- The biggest danger of combining alcohol and opiates is the lowering of the heart rate and shallowness of breathing. This combination can lead to unconsciousness, coma and even death.

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The Effects of An Alcohol and Weed Combination

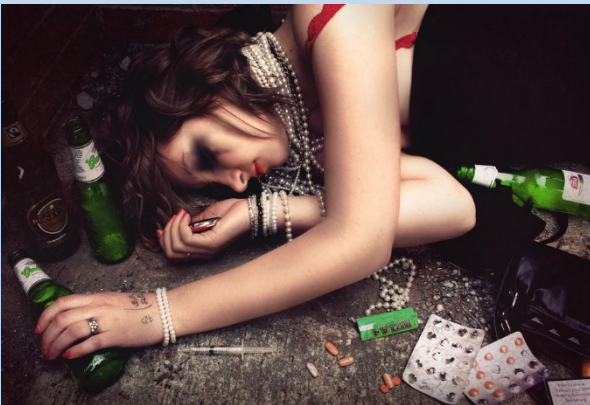
- Both THC, which is in marijuana, and alcohol are psychoactive. THC acts on cannabinoid receptors in the brain, which is why so many of the symptoms of being high are cognitive.
- ... alcohol widens the blood vessels in the gastrointestinal tract, allowing for the faster absorption of the THC.
- While most people who use an alcohol and weed combination report a “higher high,” the lows can also become amplified. For example, increased heart rate and impaired judgment symptoms are more obvious. <https://www.therecoveryvillage.com/alcohol-abuse/alcohol-and-weed/#gref>



- *Cardiovascular and respiratory effects*
- *Increased potential for unconsciousness or comatose states*
- *Increased potential for liver and kidney damage*
- *Increased potential for peculiar side effects*
- *physical dependence*
- *substance use disorder*

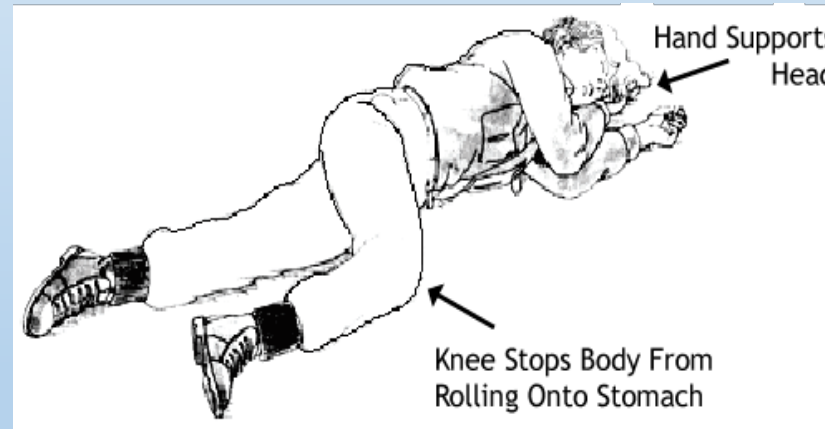
Alcohol Poisoning

- Alcohol poisoning is a serious — and sometimes deadly — consequence of drinking large amounts of alcohol 3-4 drinks within an hour or a shorter period of time.
- Alcohol depresses brain and breathing functions, sometimes causing breathing to stop. In other cases, the person can fall into a coma, often choking on vomit or saliva.



Signs of Alcohol Poisoning

- Confusion
- Vomiting
- Seizures
- Slow breathing (less than 10 breaths a minute)
- Irregular breathing
- Blue-tinged skin or pale skin
- Low body temperature (hypothermia)
- Unconsciousness ("passing out"), and can't be roused



If there is any suspicion of an alcohol overdose, call 911.
9-1-1 Life Law
Request- Remain-
Cooperate

Texas Social Host Law



The Texas social host law is in Section 2.02 of the Texas Alcoholic Beverage Code. **It holds party hosts liable in two circumstances: if the hosts knowingly serve alcohol to minors on their property, or if the hosts supply car keys to an intoxicated adult on the host's property.**



Marijuana



Today's Marijuana is not the same as the Marijuana in the 1970's



THC levels have been steadily rising 1970's- 1% THC - Today: Average is 8-30% and higher



THC & CBD Often Work in Opposition

THC

Euphoria
Anxiety
Psychosis
Cognitive impairment
Hunger



Recreational users



CBD

No euphoria
Anti-anxiety
Anti-psychotic
No cognitive impairment



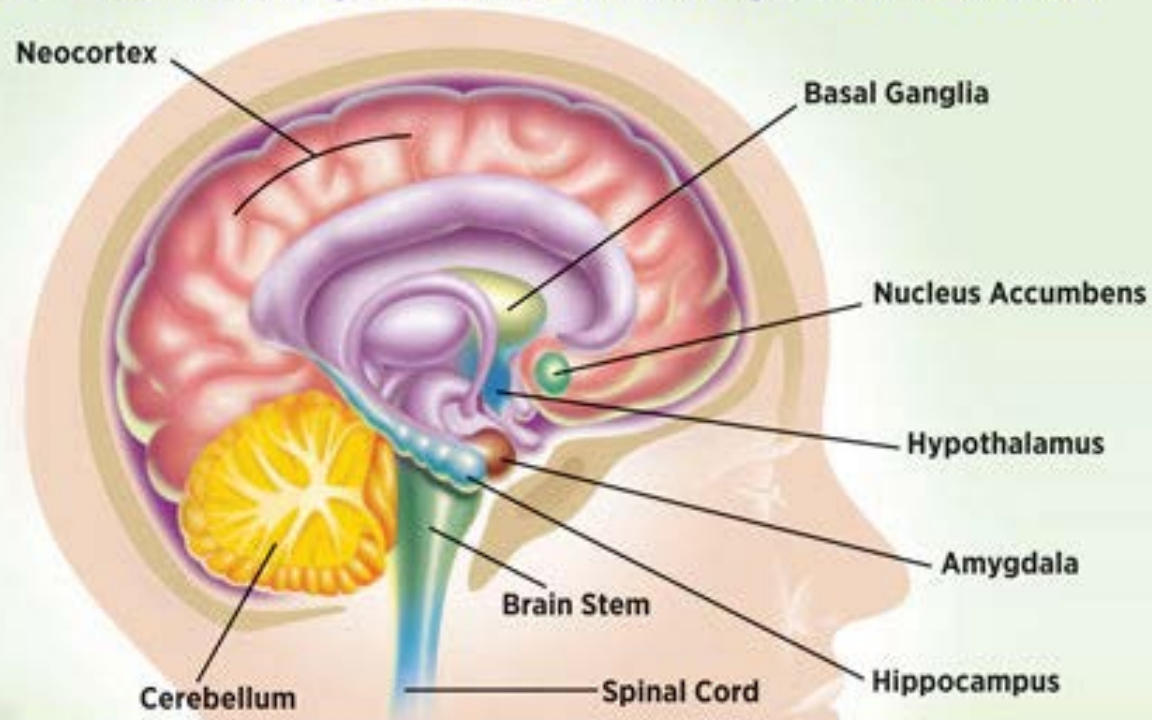
Drug companies

MARIJUANA BASICS



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How does THC affect behavior? *It depends on where the CB receptors are in the brain.*



Brain Structure	Regulates	THC Effect on User
Amygdala	emotions, fear, anxiety	panic/paranoia
Basal Ganglia	planning/starting a movement	slowed reaction time
Brain Stem	information between brain and spinal column	antinausea effects
Cerebellum	motor coordination, balance	impaired coordination
Hippocampus	learning new information	impaired memory
Hypothalamus	eating, sexual behavior	increased appetite
Neocortex	complex thinking, feeling, and movement	altered thinking, judgment, and sensation
Nucleus Accumbens	motivation and reward	euphoria (feeling good)
Spinal Cord	transmission of information between body and brain	altered pain sensitivity

The brain structures illustrated above all contain high numbers of CB receptors

Revised March 2017



What is Medical Marijuana?

The term medical marijuana refers to using the whole, unprocessed marijuana plant or its basic extracts to treat symptoms of illness and other conditions. The U.S. Food and Drug Administration (FDA) has not recognized or approved the marijuana plant as medicine.

Currently, the two main cannabinoids from the marijuana plant that are of medical interest are **THC and CBD**.

THC can increase appetite and reduce nausea. THC may also decrease pain, inflammation (swelling and redness), and muscle control problems.

Unlike THC, **CBD is a cannabinoid that doesn't make people "high."** These drugs aren't popular for recreational use because they aren't intoxicating. It may be useful in reducing pain and inflammation, controlling epileptic seizures, and possibly even treating mental illness and addictions. Many researchers, including those funded by the National Institutes of Health (NIH), are continuing to explore the possible uses of THC, CBD, and other cannabinoids for medical treatment.

It may be useful in reducing pain and inflammation, controlling epileptic seizures, and possibly even treating mental illness and addictions.

MARIJUANA SIDE EFFECTS

Marijuana impacts mental health

- 40% greater risk of psychosis when using at age 15 or earlier
- Worsens Anxiety/PTSD disorders
- Can impact social connection
- Researchers still think cannabis can trigger schizophrenia in people predisposed to the disease



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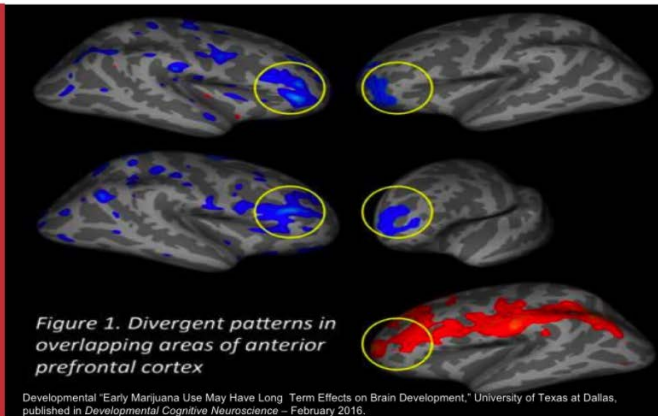
Marijuana Signs and Symptoms of Use*

- Rapid, loud talking and bursts of laughter in early stages of intoxication
- Sleepy or dazed in the later stages
- Forgetfulness in conversation
- Altered senses and coordination
- Differences in mood
- Loss of interest or motivation
- Distinct odor in clothes and breath
- Use or possession of paraphernalia including rolling papers, lighters, pipes or bongs

CURRENT MARIJUANA RESEARCH

Participants who began using marijuana at age 16 or younger demonstrated brain variations indicating arrested development in the prefrontal cortex, the part of brain responsible for judgment, reasoning and complex thinking

Marijuana shown to stop "pruning of neurons", which is important for gaining knowledge.



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Photo credit: Center for Brain Health 33

Toxic effects — Recreational cannabis intake to achieve psychoactive effects can often result in adverse effects because there is no clear demarcation between doses that achieve symptoms desired by a marijuana user and noxious effects.

In adolescents and adults, inhaled doses of 2 to 3 mg of delta-9 tetrahydrocannabinol (THC) and ingested doses of 5 to 20 mg THC **impair attention, concentration, short-term memory and executive functioning** [15,17-26,42-47]. More severe adverse effects may occur at doses >7.5 mg/m² THC, including **nausea, postural hypotension, delirium, panic attacks, anxiety, and myoclonic jerking** [42,43]. **Psychosis** has also been associated with use of higher potency/concentrated marijuana products [48,49].



Shop window with cannabis products. Photo by nickolette)

DRUG ALERT: MARIJUANA EDIBLES

WHAT IS IT?

Edibles are food products infused with marijuana. Though smoking marijuana is the most prevalent method of consumption, eating marijuana is quickly becoming a popular way to consume the drug.

Brownies are among the most common food products infused with marijuana, however, almost any food product may be infused with marijuana and eaten.

In addition to placing marijuana directly in food, marijuana-infused cooking oil can be used when frying or searing food, and marijuana-infused butter can be spread directly on prepared food.

These marijuana edibles are more common in states that have legalized marijuana and also states that permit medical marijuana use.

https://www.justthinktwice.gov/article/drug-alert-marijuana-edibles?utm_medium=email&utm_source=govdelivery

SYNTHETIC MARIJUANA

What is it made of?

- A mixture of olive colored spices, herbs, and plant shreds sprayed with a synthetic psychoactive chemical compound.
- Cannabimimetics
- Each sample is a unique mixture of untested chemicals



Product names

Spice	Kush
K2	Skunk
GenieZohai	Scence
Dragon	Pulse
Bombay blue	Bliss
Cloud	Serenity
	Space
	Puff
	Pep spice...the list goes on!!!!

► Typically inhaled through...
Joints, Bongs, or pipes



Synthetic THC?

- Synthetic Marijuana - more potent than regular marijuana; multiply all of the risks by a factor of 10 to get overall risk of experimenting with either of these drugs

Side effects include: intoxication, withdrawal, psychosis, coma, suicide attempts and even death

Why is it so popular?

- The drug is marketed as a legal substitute for marijuana because some of the effects are similar to those of a marijuana high and it is less detectable by a standard drug test.
- Some of the chemicals can be detected in drug tests



FDA Statement

Statement from FDA warning about significant health risks of contaminated illegal synthetic cannabinoid products that are being encountered by FDA For Immediate Release July 19, 2018

The U.S. Food and Drug Administration has become aware of reports of **severe illnesses and deaths resulting from the use of synthetic cannabinoid (marijuana) products that have been contaminated with brodifacoum**, a very long-acting anticoagulant commonly used in rat poison.

Synthetic Marijuana Signs And Symptoms Of Use

- Severe anxiety
- Agitation
- High blood pressure
- Rapid heart rate
- Nausea
- Vomiting
- Seizures
- Tremors
- Intense hallucinations
- Psychotic episodes Suicidal or violent thoughts
- Heart attacks
- Brain Damage
- Death
- Long term users may experience withdrawal effects and addiction symptoms.



TOBACCO

Cigarettes



Pipes



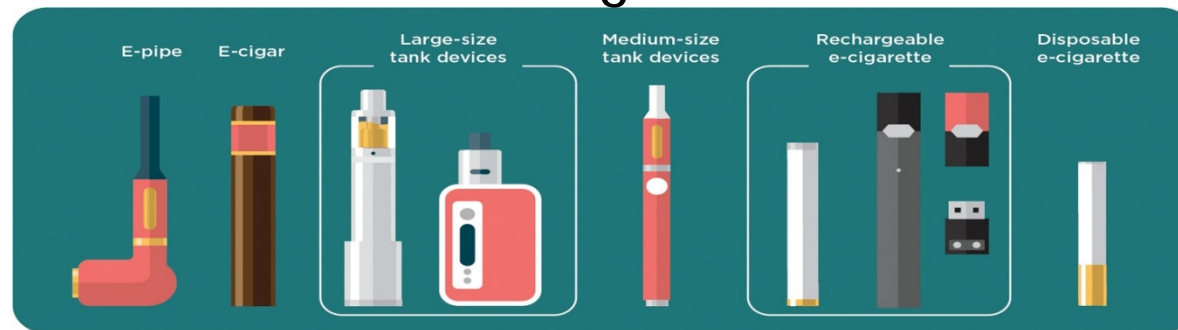
Smokeless Tobacco



Cigar



Electronic Cigarettes & Juul



Texas raises tobacco age to 21 as e-cigarette use grows among youth

•By [KRISTIN HOPPA khoppa@wacotrib.com](mailto:KRISTIN_HOPPA_khoppa@wacotrib.com) Aug 31, 2019

• The legal age raises Sunday from 18 to 21 for the sale, distribution, possession, purchase, consumption or receipt of cigarettes, e-cigarettes, dip and all other tobacco products in the state of Texas.

Why Is Nicotine Unsafe for Kids, Teens, and Young Adults

- Most e-cigarettes contain nicotine—the addictive drug in regular cigarettes, cigars, and other tobacco products.
- Nicotine can harm the developing adolescent brain.¹ The brain keeps developing until about age 25.
- Using nicotine in adolescence can harm the parts of the brain that control attention, learning, mood, and impulse control.¹
- Each time a new memory is created or a new skill is learned, stronger connections – or synapses – are built between brain cells. Young people's brains build synapses faster than adult brains. Nicotine changes the way these synapses are formed.
- Using nicotine in adolescence may also increase risk for future addiction to other drugs.¹



Staff photo illustration — Rod Aydelotte

Because nicotine affects the development of the brain's reward system, continued e-cigarette use can not only lead to nicotine addiction, but it also can make other drugs such as cocaine and methamphetamine more pleasurable to a teen's developing brain.¹⁰

Nicotine also affects the development of brain circuits that control attention and learning. Other risks include mood disorders and permanent problems with impulse control—failure to fight an urge or impulse that may harm oneself or others.¹⁰

Smokeless Tobacco

- Some people think that smokeless tobacco is a safe alternative to smoking...

Smokeless tobacco contains 28 different cancer-causing ingredients.



Smokeless tobacco users have a 50 times greater risk of oral cancer than non-users.

It also contains the addictive drug **NICOTINE**.

Secondhand Smoke(SHS)

- What is it? Smoke from the burning end of cigarettes, pipes, cigars
- Health effects of secondhand smoke
 - Increases chance of bronchitis
 - Increased ear infections
 - Increased asthma
 - Increased pneumonia

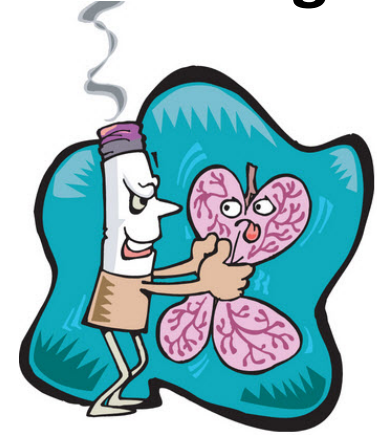


Short-Term Effects of Tobacco



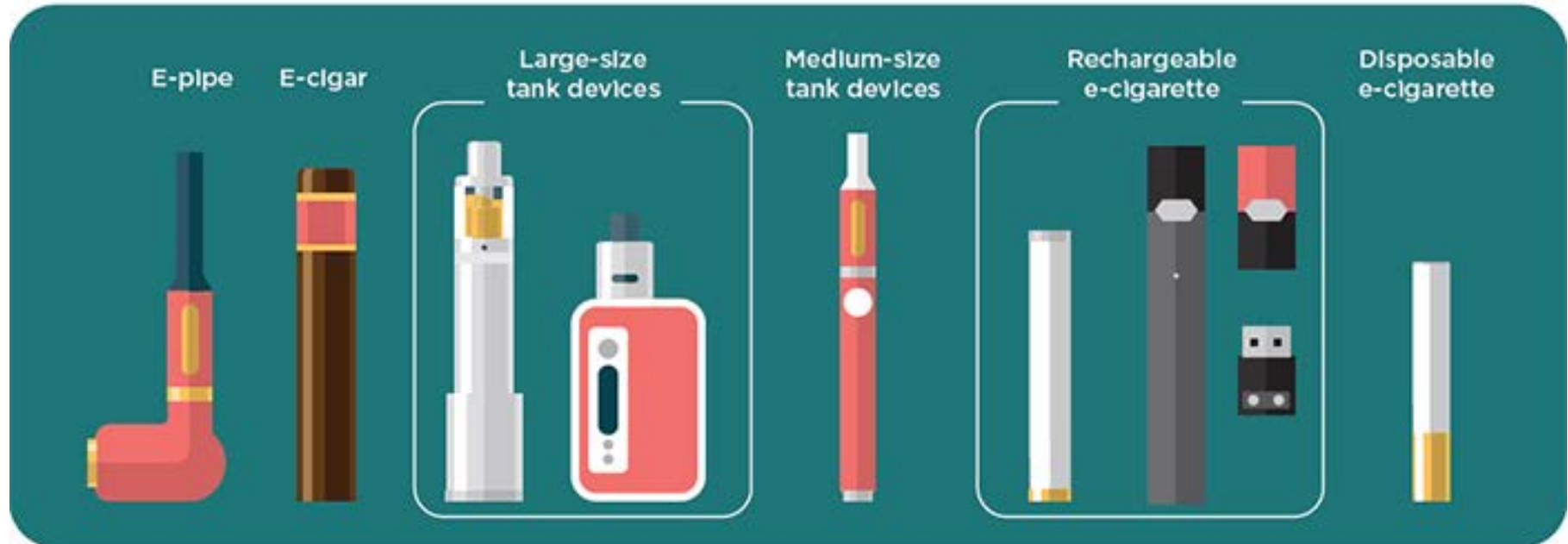
- Heart - Causes it to beat faster
- Eyes - Causes them to become red
- Mouth - Deadens taste buds, causes bad breath
- Throat - Causes bad coughs
- Nose - Decreases the ability to smell
- Teeth & Fingers - Stains teeth and fingers a brownish-yellow color
- Lungs - Begins to turn lungs black from tar
- Causes hair and clothes to smell

Long- Term Effects of Smoking



- Chronic Bronchitis
- Lung Cancer
- The Circulatory System
- Vascular Disease
- Oral Cancer

E-Cigarettes



Some e-cigarettes look like regular cigarettes, cigars, or pipes.

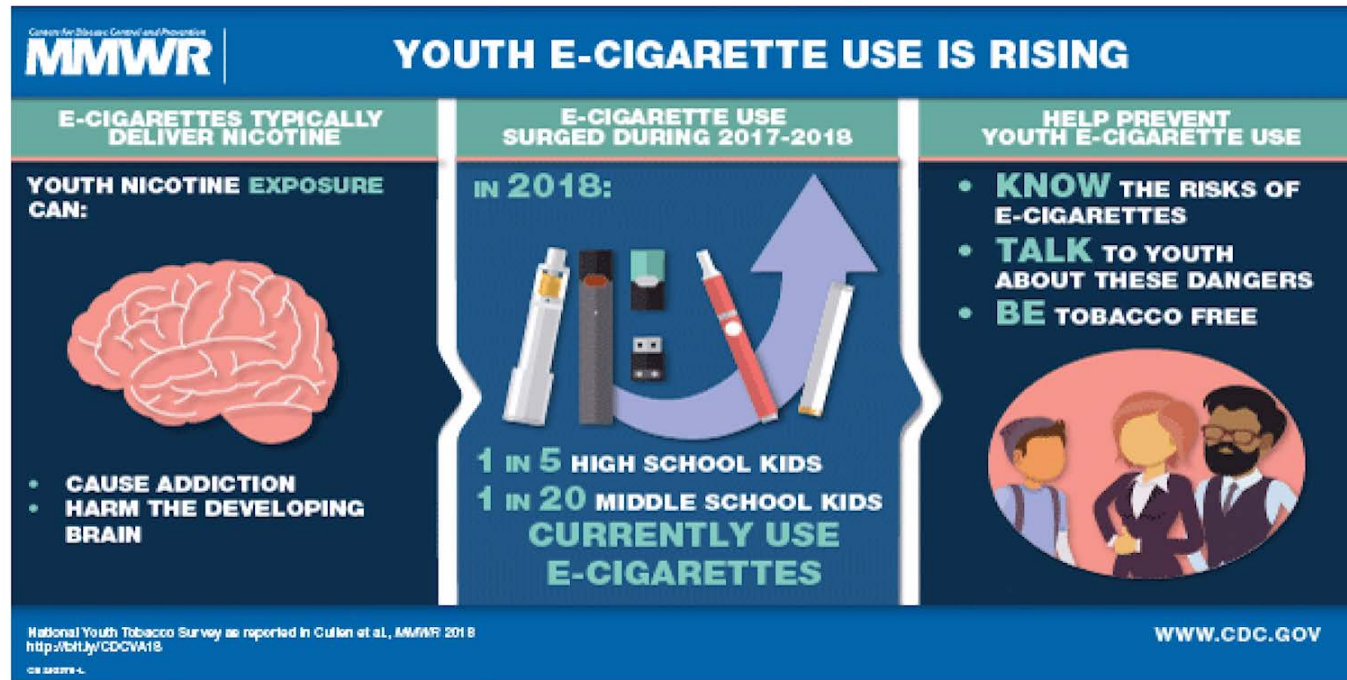
Some look like USB flash drives, pens, and other everyday items.

E-cig Quiz

<https://e-cigarettes.surgeongeneral.gov/getthefacts.html?ANS=5#quiz-content>

SAMHSA's 15th Annual Prevention Day Afternoon Plenary Recording – February 4, 2019

Youth E-cigarette Use: Infographic from CDC's MMWR



Source: Cullen KA, Ambrose BK, Gentzke AS, Apelberg BJ, Jamal A, King BA. *Notes from the Field: Use of Electronic Cigarettes and Any Tobacco Product Among Middle and High School Students — United States, 2011–2018.* MMWR Morb Mortal Wkly Rep 2018;67:1276–1277.

Scroll for details

E-CIGARETTES/VAPING –OTHER DANGERS

ENTERHEALTH

ADDICTION TREATMENT



- Batteries can explode, causing burns and projectile injuries
- E-liquids contain a variety of unknown substances/toxicities when heated
- Exposure to e-liquids can cause medical problems-seizures, vomiting, brain injury from lack of oxygen, death
- Dripping onto outside heating element can be very toxic and dangerous
- Only 4-5 years of data-don't know long term health effects

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- Children and adults have been poisoned by swallowing, breathing, or absorbing e-cigarette liquid through their skin or eyes.

Monitoring the future study <https://www.youtube.com/watch?v=tYWG8P4FJKU>



CDC

Outbreak of Severe Pulmonary Disease Associated with Using E-cigarette Products

Investigation Notice

Posted August 30, 2019 at 5:15pm ET

CDC, U.S. Food and Drug Administration (FDA), state and local health departments, and other clinical and public health partners are investigating a multistate outbreak of severe pulmonary disease associated with e-cigarette product (devices, liquids, refill pods, and/or cartridges) use. This investigation is ongoing and has not identified a cause, but all reported cases have a history of using e-cigarette products.

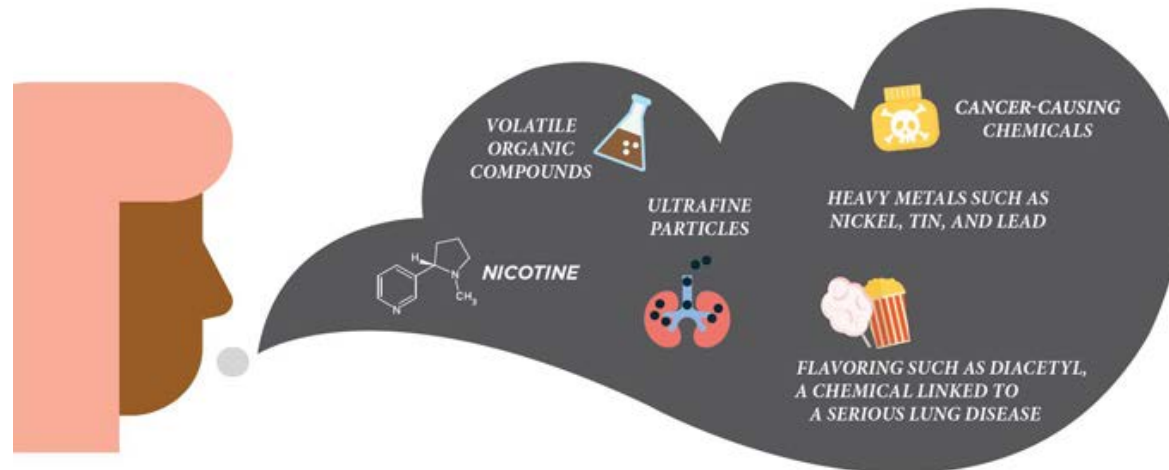
[E-cigarettes](#) are devices that deliver an aerosol to the user by heating a liquid that usually contains nicotine, flavorings, and other chemicals. E-cigarettes can also be used to deliver marijuana or other substances.

Latest Outbreak Information

- As of August 27, 2019, 215 possible cases of severe pulmonary disease associated with the use of electronic cigarette, or [e-cigarette](#), products, have been reported by 25 states and additional pulmonary illnesses are under investigation.

What Is in E-cigarette Aerosol?

- E-cigarette aerosol is NOT harmless “water vapor.”
- 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
 - Flavoring such as diacetyl, a chemical linked to a serious lung disease
 - Volatile organic compounds
 - Cancer-causing chemicals
 - Heavy metals such as nickel, tin, and lead¹
- It is difficult for consumers to know what e-cigarette products contain. For example, some e-cigarettes marketed as containing zero percent nicotine have been found to contain nicotine.³



What Is JUUL?

News outlets and social media sites report widespread use of JUUL by students in **schools, including classrooms and bathrooms.**

- **JUUL is a brand of e-cigarette that is shaped like a USB flash drive. Like other e-cigarettes, JUUL is a battery-powered device that heats a nicotine-containing liquid to produce an aerosol that is inhaled.**

- All JUUL e-cigarettes have a high level of nicotine. According to the manufacturer, **a single JUUL pod contains as much nicotine as a pack of 20 regular cigarettes.**²

- News outlets and social media sites report widespread use of JUUL by students in schools, including classrooms and bathrooms.

- Although JUUL is currently the top-selling e-cigarette brand in the United States, other companies sell e-cigarettes that look like USB flash drives. Examples include the MarkTen Elite, a nicotine delivery device, and the PAX Era, a marijuana delivery device that looks like JUUL.

- Additional information about USB-shaped e-cigarettes and actions that parents, educators, and health care providers can take to protect kids is available at [CDC's Infographic](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html) [PD]



Prescription drugs

Prescription drug abuse is the use of a medication without a prescription, in a way other than as prescribed, or for the experience or feelings elicited.

Nearly one in five teens say they have used prescription medicine at least once in their lifetime to get high.



(Drug overdoses killed more people in 2015 than HIV/AIDS at it's 1995 peak. www.vox.com)



At one point or another, we've all used prescription drugs or over-the-counter (OTC) medicines to alleviate an illness – whether it's to relieve pain or curb a cough. Unfortunately, too many young people and adults are abusing these drugs for a quick high. <https://www.hamiltoncoalition.com/prescriptiondrugs>

Prescription drug misuse and abuse is the intentional or unintentional use of medication **without** a prescription, in a way other than prescribed, or for the experience or feeling it causes. Opioid overdose claims the lives of more than **192 people per day**.

www.samhsa.gov

In 2016, approximately 11.8 million people aged 12 or older misused opioids in the past year (Figures 27 and 28). This number represents 4.4 percent of the population aged 12 or older. About 891,000 adolescents aged 12 to 17 misused opioids in the past year. This number corresponds to 3.6 percent of adolescents misusing opioids in the past year.

Classes of Prescription Drugs Most Commonly Abused

Opioid pain relievers, such as Vicodin or Oxycontin

Central nervous system (CNS) depressants for relieving anxiety, such as Valium or Xanax

Stimulants for treating Attention Deficit Hyperactivity Disorder (ADHD), such as Adderall, Concerta, or Ritalin

Prescription Use Signs & Symptoms

Opioid painkillers

Constipation

Nausea

Feeling high (euphoria)

Slowed breathing rate

Drowsiness

Confusion

Poor coordination

Increased pain

with higher doses

Depressants

Drowsiness

Confusion

Unsteady walking

Slurred speech

Poor concentration

Dizziness

Problems with memory

Slowed breathing

Stimulants

Reduced appetite

Agitation

High body temperature

Insomnia

High blood pressure

Irregular heartbeat

Anxiety

Paranoia



Opioid Painkillers: How do these drugs work?

These drugs are easily absorbed through the gastrointestinal tract and attach to one or more of the four types of opiate receptors in the brain. When receptors are stimulated, they reduce pain without eliminating its cause. They produce sleepiness, euphoria and respiratory depression. And they slow gut function, leading to constipation. Peak effects generally are reached in 10 minutes if taken intravenously—30-45 minutes with an intramuscular injection, and 90 minutes by mouth.

How opioids kill?

These medications are **dangerous because the difference between the amount needed to feel their effects and the amount needed to kill a person is small and unpredictable. Respiratory depression is the chief hazard associated with opioid painkillers.** Other especially problematic drugs—in particular alcohol, sleeping pills and anti-anxiety medications—**increase the respiratory depression caused by opioids.** So if someone is drinking or taking sleeping pills and takes what would be usual doses of opioids, he or she may pass out, stop breathing and die. Mixing extended-release and long-acting opioids can be deadly. The pain-relieving and euphoria inducing aspect of opioids may wear off before the tendency to depress breathing does. This is especially true of methadone. Methadone's peak respiratory effects typically occur later, and last longer, than its peak painkilling effects. Overdoses often occur when someone takes methadone for the first time or the dose is increased. What is worse, doctors prescribing various opioid medications may not understand how different opioid brands are metabolized, how different drugs interact and how this affects overdose potential.

Long-term opioid use changes the way nerve cells work in the brain. This happens even to people who take opioids for a long time to treat pain, as prescribed by their doctor.

How Does Someone Become Addicted to Opioids?

The nerve cells grow used to having opioids around, so that when they are taken away suddenly, the person can have lots of unpleasant feelings and reactions. These are known as withdrawal symptoms.

Have you ever had the flu? You probably had aching, fever, sweating, shaking, or chills. These are similar to withdrawal symptoms, but withdrawal symptoms are much worse.

WITHDRAWAL SYMPTOMS

Prescription Opioids: Restlessness, Muscle and bone pain, Insomnia, Diarrhea, Vomiting, Cold flashes with goose bumps, and Leg movements

Prescription Sedatives & Tranquilizers: Seizures, Shakiness, Anxiety, Agitation, Insomnia, Overactive, reflexes Increased heart rate, blood pressure, and temperature with sweating, Hallucinations and Severe cravings

Prescription Stimulants: Depression, Tiredness and Sleep Problems

Treatment of Opioid Addiction

Effective Medications are Available

Medications, including buprenorphine (Suboxone®, Subutex®), methadone, and extended release naltrexone (Vivitrol®), are effective for the treatment of opioid use disorders.

- Buprenorphine and methadone are “essential medicines” according to the World Health Organization.³

- A NIDA study shows that once treatment is initiated, a buprenorphine/naloxone combination and an extended release naltrexone formulation are similarly effective in treating opioid use disorder. However, because naltrexone requires full detoxification, initiating treatment among active users was more difficult with this medication. Once detoxification was complete, both medications had a similar effectiveness.

- Medications should be combined with behavioral counseling for a “whole patient” approach, known as Medication Assisted Treatment (MAT).

<https://www.drugabuse.gov/publications/effective-treatments-opioid-addiction/effective-treatments-opioid-addiction>

[3. World Health Organization. Proposal for the inclusion of methadone in the WHO models list of essential medicines. \(2005\)](#)

SAFE USE OF PRESCRIPTION DRUGS

Patients can take steps to ensure that they use prescription medications appropriately by:

- **following the directions as explained on the label or by the pharmacist**
- **being aware of potential interactions with other drugs as well as alcohol**
- **never stopping or changing a dosing regimen without first discussing it with the doctor**
- **never using another person’s prescription, and never giving their prescription medications to others**
- **storing prescription stimulants, sedatives, and opioids safely**
- **Additionally, patients should properly discard unused or expired medications by following [U.S. Food and Drug Administration \(FDA\) guidelines](#)**

www.drugabuse.gov

What trends are you seeing in alcohol and drug use?



Tobacco Trends:

Tobacco companies are flavoring products to make them more attractive to Teens



Tobaccofreekids.org

MIXING OPIATES WITH ALCOHOL

ENTERHEALTH
ADDICTION TREATMENT



- Mixing alcohol and opiates is dangerous in several ways, including the fact that each increases the negative effects of the other.
- Alcohol increases the depressant effects of opiates, while opiates can increase the body's rate of absorption of alcohol – enhancing alcohol's sedative properties.
- The biggest danger of combining alcohol and opiates is the lowering of the heart rate and shallowness of breathing. This combination can lead to unconsciousness, coma and even death.

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The Effects of An Alcohol and Weed Combination

- Both THC, which is in marijuana, and alcohol are psychoactive. THC acts on cannabinoid receptors in the brain, which is why so many of the symptoms of being high are cognitive.
- ... alcohol widens the blood vessels in the gastrointestinal tract, allowing for the faster absorption of the THC.
- While most people who use an alcohol and weed combination report a “higher high,” the lows can also become amplified. For example, increased heart rate and impaired judgment symptoms are more obvious. <https://www.therecoveryvillage.com/alcohol-abuse/alcohol-and-weed/#gref>



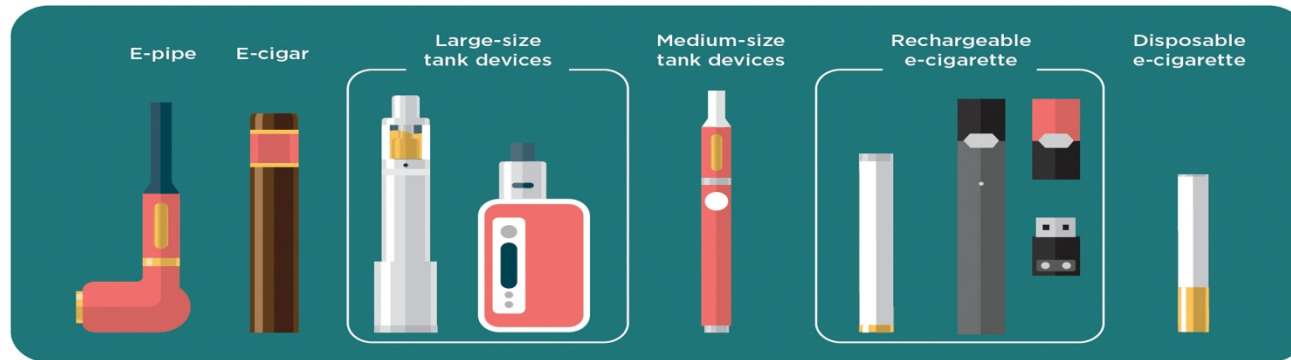
- *Cardiovascular and respiratory effects*
- *Increased potential for unconsciousness or comatose states*
- *Increased potential for liver and kidney damage*
- *Increased potential for peculiar side effects*
- *physical dependence*
- *substance use disorder*

Marijuana Trends



Vaporizers:

- Discreet and almost odorless
- Uses multiple forms of marijuana
- Marketed as a healthy alternative
- Effects have not been investigated by large scale studies



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Marijuana Trends cont.

Dabs:

- Marijuana concentrate
- Can contain up to 90% THC
- 1 Dab Pen contains as much as 200 hits



Dabs are concentrated doses of cannabis that are made by extracting THC and other cannabinoids using a solvent like butane or carbon dioxide, resulting in sticky oils.

These extracts can deliver extremely large amounts of THC to users, and their use has sent some people to the emergency room. Another danger is in preparing these extracts, which usually involves butane (lighter fluid).

Commonly referred to as wax, shatter, budder, and butane hash oil (BHO).

Possession of one to four grams of THC, hash oil, or a concentrate, however, is a felony offense that can result in a two to ten-year prison sentence and a maximum \$10,000 fine.

<https://www.peakandtoland.com/marijuana-oil-and-texas-law/>

Marijuana edibles

Edibles take longer to digest and produce a high. Therefore, people may consume more to feel the effects faster, leading to dangerous results.



Synthetic THC - A mixture of olive colored spices, herbs, and plant shreds sprayed with a synthetic psychoactive chemical compound.

- More potent than regular marijuana; multiply all of the risks by a factor of 10 to get overall risk of experimenting with either of these drugs .

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Agitation
High blood pressure
Rapid heart rate
Nausea
Vomiting
Seizures
Tremors
Intense hallucinations
Psychotic episodes
Suicidal or violent thoughts
Heart attacks
Brain Damage
Death
Long term users may experience
withdrawal effects and addiction
symptoms.



Alcohol Trends - Alcopops

A type of sweet, sugary and alcoholic beverage. They are often made with a mixture of vodka, white rum or wine and can be flavored to taste like a soda. These beverages are often marketed to young and inexperienced drinkers who enjoy sweet taste of the drink in preference to other drinks like wine, beer or spirits. They can contain up to 15 percent alcohol yet have very little alcoholic taste to them.



<http://alcoholrehab.com/alcoholism/alcopops/>



Powdered Alcohol

Students gather at State Capitol to push for powdered alcohol ban

•by: [Matthew Prendergast](#)

Posted: Feb 20, 2019 / 02:34 PM CST / Updated: Feb 20, 2019 / 05:35 PM CST

AUSTIN (TEXAS) — Students from across Texas gathered at the Capitol Tuesday to push for a ban on powdered alcohol.

Powdered alcohol is approximately the amount of a shot of alcohol processed into powdered form in the size of a Kool-Aid packet. The organization Texans Standing Tall says it poses a serious risk — especially to teenagers.

"Powdered alcohol is such a dangerous and unique product and with the already existing drinking problem on college campuses — it's only serving to increase and hurt the lives of Texas youth and youth across the nation," said Hannah Via with Texans Standing Tall's Youth Leadership Council.

“Syrup,” “Purple Drank,” “Sizzurp,” or “Lean”

- Soda mixed with prescription-strength cough syrup containing codeine and promethazine—these cough syrups are available by prescription only
 - Codeine is an opioid that can produce relaxation and euphoria when consumed in sufficient quantities.
 - Promethazine is an antihistamine that also acts as a sedative.
- Drinking this combination has become increasingly popular among some celebrities and youth in several areas of the country.



Heroin



What is it?

An opiate (narcotic) drug processed from morphine and extracted from certain poppy plants. Heroin comes in a white or brownish powder, or a black sticky substance known as “black tar heroin.” Often “cut” with other drugs or substances such as sugar or powdered milk. User is unaware how much actual heroin is being used, creating likelihood of overdose.

Street Names Big H, Black Tar, H, Horse, Junk, Ska, Smack, Thunder

How is it used? • It is injected with a needle, smoked or snorted. How does heroin affect your body? • Heroin enters the brain very quickly. • It is addictive both psychologically and physically. • It can depress breathing. Overdoses can be fatal.

WHAT IS FENTANYL? Fentanyl is a potent synthetic opioid drug approved by the Food and Drug Administration for use as an analgesic (pain relief) and anesthetic. It is approximately 100 times more potent than morphine and 50 times more potent than heroin as an analgesic.



What is the effect on the body? Fentanyl, similar to other commonly used opioid analgesics(e.g., morphine), produces effects such as relaxation, euphoria, pain relief, sedation, confusion, drowsiness, dizziness, nausea, vomiting, urinary retention, pupillary constriction, and respiratory depression.

What does it look like? Fentanyl pharmaceutical products are currently available in the following dosage forms: oral transmucosal lozenges commonly referred to as fentanyl “lollipops” (Actiq), effervescent buccal tablets (Fentora), sublingual tablets (Abstral), sublingual sprays (Subsys), nasal sprays (Lazanda), transdermal patches (Duragesic), and injectable formulations. Clandestinely produced fentanyl is encountered either as a powder or in counterfeit tablets and is sold alone or in combination with other drugs such as heroin or cocaine.

<https://www.dea.gov/factsheets/fentanyl>

WHAT IS METHAMPHETAMINE? Methamphetamine (meth) is a stimulant. The FDA approved brand-name medication is Desoxyn.



What are common street names? Common street names include: • Batu, Bikers Coffee, Black Beauties, Chalk, Chicken Feed, Crank, Crystal, Glass, Go-Fast, Hiropon, Ice, Meth, Methlies Quick, Poor Man's Cocaine, Shabu, Shards, Speed, Stove Top, Tina, Trash, Tweak, Uppers, Ventana, Vidrio, Yaba, and Yellow Bam

What does it look like? Regular meth is a pill or powder. Crystal meth resembles glass fragments or shiny blue-white "rocks" of various sizes.

How is it abused? Meth is swallowed, snorted, injected, or smoked. To intensify the effects, users may take higher doses of the drug, take it more frequently, or change their method of intake. **What is its effect on the mind?**

Meth is a highly addictive drug with potent central nervous system (CNS) stimulant properties. Those who smoke or inject it report a brief, intense sensation, or rush. Oral ingestion or snorting produces a long-lasting high instead of a rush, which reportedly can continue for as long as half a day. **Both the rush and the high are believed to result from the release of very high levels of the neurotransmitter dopamine into areas of the brain that regulate feelings of pleasure.** Long-term meth use results in many damaging effects, including addiction. Chronic meth users can exhibit violent behavior, anxiety, confusion, insomnia, and psychotic features including paranoia, aggression, visual and auditory hallucinations, mood disturbances, and delusions — such as the sensation of insects creeping on or under the skin.

Cocaine

What is it?

White, crystalline powder derived from coca leaves. Cocaine base (crack) looks like small, irregularly shaped white rocks.

Street Names

Coca, Coke, Crack, Crank, Flake, Rock, Snow, Soda Cot

How is it used?

- Snorted
- Dissolved in water and injected
- Crack cocaine is smoked
- Cocaine users usually binge on the drug until they are exhausted or run out of cocaine.

How does it affect the body?

- Smoking or injection creates an intense euphoric “rush”
- Tolerance builds quickly, easy to overdose
- Cardiac arrhythmias
- Increased blood pressure and heart rate
- Restlessness, irritability, anxiety, paranoia
- Insomnia, loss of appetite
- Stroke or death
- Sudden cardiac arrest
- Convulsion
- The crash that follows a high is mental and physical exhaustion, sleep, and depression lasting several days. Following the crash, users crave cocaine again.



Drugs Seized Locally



methamphetamine



Xanax



Hydrocodone



Crack Cocaine



Cocaine



Ecstasy

Marijuana



Marijuana Plant



Thank you for your time!

HAYS CALDWELL COUNCIL

A PROGRAM OF **CENIKOR** FOUNDATION

- ▶ Today's Presenter: Donna McCain, Prevention Specialist, dmccain@Cenikor.org, Elyse Greenamyre , EGreenamyre@Cenikor.org
- ▶ If you would like to schedule a Tobacco, Alcohol, or other Drug presentation, lunch booth or have a curriculum provided in your school contact:
Carla Merritt, LMSW,LCDC,CPS at cmerritt@cenikor.org
- ▶ If you have questions about adolescent treatment, adult treatment, or the Youth Recovery Community program contact:
Carla Merritt, LMSW,LCDC,CPS at cmerritt@cenikor.org

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For Healthy Tips for a Drug-Free Life text DRUGFREETX ENGL to 468-311 or LIBREDEDROGAS ESPL 468-311.