

A glass of beer with a cannabis leaf in the foreground. The glass is filled with a golden beer and has ice cubes. The cannabis leaf is green and serrated, resting on a wooden surface. The background is a blurred outdoor scene with water and a wooden pier.

Alcohol and Marijuana

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Alcohol: A Public Health Concern

- Alcohol use by teens has declined over the past decade.
- However, it still remains the most widely abused drug by adolescents.
- Underage drinking continues to be a serious health problem.
- Adolescent females have a higher incidence than males.

Why do teens drink?

Social Media

Peer Pressure



Observing
Adults Drinking

Hearing “I just need a
drink to relax.”

Advertising



Self-medication

Trends

Current alcohol use nearly quadruples from **9th grade (11%)** to **12th grade (42%)**.

By 12th grade, nearly one in three high school students reports *recent binge drinking* (**29%**).

MetroWest Youth Risk Behavior Survey, 2021

Binge Drinking



- Although youth drink less often than adults do, when they do drink, they drink more.
- Young people consume more than **90%** of their alcohol by binge drinking. (*National Institute on Alcohol Abuse and Alcoholism, 2019*)
- Females report higher rates of binge drinking.

Self Medicating

- **5%** of teens reported consuming alcohol **ALONE**. (*MetroWest Adolescent Health Survey, 2021, past 30 days*)
- Due to Anxiety, Depression, Isolation, Stress
- LGBTQ+ & minority youth are more likely to self-medicate.



Risk of Alcohol Use Disorder

Alcohol use prior to age 15:

4x more likely to meet criteria for alcohol dependence

2x more likely to meet criteria for alcohol abuse

Annual Deaths Due to Alcohol (under 21)

- **1,580** deaths from motor vehicle crashes
- **245** from alcohol poisoning, falls, burns, drowning
- **492** from suicides

(NIDA, 2019)

Drinking and Driving



5% of teen drivers drove after drinking alcohol

17% rode with a driver who had been drinking alcohol

(2019 CDC Youth Risk Behavior Survey)

Alcohol and High Risk Sexual Behavior

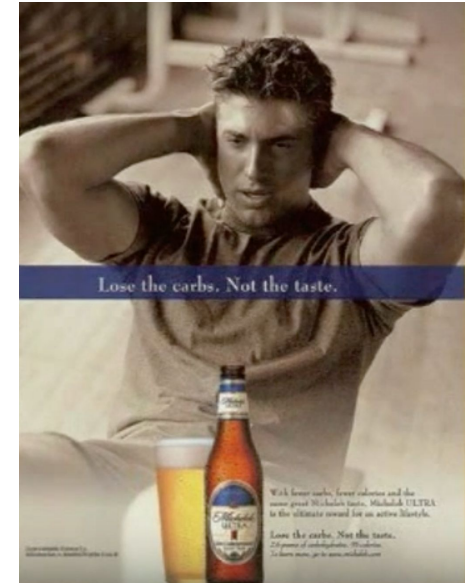
22% of high school youth reported using alcohol or drugs prior to their last sexual encounter.

(MetroWest Adolescent Health Survey, 2018)

Alcohol Advertising

Young people view **2,000** beer and wine commercials annually.

Special sports events have **2.4** alcohol television commercials per hour.



How easy is it for teens to get alcohol?

- Almost **72%** of teens who drink get alcohol without having to pay for it.
- Teens can access alcohol from friends, family members, or at parties.
- Underage drinkers who pay for alcohol usually give money to someone else to buy it.

What about other countries?

(WHO, 2015)

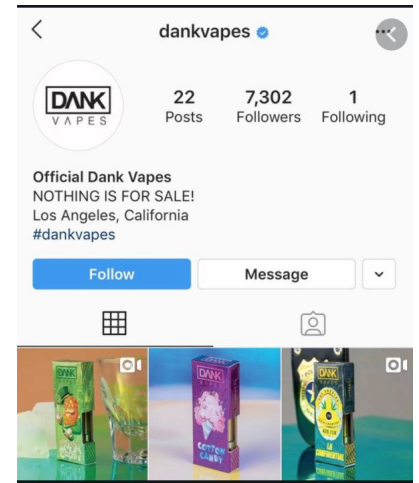
	Percentage of Youth Reporting Binge Drinking in the past 30 days	Age of Legal Use/Purchase
United States	19.8%	21
Canada	33.2%	18 or 19
Germany	50.6%	16
France	48.5%	18
United Kingdom	40.5%	16 under supervision, 18 to buy
Denmark	40.5%	No age, 18 to purchase

Parents Play a Vital Role

- Make sure teens **can't access alcohol without your knowledge**. Unmonitored alcohol, including alcohol stored in a cabinet, basement or garage, can be a temptation. When in doubt, lock it up.
- **80%** of teens say **their parents are the leading influence on whether to drink** even while they are in high school and college.

Big Cannabis: The New Big Tobacco

- Social media messages decrease teens' perception of harm of marijuana.
- Teens who see marijuana ads (including medical marijuana) are more likely to use the drug.
- The number of teens who had seen a marijuana ad increased from **25%** to **70%** from 2010-2017. Rates of use increased. (*California, 5000 middle school students, Drug and Alcohol Dependence, 2018*).



An advertisement for medical marijuana. It features a football player in a blue jersey with the number 31, standing on a field. The text reads: 'did you know?' in a blue box, '100 Million' in a purple circle, 'Americans suffer from chronic pain' in bold, '9 in 10 retired players suffer from pain on a daily basis' in smaller text, 'Medical Marijuana works on pain even when opiates don't' in bold, and 'americansforsafeaccess.org/football' in a black box at the bottom.

Effect of Legalization

Survey of 3 million 7th, 9th and 11th graders in California

Between 2017-2018 and 2018-2019

- 23% increase in past 30 day marijuana use
- 18% increase lifetime use

Journal of Studies on Alcohol and Drugs, 2021

MetroWest Data, 2021


Initiation of marijuana use increases from:

- **7%** in 9th grade to **39%** in 12th grade.

By 12th grade, **24%** of students report current use

Perceived risk of marijuana use **declined from 58% in 2018 to 51% in 2021** (use once or twice a week)

48% say it would be “fairly easy” or “very easy” to obtain marijuana if they wanted to down from **64%** in 2018



MARIJUANA IS
NOT AS BAD AS
OTHER DRUGS

TY SELLS | CLEARING THE AIR

“Not As Bad”

But it is bad for you.

What’s better: smoking weed or not smoking weed?

Would you rather jump off of a 4 story building or a 8 story building?



MARIJUANA
IS
NATURAL

TY SELLS | CLEARING THE AIR

Natural Does Not Mean Safe

Some examples of other natural dangerous plants:

Cocaine, Heroin, Tobacco,

Poison Ivy, Poisonous Berries

Remember: The marijuana of the 60s was 1-3% THC; marijuana of today: 12%; The plant did not do this itself--genetically modified

A black and white photograph of two young women with long hair, smiling and whispering to each other. The woman on the right is covering her mouth with her hand. A yellow speech bubble is overlaid on the right side of the image.

MARIJUANA
IS NOT
ADDICTIVE

TY SELLS | CLEARING THE AIR

It is Addictive!

1 in every 6 adolescents who use marijuana will develop an addiction

National Institute of Drug Abuse, 2021



TY SELLS | CLEARING THE AIR

While you can't overdose...

Psychosis can be caused by heavy marijuana ingestion (dabbing, vaping, edibles)

Psychotic Events can lead to adverse outcomes



MARIJUANA
IS MEDICINE .

RX

TY SELLS | CLEARING THE AIR

THC is not a medicine

Only FDA approved uses for CBD for under 18: Lennox Gastaut Syndrome and Dravet Syndrome (two types of seizure disorders)

For medications, you need a dosing regimen and protocols for managing side effects

No evidence for treatment of anxiety, depression or chronic pain

Nicotine was promoted as healthy by Big Tobacco



MARIJUANA
IS LEGAL

TY SELLS | CLEARING THE AIR

It is legal...

Legal does not mean safe.

There are plenty of legal products that are not safe:

- Tobacco
- Alcohol
- Energy Drinks

For your health, I advise against using them as well

Respiratory Effects

You are inhaling a substance into your lungs

Many of the same harmful carcinogens as cigarette smoke

Carcinogenic effect is unclear

Weakens respiratory immune defenses

Regular users are more likely to experience cough, wheezing, exercise intolerance

Cannabinoid Hyperemesis Syndrome

A 16 year old presents to the office with a 2 month history of significant abdominal pain every morning with vomiting on certain days. He has lost weight. He has missed a lot of school. After going through the usual GI history, I ask his mother to leave the room. He admits to using marijuana almost daily.

This scenario is all too common in pediatric practice now. We're now seeing patients as young as 13 and 14.

Symptoms include: **nausea, vomiting, abdominal pain, diarrhea.**

Shower helps symptoms

UMass Memorial Data: November 2019: One Teenager a Week Admitted for CHS

Endocrine Side Effects in Males

Dose related decrease in testosterone levels

Erectile Dysfunction

Low Sperm Count

Gynecomastia (Development of Breast Tissue)

Psychiatric and Neurological Effects

The Brain is Hijacked

Use at a young age/long term use leads to:

- Lowering of IQ of up to 8 points (irreversible)
- Increased incidence of psychosis (41%)
- Increased incidence of anxiety, depression, and suicidal ideation

Casual Use and Effect on Academics

The marijuana of today is very potent; may take up to days to be excreted.

Readily crosses the blood-brain barrier and binds to receptors in the brain for long periods of time.

A study of high school students showed that those who used marijuana casually (even only on weekends) had lower test scores.

Journal of School Health, 2017

Impaired Driving

Impairs:

- **Judgement**
- **Motor Coordination**
- **Reaction Time**

Several meta-analyses of multiple studies found that the risk of being involved in a crash significantly increased after marijuana use. (National Institute on Drug Abuse)

Cannabis Use Disorder

- Craving or a strong desire to use cannabis
- Unsuccessful efforts to cut down or control cannabis use
- Failure to fulfill role obligations at work, school or home, declining grades
- Give up recreational activities
- Continued cannabis use despite having social or interpersonal problems
- Using at school regularly
- Impaired Driving
- Withdrawal symptoms after stopping

Marijuana Withdrawal Timeline



Day 1:
anxious, irritable,
trouble sleeping

Day 2-3:
cravings, sweating,
chills

Days 4+:
symptoms improve,
depression may
begin

Edibles



- Products marketed to teens
- Cookies, Brownies, Candy
- Delayed onset of action--Because the “high” is not immediate, teens will consume larger amounts
- Very Potent: Ingestion can cause acute psychosis

Marijuana Vaping

Vaping THC does not produce the telltale smell that emerges when smoking marijuana through a joint, blunt or pipe. **Teens can use marijuana without being detected**

When people vape rather smoke marijuana, they tend to consume even **higher concentrations of THC**, which means greater exposure to the drug's mind altering and addictive ingredient; **95% THC** in some extracts



Case: High School Athlete

Daniel Amnet, High School Cross Country Athlete in Michigan, went public his story

Knee Injury Prevented him from competing

Started with casual vaping-THC addiction

Double Lung Transplant, 2020

CDC, February 2020:

2,807 hospitalizations, 68 deaths



Alcohol and Marijuana are often mixed

Consumption of any amount of alcohol with marijuana significantly increases THC levels in the user's blood.

Anxiety, Nausea and Vomiting, Memory Impairment, Fatigue, Hallucinations



Both Alcohol and Marijuana are Gateway Drugs

- Early use can lead to increased vulnerability to addiction
- Most users will not go on to develop an addiction to other drugs
- Genetic and Environmental Factors play a role
- My patients with Opioid Use Disorder all started with alcohol or marijuana



Parents Play a Vital Role

Teens whose parents talk with them regularly about drugs and alcohol are **42%** less likely to use substances than those whose parents don't.

Partnership at Drugfree.org, 2013

Young people are more likely to listen when they know you're on their side. Tell them you care about their health, wellness, and success. Be open and honest.



Talking to a Teen who is Using Marijuana

Open and Honest Discussion With Factual Information

No Judgement or Punitive action

Empathy

Avoid home drug tests

If your teen asks you: “Mom/Dad, did you ever try marijuana when you were younger?”

- Be honest if you used
- Discuss adverse effects you may have experienced
- Discuss regrets
- Say “I was one of the lucky ones who didn’t have any long term effects”

Contact your child's pediatrician

- Motivational Interviewing (Can be done in Primary Care Setting)
- ACRA--Adolescent Community Reinforcement Approach--Mental Health Clinician
- **Treating underlying Depression and Anxiety**
- Inpatient: Motivating Youth Recovery, Worcester

In Conclusion

- Alcohol Use Disorder and Cannabis Use Disorder are Preventable Illnesses
- Connection with Trusted Adults
- Connections with Community
- Universal Screening and Early Intervention

