



# DRUGS: SHATTER THE MYTHS



National Institute  
on Drug Abuse

## **What does the National Institute on Drug Abuse (NIDA) do?**

NIDA is part of the National Institutes of Health. We are the largest supporter of the world's research on drug abuse and addiction. Our goal is to better understand who uses drugs and why, and how drugs work in the brain and body, so we can develop and test new ways to prevent and treat drug abuse and addiction.

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# Can marijuana be **ADDICTIVE?**

**Yes.** The chances of becoming addicted to marijuana or any drug are different for each person. For marijuana, around **1 in 11** people who use it become addicted. Could **you** be *that* one?

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Anthony J, Warner LA, Kessler RC. Comparative epidemiology of dependence on tobacco, alcohol, controlled substances, and inhalants: basic findings from the National Comorbidity Survey. *Exp Clin Psychopharmacol.* 1994;2:244–268.

Lopez-Quintero C, Pérez de los Cobos J, Hasin DS, et al. Probability and predictors of transition from first use to dependence on nicotine, alcohol, cannabis, and cocaine: results of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). *Drug Alcohol Depend.* 2011;115(1–2):120–130.





A TRUE  
STORY

From age 13 to 18, **Alby** got high several times a day to help him cope. He went to school high and eventually dropped out. “I was losing focus. My attention went from 100 to zero. I was depressed,” he says. Now, after getting substance abuse treatment, Alby has been able to face his problems by talking them out with counselors and making new friends he describes as “positive.” As he puts it, “I feel a lot better about myself. I feel a lot sharper. I don’t feel lazy anymore.”



**IF YOU SMOKE MARIJUANA  
A LOT IN YOUR TEENS, YOU  
COULD LOSE IQ POINTS (WHICH  
MEASURE INTELLIGENCE) THAT  
YOU MIGHT NEVER GET BACK.**



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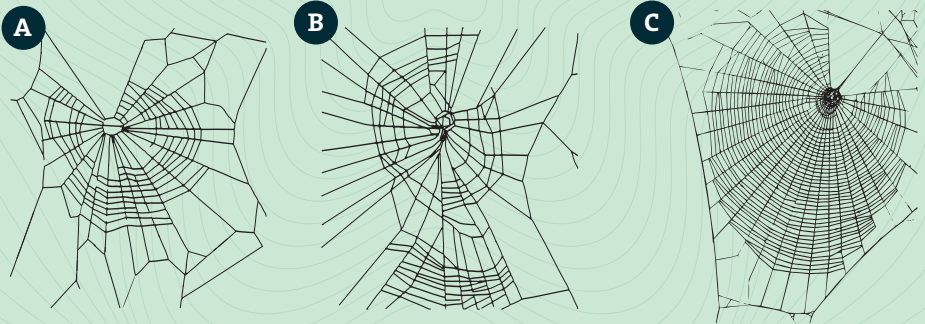
Meier MH, Caspi A, Ambler A, et al. Persistent cannabis users show neuropsychological decline from childhood to midlife. *Proc Natl Acad Sci USA*. 2012;109:E2657–2664.

# QUIZ

## Why isn't smoked marijuana a safe medicine?

- A. You can't be sure what chemicals are in it.
- B. Smoking anything can hurt your lungs.
- C. It affects your thinking skills.
- D. It alters your motor skills, making you an unsafe driver.
- E. All of the above

## Which of these webs is made by a spider that is NOT on drugs?



## “Spice” (also known as K2):

- A. Is sometimes misleadingly called “fake weed”
- B. Has put people in emergency rooms with vomiting, confusion, and hallucinations
- C. Is used mainly by smoking
- D. All of the above

E. All of the above, C. No Drugs, D. All of the above



\* Product Placement

\* Product Placement

A lot of teens ask us about **peer pressure**, or why people do things that can hurt them just to fit in.



Why do people

# SMOKE

when they know it's so bad for them?

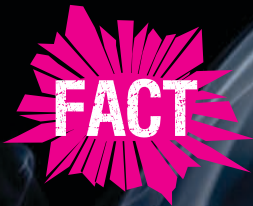


**Product Placement**

Maybe they smoke because they can't stop. People start smoking for different reasons, but most keep doing it because of one reason — they are addicted to nicotine.

**DID YOU KNOW?** Research says that teens who see a lot of smoking in movies are more likely to start smoking themselves. Sometimes characters smoke to look edgy and rebellious; but sometimes it's just about "product placement" — the tobacco industry trying to get into your head and your pockets.

U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2012.



## **MOST PEOPLE WHO SMOKE STARTED BEFORE AGE 18.**



Almost one in five 12th graders used a hookah in the past year? A hookah is a water pipe used to burn tobacco leaves. A lot of people think it's less harmful than smoking cigarettes, but many of the health risks are the same.

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Johnston L, O'Malley P, Miech R, Bachman J, Schulenberg J. *Monitoring the Future National Survey Results on Drug Use: 1975-2015: Overview: Key Findings on Adolescent Drug Use*. Ann Arbor, MI: Institute for Social Research, The University of Michigan; 2015.

U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2012.

# QUIZ

## Smokeless tobacco does not cause cancer.

- A. True, it is the tar in cigarettes that causes lung cancer, emphysema, and bronchial disorders.
- B. False, smokeless tobacco (such as chewing tobacco and snuff) increases the risk of cancer, especially oral cancers.

## How many Americans die from diseases associated with tobacco use each year?

- A. About 1,500
- B. About 13,200
- C. About 50,500
- D. About 480,000

**DID YOU  
KNOW?**

### E-Cigarettes

E-cigarettes contain nicotine—the addictive drug in tobacco cigarettes—and other chemicals that may be harmful.

More teens use e-cigarettes than tobacco cigarettes. Scientists have just started to research the health effects of e-cigarettes, but we do know one thing: users will inhale the same nicotine they get from a regular cigarette.

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U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014.

**B.** False, **D.** About 480,000

**ANSWERS:**

TOPIC

Alcohol

# DRINKING

and driving can add up to tragic endings. In the U.S., about 4,300 people under age 21 die each year from injuries caused by underage drinking, more than 35 percent in car crashes.

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Centers for Disease Control and Prevention. Alcohol Related Disease Impact (ARDI) application, 2013. Available at [https://nccd.cdc.gov/DPH\\_ARDI/default/default.aspx](https://nccd.cdc.gov/DPH_ARDI/default/default.aspx).



**FACT**

About 4 in 10 people who begin drinking before age 15 eventually become alcoholics.

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U.S. Department of Health and Human Services.  
*The Surgeon General's Call to Action to Prevent  
and Reduce Underage Drinking.* Rockville, MD:  
Office of the Surgeon General; 2007.

A photograph of a crowded nightclub with people dancing under colorful lights. The scene is dimly lit with vibrant red, blue, and purple hues. In the foreground, a woman with long, dark, wavy hair is seen from the back, wearing a dark blue halter-neck top. In the background, other people are visible, some with their arms raised, suggesting a lively dance floor atmosphere.

TOPIC

## Medical Consequences

# HIV

## Getting HIV from unprotected sex

When you can't think straight because you're drunk or high, you may forget to play it safe.

# Meth

Meth reduces the amount of protective saliva around the teeth. People who use meth also tend to drink a lot of sugary soda, neglect oral care, grind their teeth, and clench their jaws — all of which can cause what's known as “meth mouth.” Meth users sometimes hallucinate that insects are creeping on top of or underneath their skin (called formication). The person will pick or scratch their skin, trying to get rid of the imaginary “crank bugs.” Soon their face and arms are covered with open sores that can get infected.



**DID YOU  
KNOW?**

**You are getting bombarded with messages about drugs in songs and movies. A study of popular music found that about**

**1 in 3**

songs said something about drug, alcohol, or tobacco use.

**3 in 4**

rap songs said something about drug, alcohol, or tobacco use.

**And of the top 100 movies over a 9-year period, more than**

**7 in 10**

movies showed characters smoking.

**1 in 3**

movies showed people getting drunk.

**Get the facts, and make your own decisions.**

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Primack BA, Dalton MA, Carroll MV, Agarwal AA, Fine MJ. Content analysis of tobacco, alcohol, and other drugs in popular music. *Arch Pediatr Adolesc Med.* 2008;162(2):169–174.

Tickle JJ, Beach ML, Dalton ML. Tobacco, alcohol, and other risk behaviors in film: how well do MPAA ratings distinguish content? *J Health Commun.* 2009;14(8):756–767.



# Tobacco

Wrinkles, bad breath,  
yellow teeth, wheezing,  
stinky clothes?... Let me  
at those cigarettes!

ADDICTION

SKIN DAMAGE

CATARACTS

WRINKLES

MOUTH CANCERS

THROAT CANCER

HEART DISEASE

LUNG DISEASE





## Q&A

### What are Prescription Opioids?

Prescription opioids, such as Vicodin® and OxyContin®, are medications that relieve pain. When taken as prescribed, they can be very effective in helping people with severe pain, such as a bad injury or pain after surgery. But they come from the same class of drugs as heroin and can be dangerous if used to get high.



### FACT

More people die from prescription opioid overdoses than from heroin and cocaine combined.

**A lot of you have asked: how can**

# **PRESCRIPTION (RX) DRUGS**

**be harmful when they're prescribed  
by doctors?**

Prescription drugs aren't bad—they help a lot of people. It really depends on the *who*, *how*, *why*, and *what* of it.

- *Who* were they prescribed for (you or someone else)?
- *How* are you taking them (as prescribed or not)?
- *Why* (to get well or to get high)?
- *What* else are you taking (mixing with alcohol or other drugs can be dangerous)?

Some teens abuse stimulants thinking it will improve their grades, but research tells us it may do just the opposite!



**FACT**

## **ANYONE CAN OVERDOSE ON PRESCRIPTION OPIOIDS OR HEROIN.**

**DID YOU  
KNOW?**

If a person overdoses, they could stop breathing and die. Naloxone is a drug that quickly reverses the effects of an overdose. If you see someone overdose, call 911 right away.

# QUIZ

**It's safe to use prescription drugs when:**

- A. You've checked out WebMD and know what you are doing
- B. You've taken them before for another problem
- C. They are prescribed for you by a doctor for a current problem
- D. Your mom gave them to you from her prescription
- E. All of the above

**DID YOU  
KNOW?**

Mixing pills with other drugs or with alcohol really increases your risk of death from accidental overdose.

Abuse of prescription ADHD medications like Adderall® and Ritalin® can cause serious health problems, including panic attacks, seizures, and heart attacks.

C. They are prescribed for you by a doctor for a current problem.

You know they make you

**FUZZY,**  
but what do drugs do to your brain?

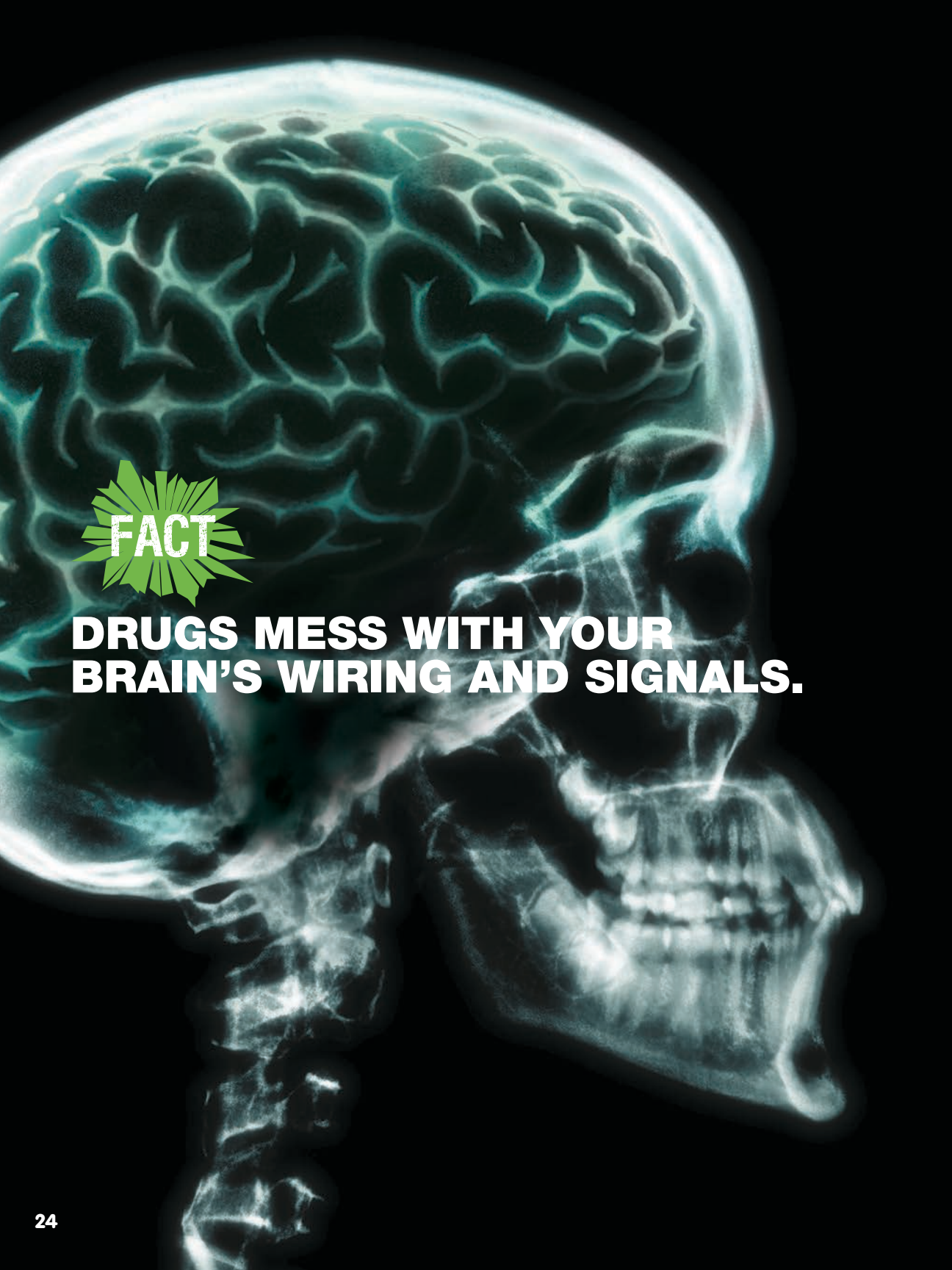
Different drugs do different things. But they *all* affect the brain—that's why drugs make you feel high, low, speeded up, or slowed down, or see things that aren't there.

**DID YOU KNOW?** Repeated drug use can reset the brain's pleasure meter, so that without the drug, you feel hopeless and sad. Eventually, everyday fun stuff like spending time with friends or playing with your dog doesn't make you happy anymore.



**A TRUE  
STORY**

**Justin** always thought that if he “huffs” markers in small doses, just every once in a while, it will cause little or no damage to his brain cells. Maybe, maybe not. We’re all different, so you never know when something dangerous will happen to you. Huffing may make you high for a few minutes, but it can damage your brain for a whole lot longer.



**FACT**

**DRUGS MESS WITH YOUR  
BRAIN'S WIRING AND SIGNALS.**



# QUIZ

**Most drugs of abuse target the brain's reward system by flooding it with:**

- A. Serotonin
- B. Blood
- C. Dopamine
- D. Acetylcholine

**True or False: All it takes to stop using drugs is willpower.**

- True
- False

**Which of the following affects someone's risk of getting addicted?**

- A. Genes (traits in your body passed from parent to child)
- B. Life at home
- C. Friends' drug use
- D. All of the above

C. Dopamine is a chemical present in regions of the brain that control movement, emotion, motivation, and feelings of pleasure. **False.** While the initial decision to take drugs is typically voluntary with continued use, the brain changes and it becomes harder and harder for a person to control drug use. **D.** All of the above.

# GET HELP?

## **Does treatment really work? Why do people come and go so much?**

It takes time to recover from addiction — not only for the brain to re-adjust, but to make lifestyle changes to avoid drugs. Think how hard it is for people trying to lose weight — they try different diets, exercise for a while, lose a few pounds only to gain them back...until they can make lasting changes to keep the weight off. Same with quitting drugs — it may take several rounds of treatment before it sticks.



DID YOU KNOW?

### **1-800-662-HELP**

There are different types of treatments to meet your specific needs. You can get referrals to treatment programs by calling 1-800-662-HELP (a confidential hotline), or by visiting the Substance Abuse and Mental Health Services Administration online at [findtreatment.samhsa.gov](http://findtreatment.samhsa.gov).



**THERE IS TREATMENT  
AND IT WORKS.**

# QUIZ

**A person who is addicted to drugs...**

- A. Is beyond reach
- B. Can be helped with treatment
- C. Needs a brain transplant
- D. Can easily quit if they want to

What do

# YOU think?

We know you have a lot of questions about drugs. We do too, and we'd love to hear from you! So go to our blog at [teens.drugabuse.gov/blog](https://teens.drugabuse.gov/blog) and let us know what you think—and thanks for sharing!

We also have National Drug & Alcohol Facts Week<sup>SM</sup> (NDAFW) each year that helps teens *SHATTER THE MYTHS<sup>SM</sup>* about drugs and drug abuse. NDAFW includes local school and community events and DRUGS & ALCOHOL CHAT DAY, a live, online chat held between high school students and NIDA scientists. Go to [teens.drugabuse.gov/national-drug-facts-week](https://teens.drugabuse.gov/national-drug-facts-week) to learn about events in your area. If you have a question about drugs that you haven't seen answered anywhere else, you might be able to find it in the chat day transcript (you can find the link on the NDAFW website above).



Here are some popular questions we've answered:

- How many young people are addicted to drugs?
- What's the most commonly used drug by teens?
- Can drugs make you mentally ill?
- What drug is the most addictive?
- Is smoking marijuana more harmful than smoking cigarettes?

SECONDARY  
LEAD  
RESEARCH  
GRADERS  
SMOKE  
QUESTION

SCH

ADDICTIVE  
PERSON  
PLEASE  
MEMORY  
SMOKING  
MANY

LEARN

PEOPLE  
BAD  
YOUNG  
DEPENDS  
GO  
DOPAMINE  
ADDICTION  
KIDS  
ONE  
STILL  
AFFECT  
CONSEQUENCES  
TAKE  
TOBACCO  
NIDA  
DRUG  
RISK  
KNOW  
USING  
HEART  
HIGHER  
EFFECT  
TAKING  
NATIONAL  
WORD  
EVEN  
BRAIN  
STOP  
NICOTINE  
LIFE  
EFFECTS  
MUCH

# DRUGS

ALCOHOL  
LIKELY  
USE  
PROBLEMS  
PAIN  
HELP  
SEE  
TIME

NEED  
TREATMENT  
COCAINE  
MAY  
FIND  
REALLY

GOOD  
MARIJUANA  
CHANGES  
INFORMATION  
CHECK  
METH  
FAMILY  
EXAMPLE  
SERIOUS  
DRINKING  
AGE  
LIKE  
DANGEROUS  
ALSO  
GREAT  
SOUTH  
NATIONAL  
HEALTH  
THANKS  
FEEL  
CAUSE  
GET  
YEAR  
LONG  
MAKE  
SYSTEM  
PRESCRIPTION  
JOB  
ADDICTED



[drugabuse.gov](http://drugabuse.gov)  
[teens.drugabuse.gov](http://teens.drugabuse.gov)



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