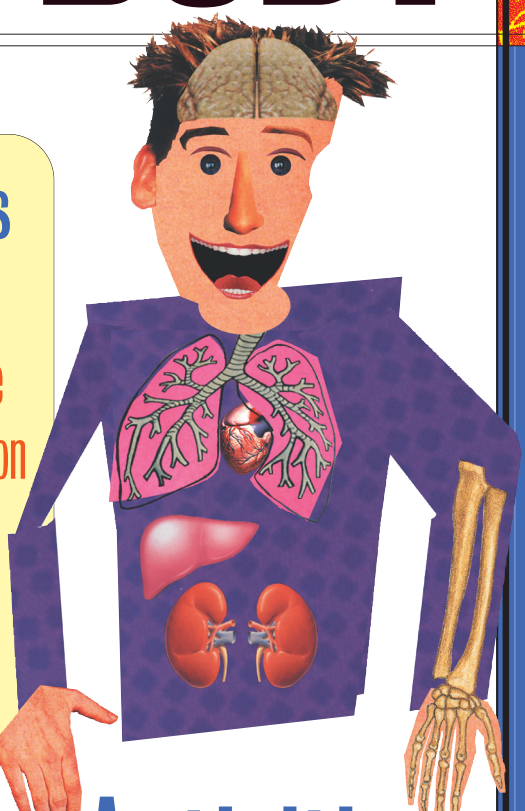
HEADS UP
REAL NEWS
ABOUT DRUGS
AND YOUR BODY



Reproducible Skills Pages, Including:

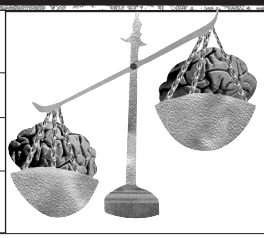
- >>Body & Brain Science
- >>Reading Comprehension
- >>Graphs, Charts
- >>Critical Thinking
- >>Sequencing

14 Drug Education Activities

STEPHEN KRONINGER/ILLUSTRATION)

FROM SCHOLASTIC AND THE SCIENTISTS OF THE NATIONAL INSTITUTE ON DRUG ABUSE,
NATIONAL INSTITUTES OF HEALTH, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

HEADS UP REAL NEWS ABOUT DRUGS AND YOUR BODY



Dear Teacher,

One of the most important things you can do as a teacher is to give your students information about the health effects of drug abuse. Together with the National Institute on Drug Abuse (NIDA), we've put together this 16-page book of reproducibles, full of facts and activities on drugs of abuse. This book is just one component of our ongoing drug education program, "Heads Up: Real News About Drugs and Your Body," a partnership between NIDA and Scholastic Inc. These skills pages can be used alone or to support and extend the feature articles that appeared in your classroom magazine in the 2002-2003 school year and are continuing this year.

This book includes an introduction to the brain, that crucial organ so vulnerable to drugs of abuse. Then, we focus on the health effects of specific drugs, including marijuana, inhalants, nicotine, steroids, prescription drugs, club drugs, heroin, and cocaine.

While you can use these reproducibles to support a drug education, health, or human-body science curriculum, the activities extend into other areas. In order to complete the activities, students must read charts and graphs and complete diagrams. They must read and practice universal skills such as critical thinking, pre- and post-reading strategies, inferencing, and recall. We hope you find these pages useful across your curriculum.

—The Editors

• For past and current articles in the Heads Up series, as well as activities and teaching support, go to: www.Scholastic.com/HEADSUP

• For free reprints of the 2002–2003 Heads Up series, call 1–800–729–6686 and refer to NCADI MS927; the accompanying Teacher's Edition is NCADI MS928.

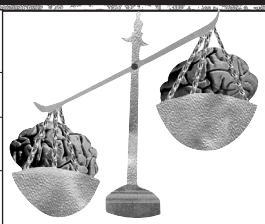
• For free copies of the 2002–2003 Heads Up poster, call 1–800–729–6686 and refer to NCADI AVD165.

ANSWER KEY

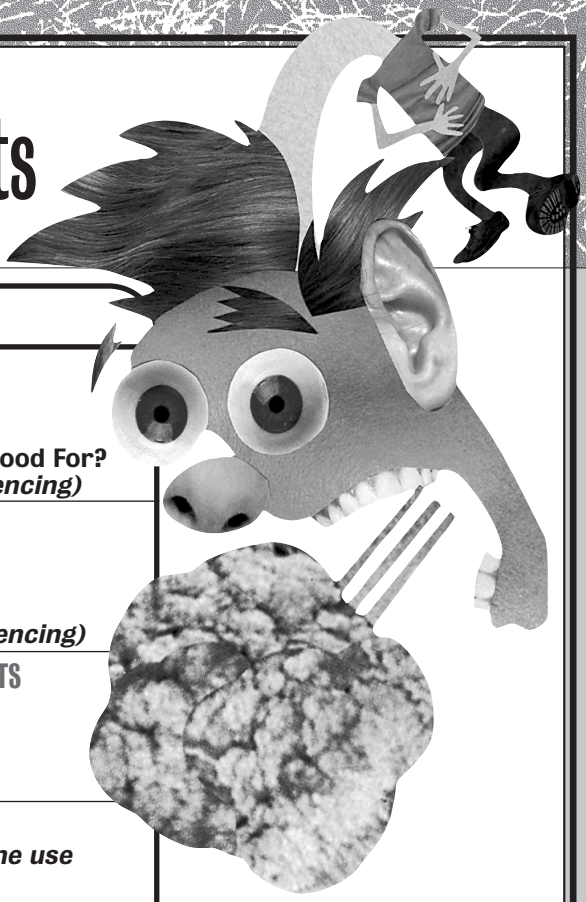
Brain, p. 2: Cerebral cortex: thinking, reasoning, seeing, hearing, sense of touch, and some kinds of movement; Limbic system: produces feelings and emotions; Cerebellum: coordinates movements involved in everyday tasks; Brain stem: controls breathing, food digestion, and heartbeat; Nucleus accumbens: involved in reward and feelings of pleasure. Students' responses to how they've used each part of the brain will vary.
Marijuana, p. 3: 1. hemp; 2. joint; 3. blunt; 4. THC; 5. cannabinoid; 6. neurons; 7. hippocampus; 8. cerebellum; 9. cortex; 10. dopamine.
Inhalants, p. 4-5: The route through the maze is through the following nine facts: Inhalants can cause heart attacks; Inhalants can cause kidney damage; Inhalant abusers are at risk for depression; Abuse of inhalants can lead to muscle spasms and movement difficulties; Inhalants can cause memory problems; According to a survey, fewer teens tried inhalants in 2002 than tried them in 2001; You can die from lack of oxygen as a result of using inhalants; Inhalants can cause permanent hearing loss; Sniffing gasoline (benzene) can damage bone marrow.
Nicotine, p. 6: 1. a; 2. c; 3. b; 4. b; 5. a.
Steroids, p. 7: Hair—male-pattern baldness; Bones—stunted growth; Brain/limbic system—roid rage; Arm/needle injection site—HIV/AIDS; Heart—heart attack; Liver—cysts and liver cancer.
Club Drugs, p. 9: Answers can include any of the effects listed on page 8 under the respective drugs.
Cocaine, p. 10: Student answers will vary.
Heroin, p. 12 Introduction: 1, 2, 3, 4; Addiction: (cards beginning with) 1. Also called . . . 2. This stimulation . . . 3. Eventually, the . . . ; Health Risks: 1. But addiction . . . 2. Heroin comes . . . 3. First of . . . 4. Sharing needles . . . 5. Heroin abuse . . . 6. Finally, the . . .; Draw Your Own Conclusion: (answers will vary).
Real *Jeopardy*, p. 15: 1. What are steroids, heroin, and cocaine? 2. What is a hollowed-out cigar filled with marijuana? 3. What are MDMA, inhalants, and marijuana? 4. What is a street name for MDMA? 5. What are MDMA, cocaine, and LSD? 6. What are steroids? 7. What are marijuana, heroin, and cocaine? 8. What are MDMA, LSD, and marijuana? 9. What is a street name for LSD?
Prescription Drugs, p. 16: 1. F; 2. T; 3. F; 4. T; 5. T.

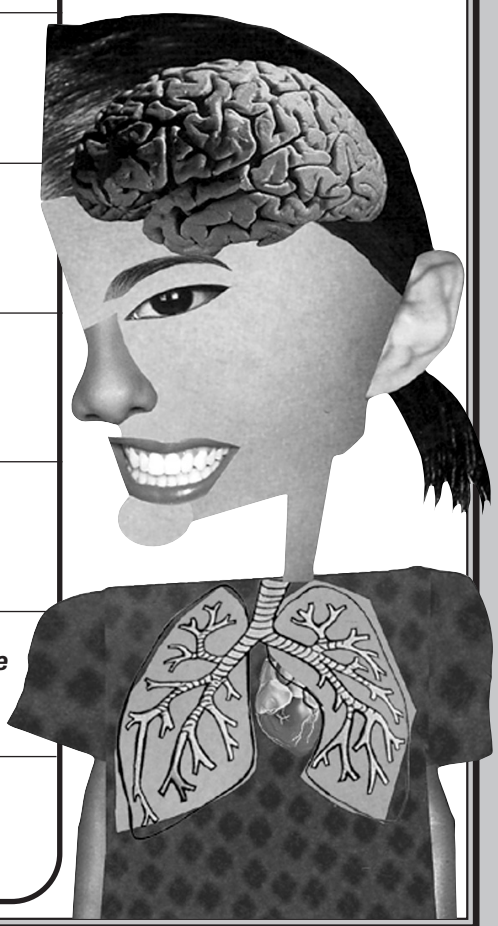
ILLUSTRATIONS BY STEPHEN KRONINGER; BRAIN DIAGRAM (PAGE 2) BY 5W INFOGRAPHICS

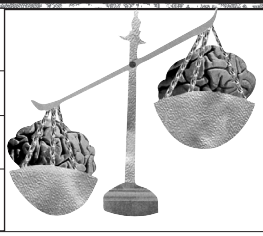
HEADS UP REAL NEWS ABOUT DRUGS AND YOUR BODY



Contents







Your Brain At-a-Glance

There are no two ways about it—drugs change the way the brain works. And the brain has some pretty heavy responsibilities, controlling body functions such as breathing, walking, and thinking. Here is a brief overview of the major parts of your brain and the jobs they do, along with some examples of how drugs can get in the way. After reading it, complete the diagram activity below.

The largest part of your brain is the **cerebral cortex**. When it's functioning normally, this section takes care of thinking, reasoning, the five senses, and controlling certain kinds of movements. But, smoking **marijuana** can make it tough for the cerebral cortex to do its work.

Next, making up only one eighth of the brain's total weight, is the **cerebellum**. The cerebellum is in charge of coordinating movements involved in repeated, everyday actions, such as brushing teeth and riding a bike. One of the health risks of abusing **inhalants** is that they may damage this part of the brain.

Just above the spinal cord, a small section of your brain called the **brain stem** controls basic functions, such as breathing, digesting food, and maintaining your heartbeat. Taking **heroin** can slow breathing—even to the point of death—because it affects the brain stem.

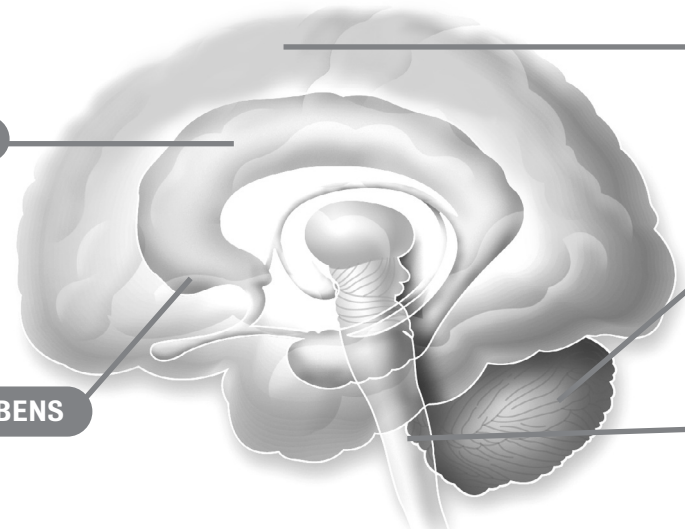
Then, there's the **limbic system**, also known as the emotional brain. This is where feelings like fear and passion are born. Many scientists believe that **steroids** act on the limbic system and cause some users to experience out-of-control feelings of violent aggression called roid rage.

Scientists have identified a reward pathway in the brain that includes the **nucleus accumbens**. When we do something that is key to survival, such as eating when we are hungry, the reward pathway is stimulated. Most drugs that are addictive, like **cocaine**, also stimulate this reward pathway, often more than natural rewards, such as food. Our brains are wired to remember what activates this pathway. That is why when we are hungry, we may crave food, and when a drug abuser's brain gets used to drugs, he or she craves drugs as well.

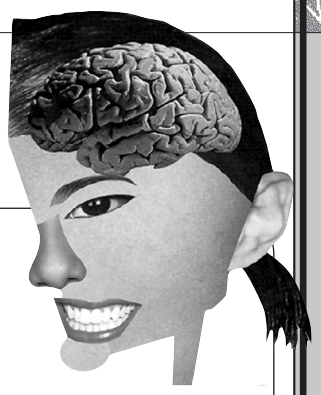
How can drugs do this? Once in the brain, drugs of abuse are similar in size and shape to brain chemicals called neurotransmitters. Brain cells release and absorb these natural chemicals in order to send and receive messages to and from each other. Drugs disrupt this delicate communication system. For example, **nicotine** causes more neurotransmitters to be released and **cocaine** blocks the normal reabsorption of brain chemicals. That is how the drugs produce unnatural feelings. While the feelings may last for minutes, the changes to brain cells in the reward pathway can be long-lasting.

PARTS OF THE BRAIN: WHAT ARE THEY GOOD FOR?

For each brain part, write one of the functions it performs. Plus, include one way you've used this part of your brain recently.



The Word on Marijuana



Here are some of the key words you need to understand to discuss the drug marijuana and its effects. Review the glossary. Then, fill in the blanks in the article below. Finally, circle the words you filled in within the word search.

GLOSSARY

Blunt: slang term for a hollowed-out cigar filled with marijuana

Cannabinoid Receptors: sites on the surface of brain cells where the active ingredient in marijuana attaches to produce the drug's effects

Cerebellum: part of the brain involved in coordination of body movement

Cerebral Cortex: part of the brain involved in higher-thinking functions

Dopamine: a brain chemical (or neurotransmitter) that helps nerve cells in the pleasure and reward pathway communicate with each other

Hemp: the plant marijuana comes from

Hippocampus: part of the brain's limbic system that helps with learning and memory

Joint: slang term for marijuana rolled into a cigarette

Neurons: cells in the brain; also found in the spinal cord and other organs

THC: tetrahydrocannabinol, the main active ingredient in marijuana

WHAT IS MARIJUANA? WHAT DOES IT DO TO THE BRAIN?

The drug marijuana is the dried, shredded leaves of the _____ plant. While there are several methods of use, marijuana is often rolled into a cigarette, called a _____, or stuffed into a hollowed-out cigar, called a _____, and smoked.

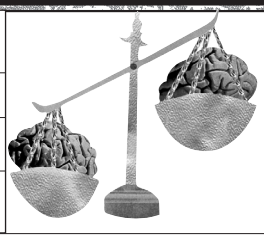
The drug's effects on the brain are caused by the main active ingredient, tetrahydrocannabinol, or _____. This chemical attaches to specific receptors in the brain called _____ receptors. When it binds to these receptors, it interferes with the normal communication between brain cells, or _____.

Several parts of the brain have an abundance of these receptors, including the _____, which deals with learning and memory; the _____, which helps with coordination of body movement; and the cerebral _____, which is in charge of higher-thinking functions.

Finally, research shows that THC triggers the release of _____, a chemical that stimulates activity in the brain reward pathway. Other drugs of abuse, like cocaine and amphetamines, also stimulate this pathway.

WORD SEARCH

T E N N H O R M L X E O
A R J O I N T E E Q A L
T U Z O P U C T E P M R
C H E M P N R N D G K N
Z U C U O O I E J M S R
F L A E C M U M Z V O D
C A N N A B I N O I D C
N A Y P M L Z I M L L B
S M O E P U H A W O R E
H D U S U N E U R O N S
O A H M S T R H E H A N
C E R E B E L L U M S O



Top 10 Things You Need to Know About Inhalants

Educate yourself about this dangerous class of drugs with our Top 10 list below. Then, make your way through the "Find the Facts" maze on the next page.

1. **Household products can be dangerous.** Inhalants are breathable chemical vapors that produce mind-altering effects. Some of these come from everyday household products like spray paint, glues, and cleaning fluids. But these toxic chemicals were never meant to be inside a human body!

2. **Using inhalants just one time can kill you.** Sniffing highly concentrated amounts of the chemicals in solvents or aerosol sprays can cause heart attacks and even death within minutes. Known as "Sudden Sniffing Death," this can happen the first time you use inhalants or anytime after. You can also die from lack of oxygen, since you are filling your lungs with chemicals instead of air.

3. **No matter how inhalants are taken, they still spell danger.** Inhalants are breathed in through the nose or mouth in a number of ways, variously called sniffing, snorting, huffing, or bagging. But there is no safe way to breathe toxic fumes.

4. **Your brain may never be the same again.** The poison in inhalants can kill so many brain cells that brain tissue actually shrinks. People who abuse inhalants may have difficulty with memory, learning, and thinking.

5. **When you hurt your brain, you hurt your body.** Inhalants dissolve the protective coating called myelin on the neurons, or cells in the brain. Myelin helps messages travel rapidly along nerve cells. When myelin is damaged, messages move too slowly—resulting in muscle spasms, tremors, and even difficulty walking and talking.

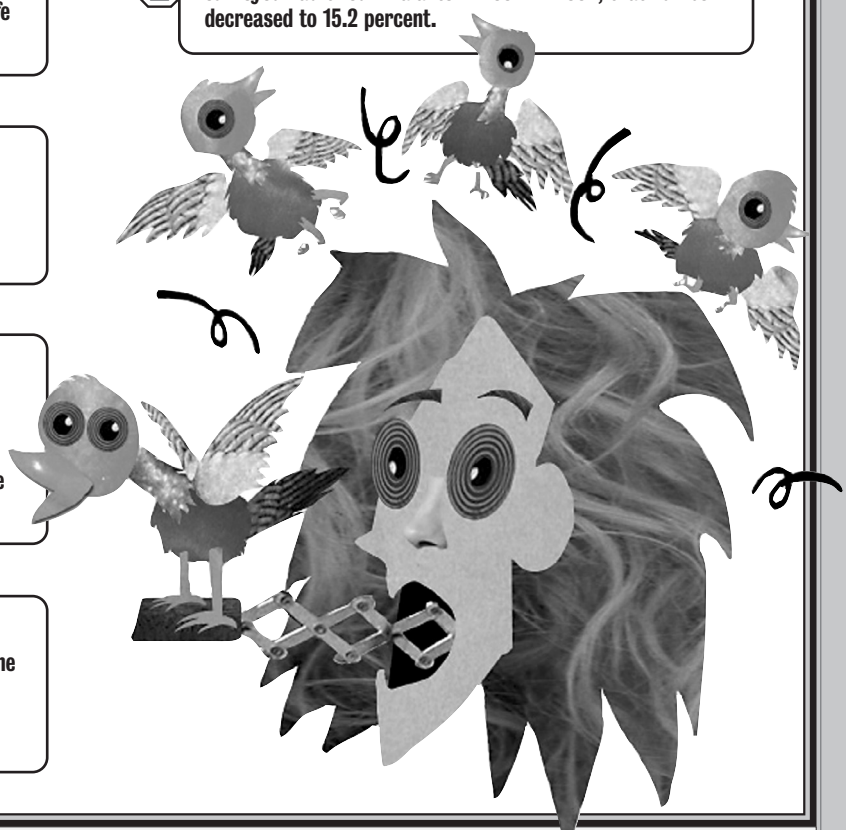
6. **By using inhalants, you risk depression.** Inhalants can affect an abuser's mood even when he or she is not huffing. The sniffer can fall into a gloomy mood where nothing about life seems good or hopeful—a condition doctors call depression.

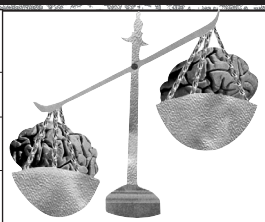
7. **You can lose your hearing for good.** Use of toluene (a chemical found in spray paints and glues) and trichloroethylene (a chemical found in cleaning fluids and correction fluids) can cause hearing loss.

8. **The destruction could go as deep as inside your bones.** Use of benzene (or gasoline) can damage bone marrow.

9. **Damage can go beyond your brain and bones.** Chronic exposure to inhalants can lead to significant damage to the heart, lungs, liver, and kidneys.

10. **Fewer teens are trying inhalants.** According to a recent NIDA-funded study, 17.1 percent of 8th-graders surveyed had tried inhalants in 2001. In 2002, that number decreased to 15.2 percent.





Find-the-Facts Maze

After reading "Top 10 Things You Need to Know About Inhalants," make your way to the end of this maze by following the facts. You can only go through spaces with true statements. Turn around and try another route when you find a lie. The correct path will lead you through nine boxes.

START

Inhalants can cause heart attacks.

The only organs that inhalants affect are the brain and heart.

Inhalant abuse never affects bones.

"Huffing" refers to a safe method of inhaling chemical fumes.

Inhalant abuse can kill you, but only if you do it many times.

Inhalants can cause kidney damage.

Inhalant abusers are at risk for depression.

Toluene (a chemical found in spray paints) is the only harmless inhalant.

Aerosol sprays are not toxic.

Abuse of inhalants can lead to muscle spasms and movement difficulties.

Inhalants can cause memory problems.

Inhalants damage, but do not kill, brain cells.

According to a 2002 study, more than 50% of 8th graders surveyed had tried inhalants.

The liver is one organ that is not damaged by inhalants.

Inhalants can cause permanent hearing loss.

You can die from lack of oxygen as a result of using inhalants.

Inhalants are drugs developed to be taken inside the human body.

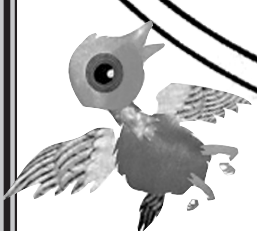
Inhalants help speed messages through nerves by building myelin.

Sniffing gasoline (benzene) can damage bone marrow.

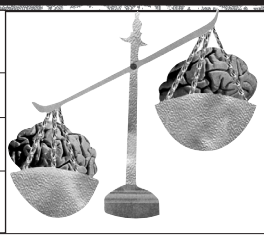
According to a survey, fewer teens tried inhalants in 2002 than tried them in 2001.

When inhaled, toxic fumes cannot replace all of the oxygen in the user's lungs.

Sniffing chemicals through the nose is safe; inhaling through the mouth is not.

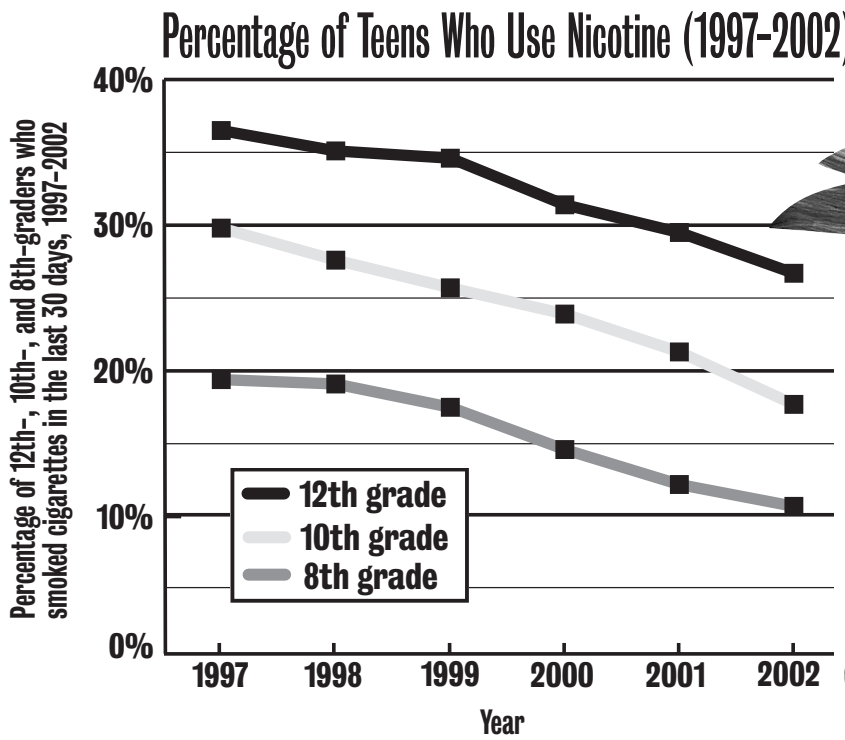


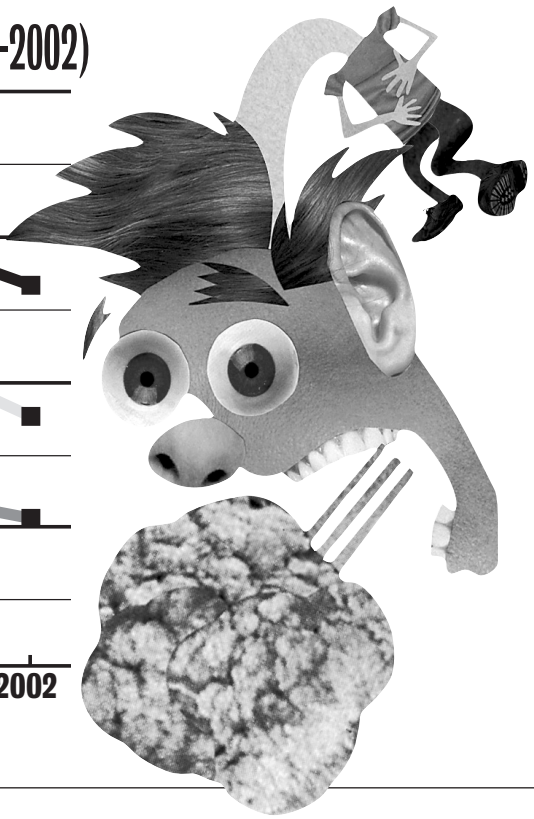
FINISH



Nicotine News

Good news about cigarettes and teens: Fewer 12th-, 10th-, and 8th-graders lit up in 2002 than in 2001. This continues a downward trend that's been going on for about five years. Maybe young people are getting better information about the health risks of tobacco use, such as lung cancer and addiction. Check out the line graph below. Then, take the multiple-choice quiz that follows.





SOURCE: MONITORING THE FUTURE, 2002

MULTIPLE CHOICE QUIZ

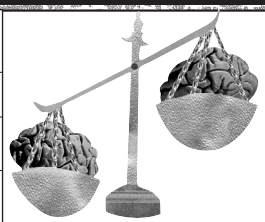
1. From 1997-2002, the percentage of teens who smoked in the past month
- **a.** went down consistently each year, in each grade
- **b.** went down each year, except 2000, in each grade
- **c.** went down consistently each year for 8th-graders and 10th-graders, but went up consistently each year for 12th-graders

2. The lowest percent of teens who smoked in the past month was achieved by which grade in which year?
- **a.** 10th-graders, 1997
- **b.** 12th-graders, 2000
- **c.** 8th-graders, 2002

3. What is the difference between the percent of 12th-graders who smoked in 1998 and the percent of 8th-graders who smoked in 1998?
- **a.** about 5 percent
- **b.** about 15 percent
- **c.** about 30 percent

4. What is the difference between the percent of 10th-graders who smoked in 2000 and the percent of 8th-graders who smoked in 2000?
- **a.** about 2 percent
- **b.** about 9 percent
- **c.** about 15 percent

5. Between 1997 and 2002, about how much change has there been in the percent of 12th-graders who smoked?
- **a.** about 10 percent
- **b.** about 15 percent
- **c.** about 20 percent



Steroids: All-Over Horror

Some people take anabolic steroids illegally as a way to increase their muscle mass. But steroids affect more than muscles. Read below how steroids wreak havoc with brain and body. Then, finish the diagram. Write either how steroids affect the body part indicated by an arrow, or the name of the body part affected.

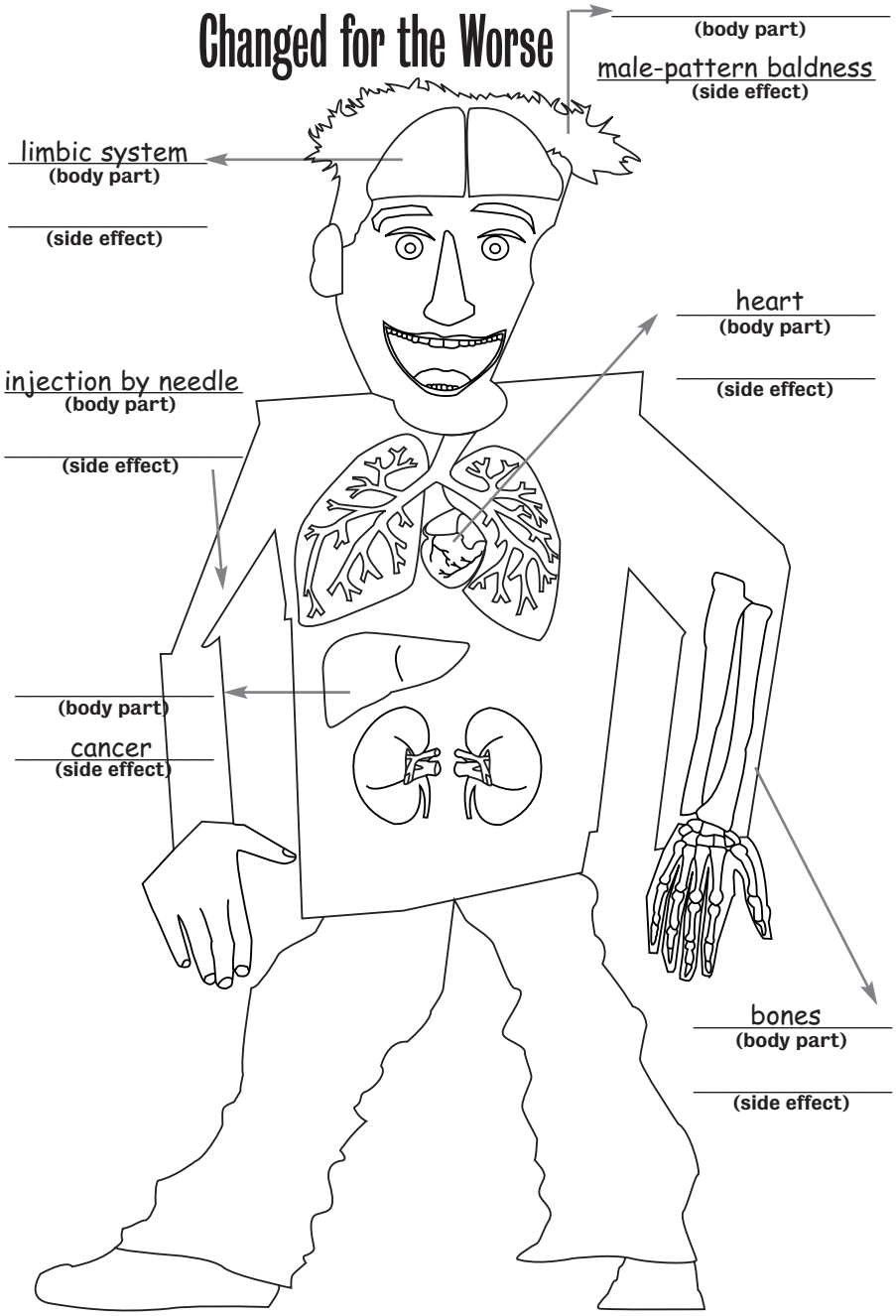
- Anabolic steroids are artificial versions of the male sex hormone testosterone. When a user takes steroids, the normal balance of hormones is disrupted. Hormonal confusion can lead to bodily confusion—men can take on female traits and women can take on male traits. Men, for example, can grow breasts, a condition called **gynecomastia**. And women can grow facial and excessive body hair, and get deep voices. Both sexes can experience **male-pattern baldness**.

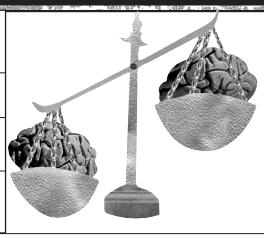
- The drugs may also cause **stunted growth** in teens. When there's an excess of hormones, the brain is fooled into thinking that the body has already gone through puberty, so it signals the bones to stop growing. That means teens may never reach their full height.

- Anabolic steroids cause problems in the brain, as well. Because of their effect on the **limbic system**, a part of the brain connected with mood, some users experience homicidal rages or moments of unprecedented aggression and violence. This condition is known as **roid rage**.

- Most steroid users pop pills but some inject the drugs. When they share needles, this can lead to the spread of **HIV** and **AIDS**.

- Finally, steroids make their way to the heart, causing potentially fatal **heart attacks**, and the liver, causing cysts and possibly **liver cancer**.





Rave Realities: The Truth About Club Drugs

Some teens go to all-night dances, called raves or trances. Some like to party at clubs. Many of the young people who are into the club and dance scene don't do drugs. But some do. They may be attracted to club drugs like MDMA (ecstasy) because they promise increased stamina for hours of dancing and intoxicating highs. But what these teens don't know may hurt, or even kill, them. Here are the facts on club drugs.

MDMA (Ecstasy)

The so-called "love drug" can cause psychological problems like confusion, depression, sleep problems, and severe anxiety. MDMA can also cause physical difficulties, such as faintness, nausea, muscle tension, blurred vision, involuntary teeth clenching, and chills or sweating. MDMA can affect the body's ability to regulate its temperature, which can lead to severe overheating (hyperthermia). In rare cases, this has resulted in death to MDMA users. Some side effects of MDMA don't go away when the drug wears off. Depressed feelings can emerge several days after MDMA is ingested. Animal studies show that MDMA can cause brain damage; this may also occur in people.

GHB

Sometimes called Georgia Home Boy, liquid ecstasy, or G, GHB slows the central nervous system (brain and spinal cord), causing a sedative effect. Odorless and colorless, it can be slipped into a drink without the victim realizing it. Disabled by the drug, the victim can be easily robbed or raped. GHB can cause sleep, coma, and death. The drug can also cause vomiting, loss of reflexes, and death by suffocation if an unconscious user's airway becomes obstructed through, for example, vomiting. Chronic drug users may have withdrawal symptoms such as insomnia, tremors, and sweating when they stop using GHB.

Ketamine

Ketamine ("Special K," "Vitamin K") is an anesthetic intended primarily for use on animals. It's called a dissociative drug because of the sense of detachment it produces in users. At high doses, "Special K" can cause delirium, amnesia, high blood pressure, and potentially fatal breathing problems.

LSD

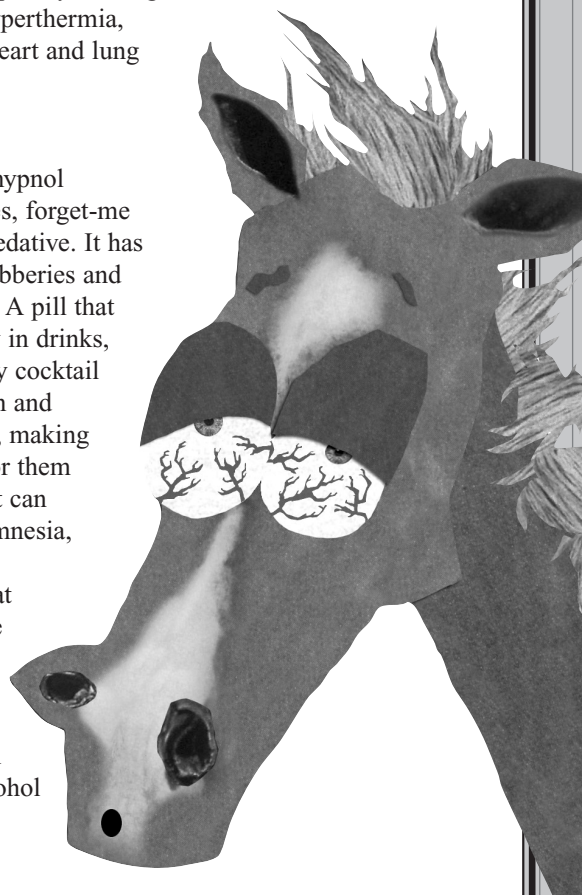
A hallucinogen, LSD causes extreme changes in sensory perceptions. Also known as acid, the drug produces physical effects, including tremors, sleeplessness, dry mouth, dilated pupils, loss of appetite, and increased heart rate and blood pressure. People taking LSD may also lose touch with reality. For example, they may see or hear things that aren't there (hallucinations). They may also have bizarre or paranoid thoughts and act on them, causing injury to themselves or others. Users may also have recurring perception problems, sometimes called flashbacks, long after they take LSD. For example, they may see trails of light that aren't there or feel like the room is spinning.

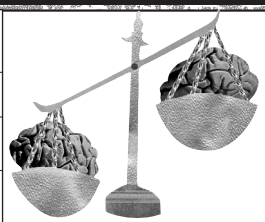
Methamphetamine

This highly addictive drug has many street names—speed, ice, chalk, meth, crystal, crank, fire, and glass. It's a stimulant with many serious health risks. Meth can cause memory loss, aggression, violence, psychotic behavior, heart problems, brain damage, stroke, and extreme anorexia. Scientists are investigating whether heavy, long-term meth use contributes to a permanent loss of muscle control that includes shakes and tremors. This drug can kill in many ways; for example, by causing convulsions, hyperthermia, and disabling heart and lung function.

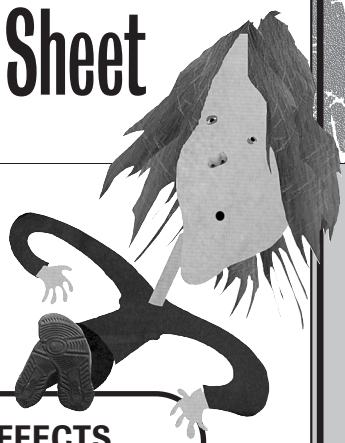
Rohypnol

Like GHB, Rohypnol (roofies, rophies, forget-me pill) acts as a sedative. It has been used in robberies and sexual assaults. A pill that dissolves easily in drinks, it makes a scary cocktail that can weaken and disable victims, making it impossible for them to fight back. It can also produce amnesia, wiping out any memory of what happened while under the influence. Last but not least, Rohypnol mixed with alcohol can be deadly.





Club-Drug Cheat Sheet



Now that you've read the facts on club drugs, how will you remember them? One helpful way to process new information is to use a graphic organizer, called a web. Use the "Rave Realities" page to fill in the specific types of club drugs, then remember or re-read the page to fill in the effects of each drug.

EFFECTS
Hyperthermia
_____
_____

MDMA
type of drug

EFFECTS
_____
_____
_____

_____
type of drug

EFFECTS
_____
_____
_____

_____
type of drug

CLUB DRUGS

_____
type of drug

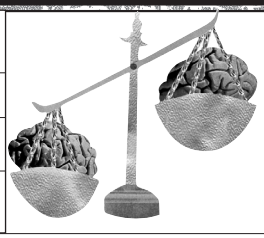
EFFECTS
_____
_____
_____

_____
type of drug

EFFECTS
_____
_____
_____

_____
type of drug

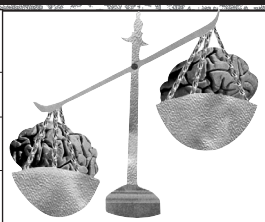
EFFECTS
_____
_____
_____



The Cocaine Course

Your teacher is about to give you as many important facts about the drug cocaine as can fit on one page. But first, write down what you already know about the drug in the first column of the chart below. Some sample facts are already listed. Then, write any questions you have about this drug. Some examples of questions are also provided. Leave the last column blank until after you've read the "Frequently Asked Questions" page that your teacher provides. Then, fill in five new things you learned.

WHAT I KNOW	WHAT I'D LIKE TO KNOW	WHAT I LEARNED
It's also called coke.	Why is it dangerous?	1.
It can kill you.	How is crack different from cocaine?	2.
		3.
		4.
		5.



FAQs on Cocaine

1. WHAT IS COCAINE?
Cocaine is a very addictive stimulant that is generally sold on the street in the form of a fine, white, crystalline powder. This drug's many street names include coke, snow, blow, toot, and rock.

2. WHERE DOES IT COME FROM?
Cocaine is made from the leaves of the coca plant.

3. HOW IS IT USED?
Cocaine is generally snorted through the nostrils in powder form. It may also be injected into the veins in a liquid form.

4. HOW IS CRACK DIFFERENT FROM COCAINE?
Crack is the crystallized or freebase form of cocaine, which is usually smoked in a pipe.

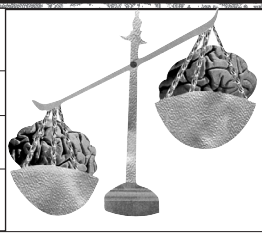
5. WHY IS COCAINE DANGEROUS?
Cocaine is a stimulant that speeds up your heart and causes your blood vessels to narrow. Cocaine use can cause irregular heart rhythms, heart attacks, chest pain, breathing problems, dangerous overheating called hyperthermia, strokes, seizures, headaches, abdominal pain, and nausea. It is also addictive.

6. CAN IT KILL YOU?
Yes. Cocaine-induced heart attacks, stroke, hyperthermia, and a breathing problem known as respiratory arrest can be fatal. They can happen even to young, healthy people.

7. WHAT DOES COCAINE DO TO YOUR BRAIN?
Dopamine is one brain chemical or neurotransmitter that stimulates the brain reward pathway. Without drugs, dopamine attaches to a receptor site on the surface of a neuron. Then it is pumped back into the neuron that released it. When cocaine gets into the brain, it blocks this dopamine pump, and there's a buildup of dopamine in the space between neurons called the synapse. This produces overactivity in the brain reward pathway.

8. WHAT'S WRONG WITH A BUILDUP OF DOPAMINE?
The buildup of dopamine is bad because it causes an extra sense of pleasure for a short time. This leads to two problems. First, your brain is wired to want to repeat pleasurable activities.

Second, research shows long-term use may reduce the amount of dopamine or the number of dopamine receptors in the brain. If that happens, the user may lose the ability to experience pleasure without cocaine—and may also need more and more of the drug just to keep from feeling bad.



Mixed-up About Heroin

Here are one student's notes for a report on the drug heroin. But, somehow, they got out of order. Can you put the notes for each paragraph into a logical sequence? Write the correct number on each index card. We've done the first paragraph for you.

INTRODUCTORY PARAGRAPH

It is an opiate, or drug that comes from opium, the white liquid produced by the poppy plant.
2

What is heroin?
1

If a drug that comes from a plant seems harmless, think again.
3

In fact, heroin is highly addictive and it carries serious health risks.
4

ADDICTION PARAGRAPH

This stimulation of opiate receptors causes the release of unnaturally high levels of the brain chemical dopamine.

Eventually, the opiate receptors become more and more used to this overstimulation and need more heroin just to work normally.

Also called smack, H, skag, and junk, heroin enters the brain and activates specific sites on the surface of certain neurons, known as opiate receptors.

Mixed-up About Heroin, continued

HEALTH RISKS PARAGRAPH:

But addiction isn't the only thing to worry about.

Sharing needles can lead to the spread of HIV, AIDS, and hepatitis B and C.

Heroin abuse can also lead to collapsed veins, bacterial infections of the blood vessels and heart valves, as well as liver or kidney disease.

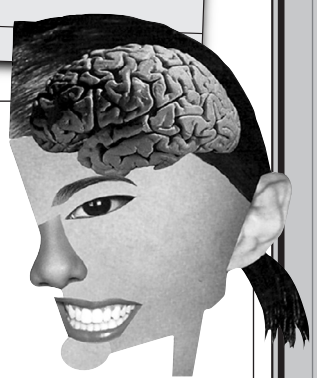
Heroin comes with a host of health hazards.

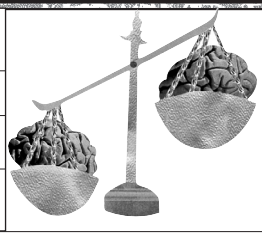
Finally, the drug depresses the respiratory system—sometimes to the point that the user stops breathing and dies.

First of all, many heroin users inject the drug, and then share needles with other users.

DRAW YOUR OWN CONCLUSION

Now that you've put the notes for a report on heroin in the correct order, write a conclusion to the report about the dangers of the drug in the space below.

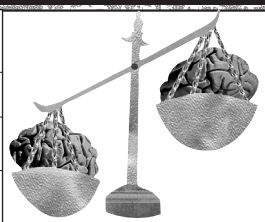




Outsmart the Chart

Use the chart below to review the facts about major drugs of abuse. Then, test your knowledge with the accompanying *Jeopardy*–style quiz.

NAME OF DRUG	STREET NAMES	HOW IT'S USED	SHORT–TERM EFFECTS	HEALTH RISKS
Cocaine	Coke, blow, bump, C, candy, Charlie, flake, rock, snow, toot, crack	Smoked from a pipe (crack); snorted through the nose; or injected into veins with a hypodermic needle	Increased heart rate, high blood pressure, irregular heartbeat; alertness and euphoria (extreme happiness); decreased appetite	Irregular heartbeat; reduced appetite; weight loss; chest pains; headaches; malnutrition; heart attack; dangerously high body temperature (hyperthermia); slow or stopped breathing; stroke; seizures; HIV/AIDS; death
Heroin	Brown sugar, dope, H, horse, junk, skag, skunk, smack, white horse	Injected directly into veins; smoked; snorted through the nose	Pain relief, euphoria; nausea; drowsiness	Confusion; constipation; staggering gait; slowed or stopped breathing; HIV/AIDS; unconsciousness, coma, death
Inhalants	Laughing gas, poppers, snappers, whippets	Inhaled through nose or mouth	Loss of inhibition; headache; nausea or vomiting; slurred speech; loss of coordination	Muscle spasms and weakness; unconsciousness; depression; memory and learning impairment; cardiovascular and nervous system damage; sudden death
LSD	Acid, blotter, boomers, cubes, microdot, screaming yellow sunshine	Swallowed or absorbed through the mouth	Altered states of perception and feeling; nausea	Loss of touch with reality; ongoing perception problems ("flashbacks"); increased body temperature, heart rate, and blood pressure; sleeplessness; weakness; tremors
Marijuana	Pot, dope, ganja, grass, herb, Mary Jane, reefer, skunk, weed	Smoked in a pipe, a cigarette or joint, or a cigar called a blunt; eaten in food; brewed as tea and drunk	Euphoria; altered perceptions; slowed reactions and thinking; impaired coordination; increased appetite	Cough; weight gain; respiratory infections; increased heart rate; anxiety; panic attacks; problems with memory and learning
MDMA	Ecstasy, E, Adam, hug, beans, love drug, X	Swallowed (pills)	Increased heart rate, blood pressure; euphoria; mental alertness; altered perception; increased tactile sensitivity; feelings of empathy	Dangerously high body temperature (hyperthermia); liver and kidney damage; heart damage; learning and memory problems
Steroids	Roids, juice	Injected, swallowed, applied to skin	Over time, anabolic (muscle-building) effects; no intoxication effects	Hostility; aggression; acne; stunted growth in teens; high blood pressure; kidney damage; liver disease; baldness; in males, breast enlargement; in females, facial hair and deepened voice; HIV/AIDS



This Is Real *Jeopardy*!

For each answer, create the correct question. The information you need is on the page "Outsmart the Chart." We've done the first one for you.

1. **Answer:** Drugs that are sometimes injected

   Question: What are steroids, heroin, and cocaine?

2. **Answer:** A blunt

   Question: _____

3. **Answer:** Drugs that can cause memory and learning problems

   Question: _____

4. **Answer:** The so-called love drug

   Question: _____

5. **Answer:** Drugs that can cause hyperthermia

   Question: _____

6. **Answer:** Drugs that can cause stunted growth in teens

   Question: _____

7. **Answer:** Drugs that are sometimes smoked

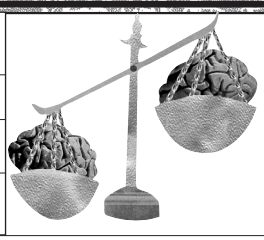
   Question: _____

8. **Answer:** Drugs that alter perception

   Question: _____

9. **Answer:** Acid

   Question: _____



A Prescription for Pain

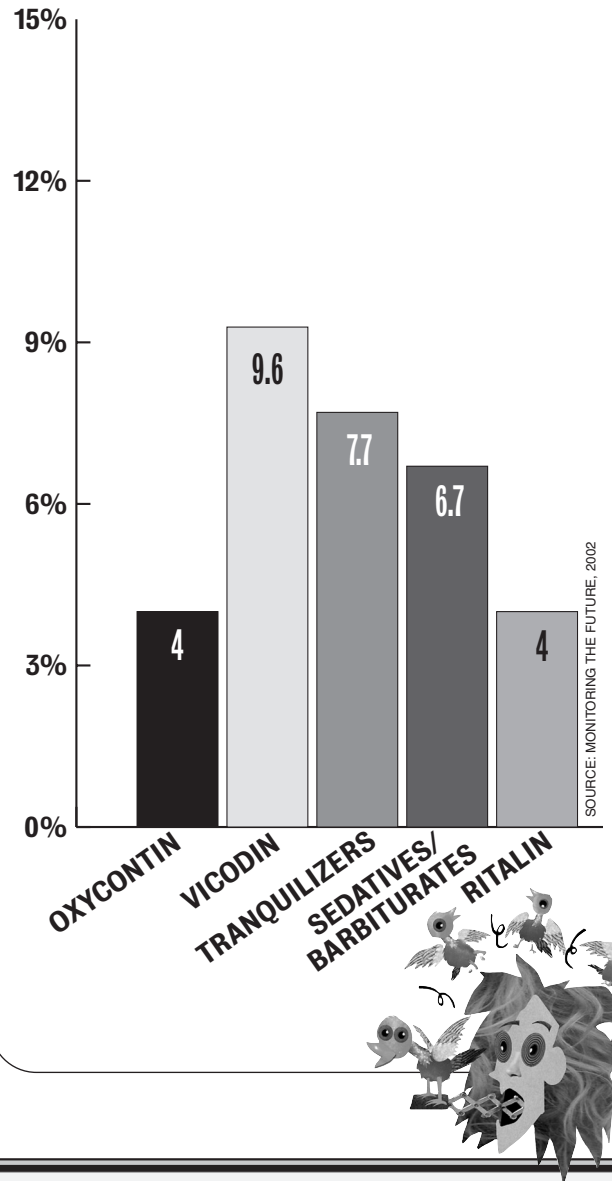
Most people who take prescription drugs do so in the form and dose prescribed, under a doctor's supervision. But some people take medicine for non-medical purposes. That's drug abuse, and it can have serious health consequences. Here's some info on a few commonly abused prescription drugs. Once you've reviewed it, complete the true/false quiz based on the graph at right.

- **OxyContin** and **Vicodin** are painkillers. They belong to the same class of drugs as heroin—they're opioids. What do opioids do? They attach to specific parts of certain cells (called opioid receptors) in the brain and spinal cord where they block pain. When used for non-medical purposes, OxyContin and Vicodin can cause addiction and, depending on the dosage, slowing or stopping of breathing, and death.

- **Tranquilizers** and **barbiturates** are used to treat anxiety, panic attacks, and sleep disorders. They are depressants, which means they slow down brain activity. This produces a calming effect. When they're abused, they create the potential for addiction. In people who take these drugs chronically, an abrupt discontinuation of their use can cause seizures.

- Methylphenidate, also known as **Ritalin**, is a stimulant used to treat Attention Deficit Hyperactivity Disorder (ADHD). Stimulants increase brain activity and can lead to greater alertness and attention. If used inappropriately (not as medically prescribed), stimulants can cause dangerously high body temperatures, irregular heartbeat, seizures, and heart attacks.

The bar graph below shows the percent of 12th-graders who had abused different prescription drugs during a 30-day period in 2002.



TRUE/FALSE QUIZ

1. The graph at right shows the difference between the percentage of 12th-graders who abuse prescription drugs and the percentage of 10th-graders who abuse prescription drugs.
   TRUE **FALSE**

2. Of all of the prescription drugs shown above, Vicodin has the greatest percentage of users.
   TRUE **FALSE**

3. More than five percent of 12th-graders surveyed in 2002 said they'd abused Ritalin in the past 30 days.
   TRUE **FALSE**

4. The difference between the percentage of sedative/barbiturate abusers and tranquilizer abusers is fewer than two percent.
   TRUE **FALSE**

5. OxyContin and Ritalin show the same percentage of abusers.
   TRUE **FALSE**

HEADS UP
REAL NEWS
ABOUT DRUGS
AND YOUR BODY

Web Resources

This book of skills pages is a useful introduction to drugs' effects on the brain and body. Teachers, students, and parents looking for more information will find the Web a helpful resource. Here are some good places to start.

>>www.scholastic.com/HEADSUP

- close-ups on common drugs of abuse
- pop-up diagrams exploring the brain and the effects of drugs on the body
- teaching support, including printable skills pages

>>www.drugabuse.gov

- the latest scientific information on drug abuse and addiction from the National Institute on Drug Abuse (NIDA)
- fact sheets, statistics, and links to special sites on marijuana, steroids, and club drugs

>>www.BacktoSchool.drugabuse.gov

- NIDA's site for teachers and students in all grades—and for parents, too
- science-based information on drugs of abuse

>>www.Sarasquest.org

- NIDA's middle-school curriculum
- on-line magazine
- comprehensive teacher's guide

>>www.teens.drugabuse.gov

- the NIDA for Teens Web site on the science of drug addiction and the brain
- on-line activities for fun and learning

STEPHEN KRONINGER/ILLUSTRATION)

SUPPLEMENT TO SCHOLASTIC INC.

FROM SCHOLASTIC AND THE SCIENTISTS OF THE NATIONAL INSTITUTE ON DRUG ABUSE,
NATIONAL INSTITUTES OF HEALTH, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES