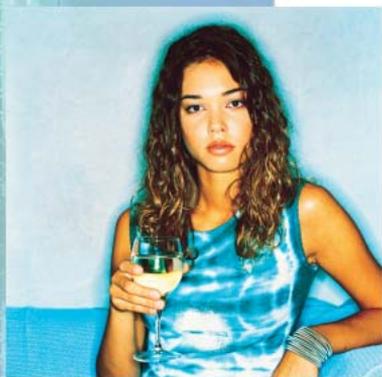


# drugwise



growing up straight  
in a **chemical culture**

■ a do it now foundation publication by jim parker

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# **To Sara**

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## ■ READY OR NOT

**h**ey... we *know* you're busy! You get up at the crack of *dawn* to go to school, channel surf with a web browser or remote control from the minute you get home until somebody yells at you to do your homework, listen to music, go to movies, and hang with your friends.

Maybe you play drums or video games, collect comics or photos of your favorite band or hip-hop group. Someday, you want to be a doctor, a model, the next Michael Jordan or Bill Gates.

*(Somebody's gotta do it!)*

Or maybe you don't have a serious *clue* about what you want to be or do with the rest of your life.

But what you are *right now* is busy.

You do your homework and you help around the house. You make your bed and sometimes you make your mom, dad, or Great Aunt Nellie nervous.



Great Aunt Nellie

So why should you spend time learning about drugs and drinking, and the problems they can cause?

For a lot of reasons.

One of the biggest reasons is that we live in a world where chemicals are all around. And drugs and alcohol can cause a *world* of problems and pain for people who don't know the facts about them.

Like it or not (and whether or not you think anyone else actually *grasps* this fact), you're also becoming an adult, and starting to make major decisions for yourself.





## ■ BUILDING BLOCKS

**b**efore we can say much about drugs one way or the other, though, we probably should agree on some basic concepts and definitions.

This stuff will apply, in one way or another, to every one of the drugs we'll be talking about in this booklet.

In fact, the first word we need to define is “drug” itself.

■ **Drug.** A drug is a chemical that changes the way that people think or feel.

Drugs can be pills, potions, or powders—even gases and liquid chemicals fall under this definition.

The only exception is food. That's why sugar isn't considered a drug, even though it *can* change the way we think and feel.

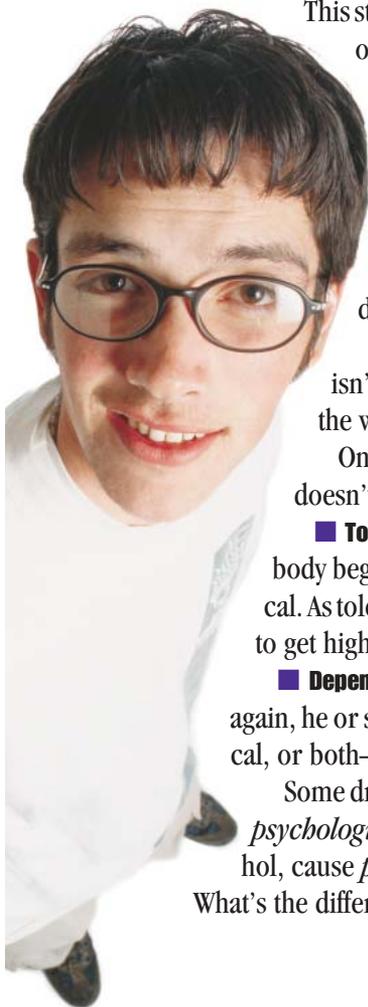
On the other hand, alcohol *is* a drug, since it doesn't have real nutritional value.

■ **Tolerance.** This is a process that occurs when the body begins to adapt to, or *tolerate*, a particular chemical. As tolerance develops, a user has to use more of a drug to get high, or achieve other desired effects.

■ **Dependence.** When someone uses a drug again and again, he or she begins to feel a need—physical, psychological, or both—for it.

Some drugs (marijuana, for example) produce a type of *psychological* dependence. Others, like heroin and alcohol, cause *physical* dependence, too.

What's the difference? Not much—or a lot, depending.



Psychologically-dependent users suffer from boredom, depression, or plain old funky feelings when they can't smoke, snort, swallow, or shoot their favorite poison.



Physically dependent users get sick when they can't smoke, snort, swallow, or shoot their favorite poison. Psychologically-dependent users suffer from boredom, depression, or just plain old funky feelings.

■ **Addiction.** An intense physical or psychological need for a drug. People who are addicted to drugs are sometimes called *addicts*. People addicted to alcohol are called *alcoholics*.

■ **Withdrawal.** The process that starts when an addicted user stops taking a drug. In withdrawal, all kinds of physical and emotional problems can come churning to the surface. The physical symptoms of withdrawal can last days or weeks, depending on the drug. Psychological effects—usually anxiety, irritability, or depression—can last a lot longer, even months or years.



■ **Intoxication.** The technical term for being drunk or high. Intoxication often involves an increasing loss of control over such basic body functions as balance and walking, along with changes in mood and behavior.

*A drug is a drug. Not all drugs cause a "high." But they all change the way users think or feel.*

Look closely at the word "intoxication," and you'll see where it comes from (See *toxic* there in the middle?) and what it refers to: the effects of a toxin, or poison, on the body.

■ **Overdose.** Dangerously high doses of a drug. Overdoses are always serious medical emergencies, and can cause coma or death, depending on the drug.

## ■ Types of Drugs

Basically, five types of drugs are used and abused:

■ **Depressants.** Drugs that *depress* (or slow down) the brain and central nervous system, easing tension and causing sleep. Because depressants slow down both the body and brain, they're sometimes called "downers." The most commonly-used depressant drug in the world is alcohol.

■ **Stimulants.** Stimulant drugs do the opposite. They *stimulate* (or speed up) the firing of cells in the brain and central nervous system, blocking feelings of hunger and fatigue. Stimulants are often called "speed" or "uppers."

■ **Hallucinogens.** Drugs in this category cause hallucinations or other sensory distortions in the way users think and perceive the world. Marijuana is a mild hallucinogen, while LSD and other chemicals are much more intense.

■ **Inhalants.** A wide range of chemicals can cause feelings of intoxication when they're inhaled or sniffed, including gases and industrial solvents. The effects of inhalants are similar to the effects of alcohol, but are more dangerous, since they kick in so suddenly and are so unpredictable.

## BRAINDRAIN

### DRUG QUIZ

#### ARE YOU DRUGWISE?

*Right off the top, we'd like to give you a chance to think about what you already know (or think you already know), drugwise. Don't worry.*

*No one's keeping score, and the questions are easy.*

*It's just the answers that are hard.*

1. The most dangerous drug in America is:  
a) crack b) alcohol c) heroin d) tobacco
2. Drug users are usually:  
a) Black b) White c) Hispanic d) Orientals e) Native Americans



*(Answers and scoring guide on page 10)*

■ **Narcotics.** Even though some people call all drugs “narcotics,” technically, they’re wrong. Narcotics are natural or synthetic members of a single drug family, which originated with the drug opium. Most were developed, and are still used, as medical drugs to relieve pain.

## BRAINDRAIN SCORING GUIDE (Continued from page 9)



**C**ongratulations! You just aced the quiz, no matter what answers you picked. Because every answer is right, in a way, and none are really wrong.

Think about it. Each drug listed in Question 1 is dangerous, and each is “most dangerous” if it causes problems for you or someone you care about. Ditto for #2. In fact, the best answer to it would probably be a simple “yes” or “all of the above.”

What’s the point? To show how tricky it is to discuss even basic ideas about drugs. A simple question can turn into a mental marathon, if you really think about it.

What does “most dangerous drug in America” *mean*, after all?

- ▶ Is tobacco “most dangerous” because of the millions of people who die from cancer and other smoking-related diseases?
- ▶ Or is crack “most dangerous” because it’s so addictive?
- ▶ Is heroin “most dangerous” because of the high rate of HIV infection and AIDS shared by addicts who share needles?
- ▶ Or is alcohol *really* the “most dangerous” because of the millions of Americans with drinking problems?

The point is that all drugs can be dangerous, and they all cause serious problems for good people, who deserve a lot better.

And the best way to make sure they don’t end up being “most dangerous” to you is to learn the facts before you have to choose— or before you create real problems for yourself.

That’s even better than being drugwise. That’s being smart.

## ■ FACING FACTS

**N**ow that we've cleared some of the background out of the way, we can begin to focus on individual drugs, and discuss how they work in the body and mind.

In this section, we'll take a look at the five main drug groups, and others that fall into the cracks between the main categories.

And the first drug we're going to talk about is a drug that's so much a part of our culture that most of us don't even think of it as a drug, at all.

Maybe you've heard of it. It's called alcohol.

**N**o matter how you look at it, alcohol has got to be considered the biggest "drug problem" in the world.

Because in terms of total numbers of people who use it and lives disrupted because of it, that's what it is.

In fact, about 18 million people in the United States alone are considered alcoholics or problem drinkers.

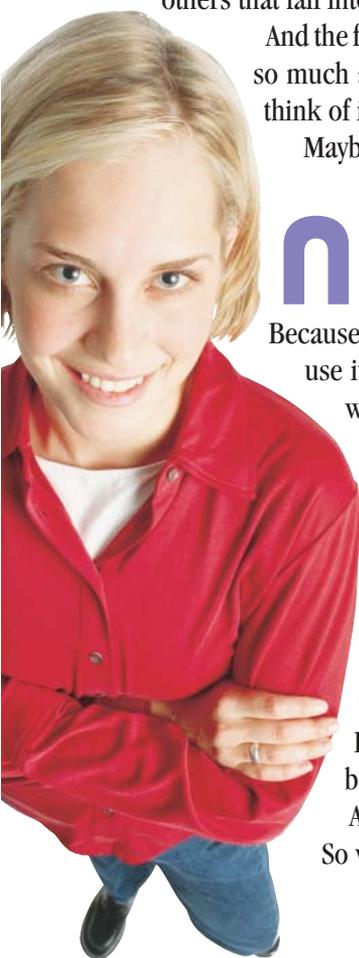
But mention "drug abuse" to most people and they forget all about alcohol. It's an "invisible" drug.

That's because most people think drugs are what other people do, and addicts are different. But alcoholics aren't different. They're like everybody else.

And they're all over the place.

So who *are* alcoholics and problem drinkers?

ALCOHOL



Most alcoholics have jobs and families and do the same things that other people do. (Especially if drinking is involved.)



They're ordinary people, with one thing in common: They have trouble controlling their drinking. They don't always fit media stereotypes, and they're usually *not* hopeless boozers and skid-row bums.

In fact, most people with drinking problems hold regular jobs and have families and do the sorts of things that other people do. Especially if it involves drinking.

But what *is* alcohol—and what is it about booze that gets some people so hooked?

It's a depressant drug, with the chemical name of *ethyl alcohol*, or *ethanol*. It's also a poison in the body—and that's what makes it so unpredictable.

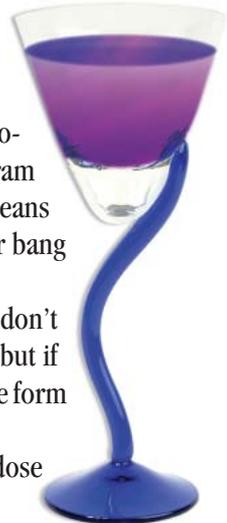
At low doses—say, one or two drinks—alcohol doesn't act like a downer, at all. Instead, it's more like a stimulant, boosting confidence and easing nervousness.

At higher doses, depressant drug effects begin to kick in—and kick harder the more a drinker drinks. So do alcohol's side effects.

Because unlike other depressants (which produce their effects in small, thousandth-of-a-gram doses), alcohol is a *high-volume* drug, which means that drinkers have to drink a lot to get the buzz or bang they're after.

And a lot of alcohol is a lot of poison. Drinkers don't always feel the toxic effects of booze right away, but if they drink enough, they feel it the next day—in the form of a *hangover*.

Since alcohol is toxic, it's also possible to overdose on it, just like other drugs—and other toxins.



In fact, the reason that alcoholic withdrawal (remember *withdrawal*?) is so difficult is because of the built-up toxic effects of alcohol on the body and the brain. Symptoms can include tremors (or “shakes”), delusions, and convulsions.

The body’s main line of defense against booze is the liver. It does its best to filter alcohol out of the bloodstream, but it’s a slow process, since it can only burn off (or *metabolize*) about an ounce an hour.

That means whenever you drink more than that, you get drunk. And the faster you drink (and the more you slosh down), the drunker you get.

What isn’t as important as you might think it might be is the specific form of alcohol that you drink.

Because even though a lot of people assume that “hard” alcohol (whiskey or tequila, for example) is more dangerous than “soft” forms, like beer or wine coolers, they’re wrong.



Because most drinks (whether liquor, beer, or wine) are pretty much equal in terms of their actual alcohol content. Beer and wine just contain more water, that’s all.

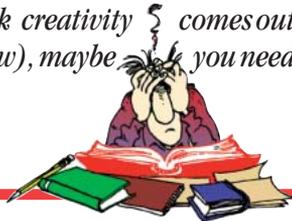
Earlier, we called alcohol an “invisible” drug. We called it that because most people don’t even think of it as a drug, at all.

That’s why the “invisible” drug is one of the trickiest drugs of all.

## DRUGWISE/DRUG WHY’S (& WHY NOT’S)

**Reason Why #67: Creativity crutch.**

**Reason Why Not #67:** *Nothing can boost your creativity above your level to create. If you think creativity comes out of a bottle (or a pipe or even a straw), maybe you need a plumber, not a psychiatrist!*



## DOWNERS

No matter what else alcohol is—visible or invisible, silent or loud—it's only one member of a broader group of drugs called depressants or “downers.”

Known medically as *sedative-hypnotics*—because of their ability to sedate (or reduce tension), and induce sleep (from the Greek word *hypnos*, for sleep)—they're better known as tranquilizers and sleeping pills.



Although there are dozens of different chemicals that produce depressant effects in dozens of different ways—all downers slow the flow of nerve impulses in the brain and central nervous system.

And they cause similar problems, too, given half a chance.

■ **Tranquilizers.** They were hailed as “wonder drugs” when they were introduced in the 1950s and '60s. And compared to other depressant drugs of the time, they *did* look pretty good for a while.

They were called “minor” tranquilizers—mostly to set them apart from the “major” tranquilizers used to treat serious forms of mental illness.

They were supposed to be both addiction-free and side-effect-free, and doctors around the world prescribed them throughout the '60s and '70s by the *billions*. But as time went on (and problems linked to them became clear), the only thing “minor” about minor tranquilizers was their name.

It wasn't that they didn't work. They did—maybe even a little too well, at blocking normal feelings of anxiety or panic.

They worked so well, in fact that users hated to give them up—even after taking them for months or years. That's when it became clear they cause a problem they weren't *supposed* to cause—serious dependency and addiction.



Another thing everybody eventually came to realize is that tranquilizers only tranquilize. They don't cure some mysterious disease that *causes* anxiety, or remove the source of worry.



As time went on (and more and more problems were linked to them), the only thing “minor” about minor tranquilizers was their name.

They just turn off parts of the brain that cause nervous feelings.

Nothing wrong with that—at least, not for people who are so stressed out that they need help even remembering what not being completely *wired* feels like. But that’s also why minor tranquilizers today are prescribed only for short-term use—usually no more than eight weeks.

Some of the more common—and better known—tranquilizers are Valium<sup>®</sup>, Xanax<sup>®</sup>, and Ativan<sup>®</sup>. They come in a variety of shapes and strengths. But they don’t come in a form that makes tension or worry magically disappear. They may hide it for a while, but when it comes back, it’s often stronger than before—like a big, bad genie who’s been bottled up too long.

■ **Sleeping pills.** Sedative-hypnotics work in the same way. In fact, they turn down the brain so much that people can’t even keep their eyes open, as they drift into *serious* slumberland.

For years, there were two basic kinds of sleeping pills: barbiturates and everything else. But that’s changed.

## DRUGWISE/DRUG LIES

**Drug Lie #99: Drugs make you more interesting.**

**Fact:** Only if you consider flaky, shaky, nodded-out, hyped-up, hallucinating, or delusional people interesting.

If not, you might regard broken kitchen appliances or one-celled organisms as a notch or two higher on the interest scale.





The problem with finding a problem-free sleeping pill is a lot like the problem of finding a problem-free tranquilizer: There doesn't seem to be one.

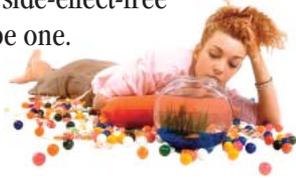
Although they were widely used in the past, barbiturates are a lot less common today.

There are two main reasons why. One is that they're so addictive. Another is that they easily cause overdose, especially when they're taken with alcohol.

Because of their risks, drug company researchers have been up nights for years trying to discover new drugs that knock people out as well as barbiturates, without the side effects and dangers.

But the problem with finding a side-effect-free sleeping pill has been a lot like the problem of finding a side-effect-free tranquilizer: There just doesn't seem to be one.

And many of the drugs developed as replacements have been every bit as risky, in their own ways.



**Effects.** The effects of downers are similar to the effects of alcohol. As dosage increases, inhibitions disappear, speech starts to slur, and body movements get clumsy and uncoordinated.

Downers are especially risky when used with alcohol. That's because both are removed from the body by the liver—and when both are circulating at the same time, alcohol gets priority and downers get bumped to “standby” status. When this happens, the downers recirculate, prolonging their effect.

The combination effect of alcohol and downers is an example of a drug *synergism*, which means that the effects of individual drugs are more intense in combination than either is alone. It's like the difference between multiplication and addition.

Three plus three may be six, but three times three is nine. And the more downers you multiply, the deadlier the result.

Since down is the opposite of up, you might guess that *uppers* are the opposite of *downers*. And if you did, you'd be pretty close to the truth.

Uppers (AKA stimulants or “speed”) are drugs that stimulate the body by speeding up action in the neurochemical circuits in the brain and central nervous system that play a role in attention and arousal.

Because speed makes users feel less tired and hungry, it's been used for years by people who want to lose weight or generally push themselves further faster than they were meant to go.

For years, the most common form of speed was a group of drugs known as *amphetamines*.

Like minor tranquilizers, they were hailed as “wonder drugs” when they were introduced, and they were promoted for years as diet pills. They were so popular that, in 1971, 12 billion diet pills were produced in the United States.

Why were they so popular? A main reason is that amphetamines work so well—at least, at first.

Besides blocking appetite and fatigue, they also create feelings of alertness and confidence—which disappear without a trace when the speed wears off.

The more they prescribed them, the more that doctors realized that amphetamines weren't wonder drugs, at all. (Sound familiar?)



*Diet dilemma. When you let drugs do your dieting for you, the diet usually wears off when the drugs do.*

While they *do* stop appetite for a while, hunger eventually bounces back, usually stronger than before. And other effects cause other problems.

But as medical use began to fall off, illegal forms of speed began to bubble up in drug labs instead—especially a high-powered form of methamphetamine, or “crystal meth.”

Today, crystal is a major drug in many parts of the country, and a cause of major problems—even a serious, lasting psychological meltdown in heavy users.

There are tons of minor problems that speed can cause, too, and some are as easy to come by as the “natural energizers” sometimes

**SPEED**





## ► COCAINE

Cocaine is another stimulant, like amphetamines. In fact, it would be hard to tell a cocaine-powered turtle from its speed-boosted brother (or sister). Except instead of arriving shell-shocked, it'd be *cracked*.

That's a joke—sort of.

But there's nothing funny about the damage that cocaine can do.

And it does a lot of *that*.



Like other stimulants, cocaine speeds up the brain and body, increasing alertness and heart rate and blocking appetite. Effects don't last as long, though—usually less than an hour. Unfortunately, problems can last a lot longer.

Since it acts on the brain's pleasure centers, cocaine can produce serious dependency. It can also interfere with basic body functions, including heart rate.

For some users, it can even stop heart contractions altogether. And when the heart stops, the *person* stops—doing cocaine and everything else.

There are two basic forms of cocaine, powder cocaine and crack (or rock), and they're used in two different ways.

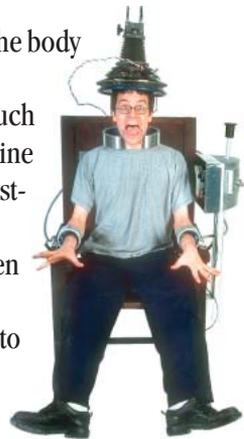
Powder is usually sniffed, while crack is smoked. Even though both contain the same drug, the fact that crack is smoked only compounds its risks.

Why? Because it's smoked, it's absorbed into the body more quickly and hits the brain harder.

As a result, crack squeezes its effects into a much smaller span of time. It shrinks a one-hour cocaine high into three minutes, which results in a fast-developing addiction.

It also illustrates the main difference between powder cocaine users and crackheads.

Powder users may watch their dreams turn to dust, but crackheads get to see theirs go up in smoke.



Just about everyone knows *something* about marijuana, if only that it comes from the hemp plant and that it grows just about everywhere, except the White House and the bottom of the Red Sea.

That's also about all that everyone *can* agree on.

Because marijuana has been a lightning rod for controversy for years, a line in the sand between cultures and classes and generations.

So what kind of a drug is marijuana? It's a complicated one, at least.



*Pot paranoia. Marijuana triggers a range of psychological effects—including feelings of paranoia.*

Although it has a lot of simple-sounding one-syllable nicknames—pot, grass, and weed, among others—marijuana isn't a simple drug.

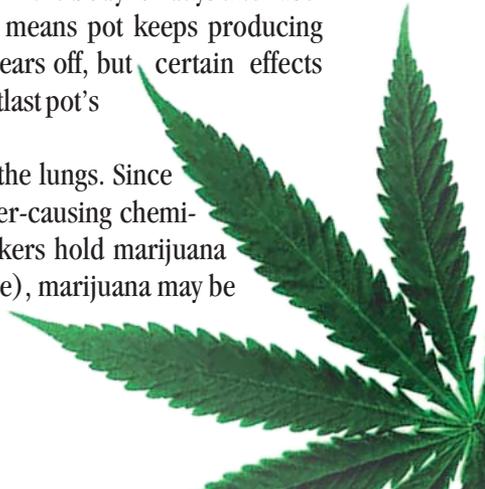
In fact, it isn't even a single molecule, like most other drugs, but a mix of 420 different chemicals. And some of them (called *cannabinoids*) don't exist anywhere else except inside the marijuana plant.

The cannabinoid that produces most of pot's effects is delta-9 tetrahydrocannabinol, or THC. It triggers a range of effects, from giddiness and euphoria to impairment of short-term memory. Adverse effects include anxiety and paranoia.

Since THC is so complex, the body isn't able to metabolize it quickly. Instead, it breaks it down in stages, so that some breakdown byproducts remain in the body for days after use.

Experts aren't sure whether that means pot keeps producing changes in the body after the high wears off, but certain effects on memory and performance may outlast pot's main drug effects.

Another potential trouble spot is the lungs. Since pot contains many of the same cancer-causing chemicals as tobacco (and since pot smokers hold marijuana smoke in their lungs for a longer time), marijuana may be as harmful to the lungs as tobacco.





Heavy pot smokers can almost become spectators in their own lives, watching it go by like a Beavis & Butt-Head marathon on THC-TV.



It might also affect the way we think and feel in other ways.

Some researchers think that pot reduces the drive for achievement, to set and meet personal goals. Others aren't sure, since goals change as our lives change. They argue that marijuana use is more likely a reflection, rather than a cause, of shifting personal priorities.

But regardless of whether pot causes (or only reflects) these kinds of changes, heavy smokers can seem almost like spectators in their own lives, watching opportunities go by like a Beavis and Butt-head marathon on THC-TV.

This may be pot's most serious potential effect of all. Because if you're already high, you don't have to do anything to feel good, which may seem cool, while you're high. But when you come down, you come back to the same problems as before, only more so, because you haven't been doing anything to make things better.

That's why marijuana can be a trap—a soft, fuzzy, funny kind of trap—to people who use it all the time. And even though it's soft and fuzzy and usually feels good, it's still a trap if you can't get out.

And too many heavy pot users forget how to get out.

## DRUGWISE/DRUG LIES: THE 'Y' FILES

***"Y" File #482: Drugs help reduce stress.***

***Fact: Drugs probably create more stress than they ever take away. It's a basic law of physics: every action has an equal and opposite reaction. The same principle applies to drugs and alcohol (and sometimes with a vengeance).***



# HALLUCINOGENS

**M**arijuana is just one example—and a mild one, at that—of a broader category of drugs known as *hallucinogens*.

Drugs in this group produce a wide range of changes in thought, mood, and perception. There are dozens of other hallucinogenic drugs, but the two best-known are probably LSD and MDMA, or “ecstasy.”

LSD is one of the most powerful psychoactive drugs ever discovered. An active dose can be as little as 30 micrograms, or about one *one-millionth* of an ounce.

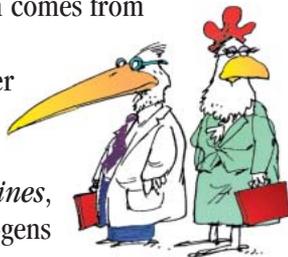


Still, a little LSD can go a long way—and can cause major changes in the way users think and feel.

Its common name is “acid,” short for its chemical name, *lysergic acid diethylamide*. It’s sometimes sold in liquid form or gelatin chips (“gel tabs”), but more often it’s soaked onto small squares of paper, known as “blotter.”

Other hallucinogenic drugs are similar to LSD, including psilocybin mushrooms, and mescaline, which comes from the peyote cactus.

There’s an alphabet soup of other chemicals in the group, too, including DMT, MDA, and MDMA (or “ecstasy”). Known as *hallucinogenic amphetamines*, the drugs are similar to both hallucinogens and speed.



**Beak out!** The sheer *strangeness* of hallucinogenic drug effects creates whole new levels of psychological risk.

So how do they work? Good question.

Because even though researchers have been looking for answers for years, the brain *is* pretty complex—maybe a million times more complex than the fastest computer.

And that makes it tough to trace what, exactly, microscopic amounts of hallucinogens do when they start doing their thing.

Still, we do know that some—like LSD—produce their main effects by temporarily “shorting-out” the way the brain works and processes sensory input.



Hallucinogens temporarily tilt the balance of brain chemicals that relay nerve impulses (and thoughts and feelings) from one cell to another.



Other hallucinogens—including ecstasy—temporarily tip the balance of brain chemicals that relay nerve impulses (and the thoughts and feelings they convey) from one cell to another.



Effects vary from one drug to another; so does the length of time that drug effects last. An acid “trip” lasts about 8-10 hours, ecstasy wears off a little faster.

One problem common to hallucinogens is that their effects are often so strange and disorienting that users can panic, fearing they’ll never come down. Luckily, most do.

Others aren’t so lucky. Some users don’t come down on schedule and, sometimes, they have to be hospitalized.

Then there’s PCP and its chemical cousin, ketamine (or “Special K”). They’re even weirder—and even more complex.

They’re hallucinogens, like LSD, but they also have depressant and anesthetic drug effects—which means they slow the body down and block sensitivity to pain.

Because of their wide range of effects, both can be really risky.

Unlike LSD, users can physically overdose on both PCP and ketamine. And because they’re anesthetics, users can seriously injure themselves and not know it.

Something both PCP and LSD—and most other hallucinogens—have in common are *flashbacks*, or recurrences of a scary drug trip.

Flashbacks don’t always happen, but when they do, they’re most often triggered by fatigue or other drug effects. Flashbacks are frightening because of their sudden onset and their intensity.

That causes more panic, and you know what goes well with panic? *Nothing.*

A lot of younger kids get into inhalants just because they're easy to get. That's too bad. Because in a lot of ways, inhalants could easily fit in that “most dangerous” category we talked about a while ago.

There are three main types of inhalants: solvents—like glue, gasoline, and lighter fluid; *aerosols*—spray oils, hairsprays and deodorants; and *nitrites*, a family of gases that includes amyl nitrite and nitrous oxide.

All are inhaled, or sniffed, through the nose or mouth to the lungs.

Solvents produce effects like alcohol. Users act drunk, slur their words (or lapse into total incoherence), stagger, and generally act weird. Effects usually last less than an hour.



Solvents are dangerous in two ways. For one thing, their effects kick in instantly—and so can an overdose. Since they're not digested by the stomach or filtered by the liver like other drugs, they're a blast of raw chemical gunk rushing from the nose to the brain in a single heartbeat.

And that's exactly how long it takes for solvents to kill someone.

Solvents can also cause problems with memory and thinking, due to their toxic effects on brain cells.

Aerosol sprays pose other dangers since sniffers can easily overdo it and coat their alveoli—the tiny air cells in the lungs that process oxygen—with hairspray or paint or other sludge. When this happens, suffocation and death can result.

Nitrites pose less immediate hazards, but they can be risky.

Isopropyl nitrite—sometimes sold legally as “liquid incense” or “head cleaner”—produce a short-term, dizzy kind of buzz, which may be linked to a shut off of oxygen flow to the inner brain. Longer-term effects can include severe headaches and dizzy spells.

Nitrites can also be dangerous if swallowed.

And some users of nitrous oxide (AKA “laughing gas”) have been known to suffocate inside cars or other enclosed spaces with open tanks of nitrous oxide.





Inhalants are blasts of raw chemical gunk that rush to the brain in a single heartbeat—which is **exactly** how long it takes for them to kill someone.

**A**s we mentioned earlier, narcotics are prescribed by doctors to relieve pain that won't respond to every-day painkillers, like aspirin.

What we didn't mention, but which you probably already know, is that they're also self-prescribed by people who take them to get high.

There are two main groups of narcotics: *opiates* and *synthetics*. Opiates are derived from the opium poppy and include such drugs as morphine, codeine, and heroin. Synthetic narcotics are similar, but they're manufactured entirely from other chemicals.



The undisputed world heavyweight champion of all the narcotics is heroin.

It's sold as a brown or white powder or as a tar that can be injected, sniffed, or smoked. Heroin causes intense physical and psychological dependence.

Tolerance to heroin develops so quickly, in fact, that addicts have to constantly up their dosage to produce desired effects. And as tolerance goes up, so does the risk of overdose—and overdose-related problems.

One reason heroin use is so risky stems from the fact that the drug is illegal—and its potency is unpredictable. Users can never be sure of the purity of the drug they're using—and sometimes, they only find out the hard (and final) way.

Another problem that's linked to heroin is AIDS. That's because users often have to share needles and sharing needles is one of the best ways of spreading the AIDS virus. That's why heroin addicts are one of the highest-risk groups for AIDS infection.

## ■ NARCOTICS



Heroin users can never be sure of the purity of the drug they're using—and sometimes, they only find out the hard (and final) way.

Synthetic narcotics are usually pretty similar to heroin in their effects, producing the same kind of high—and the same kind of addiction.

Common synthetic narcotics include Demerol®, Dilaudid®, and Percodan®.

Another synthetic narcotic, methadone, is distributed to addicts in clinics as a substitute for heroin. It blocks cravings for heroin well enough that addicts can begin to do something with their lives, other than worrying where their next big “score” is coming from.

And since we're talking about synthetic drugs, we'll throw one last drug group at you now: “designer” drugs.

Originally, designer drugs were chemicals designed by underground chemists to skirt drug laws. They'd tinker with the chemical structure of controlled substances, until arriving at a brand-new chemical with many of the same effects as the original. And they got away with it until the government made designer drugs illegal, too.

Designer drugs are dangerous because their effects are usually unknown and unpredictable.

In fact, a few years ago, a heroin-like designer substitute permanently paralyzed several people who were unlucky enough to try it.

And that brings up one of the most important dangers of all drugs sold on the street: Users never know for sure what they're getting.

The only way they can find out dosage strength and purity is by trial and error, through experimenting on themselves.

And sometimes when they *do* find out, it's already too late.



## ■ LOCKS & KEYS

Now that we've covered the different types of drugs people use to get high, let's talk briefly about how drugs work in the body and brain, and why.

Because of all the things we've learned in the past few years about drugs, the most interesting—and the most useful, both in understanding the attraction of drugs and avoiding the problems they can cause—has come from research into how drugs work in the body and brain.



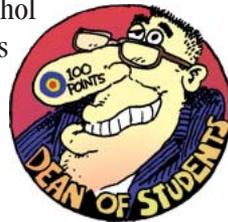
### ■ Brain Basics

For a long time, people assumed that drugs and alcohol just sort of “did something” to change the way we think and feel. Today, we know better.

Researchers now know that drugs and alcohol tilt the balance of chemicals that relay impulses from cell to cell in the brain and central nervous system. And changes here can cause major changes in the way we think and feel.

Drugs alter this balance in a number of different ways. Stimulants, for example, increase levels of transmitters that regulate arousal, like dopamine and acetylcholine.

Other drugs, like minor tranquilizers, act like tiny “keys” that fit the brain’s own system of internal relaxation “locks,” which increase the activity of neurotransmitters that help regulate emotions.



*Target practice.* Drugs produce effects by targeting receptor sites in the brain—even in people you didn't know had one.



People aren't **wrong** to try to find ways to cope with personal problems. It's just that drugs don't work to solve problems so that they **stay** solved.

Other drugs plug into receptor sites elsewhere in the brain and central nervous system.

If that were all that drugs did—just slipping inside little relaxation “locks” in our heads for a while, then letting things slide back to normal—they wouldn't be that big a deal or that bad an idea.

What makes them a big deal and a bad idea is that once the chemistry of the brain gets out of balance, it can be tough getting it back into balance. Some long-time users never seem to get it right.

### ■ 'Too-Something'

Still, knowing how drugs work in the body doesn't answer a question that's just as important: Why do people want them there?

Good question. And when you blow away all the smoke and confusion about drugs and drinking, what you find is a good (and simple) answer: because they don't feel good about themselves.

Maybe they think they're *too* something: too fat or too skinny, too dumb or too smart, too ugly or too pretty (yes, there are even some of those), too short or too tall, too poor or too rich (yep, them, too), too young or too old.

Or maybe there's something they want to change and drugs look like an easy answer or a fast shortcut.

Maybe they're wired emotionally and drink or take tranquilizers to calm down. Or maybe they don't feel like they're measuring up to their own (or someone else's) standards, and take crystal or cocaine to get more of an “edge.” Or maybe they're just bored and smoke pot to make their lives seem less empty.

No matter why people begin to drink or take drugs, after a while another reason kicks in for continuing: They think they *need* to.

And the problem with thinking *that* is it just isn't true.

## ■ MAGIC ACT

**T**he simple truth is that the factors that push people to try drugs and alcohol are understandable. And people aren't bad or wrong to try to find ways to cope with personal problems.

It's just that drugs and alcohol don't work that well at solving personal problems so that they *stay* solved.

There's nothing wrong with wanting to relax if you're tense or wanting to lose a couple of pounds if you're a little overweight.

There's nothing bad about wanting to be popular or wanting people to like you. In fact, those are okay reasons for doing most things.

But people whose lives get bent out of shape by chemicals often seem to overlook one big fact: There are better ways to achieve those goals or handle those issues so they *stay* handled.

People who have trouble relaxing can take up meditation or running or skating or playing the ukulele—or “Grand Theft Auto.”

(Well, maybe *not* “Grand Theft Auto.”)

They can read (or write) a book or make a list of the coolest/funniest/wisest things that anybody ever said or learn to bake banana bread or a million other things.

And any one of those things will help them handle stress better than drugs can.



*Way cool. Everybody has a favorite way to catch a buzz without drugs. What's yours?*

When it comes to making cool things happen in the real world, we're the originals. Chemicals are copies. **We're** magic. But drugs and alcohol can even make magic disappear.



People who just want to hang with friends can do lots of cool stuff without chemicals.

They can create personal, fun-dumb web sites or shoot hoops or start a rap group or try to figure out ways to make the world even a slightly better place to live. But they don't *have* to drink or do drugs.

One reason a lot of kids get into getting high is that it's a group activity and it's fun to do things with your friends. Passing a joint or passing a football, activities are usually more fun when they're shared.

Problems can start when kids confuse the fun of being together with the feeling of being high.

They think the drug caused the feeling, but the feeling was there in the first place. The drug—pot or acid or speed or *whatever*—was just along for the ride.

Eventually, the drug experience overwhelms the group experience, anyway. Then, what started out as a group of friends turns into a collection of stoned, isolated people, who are basically alone together.

Don't make the same mistake—and don't let your friends make it, either.

Because when it comes to the serious fun of being alive and making cool things happen in the real world, we're the originals. Chemicals are copies.

We're magic.

But drugs and alcohol can even make magic disappear.

## ■ CHOICES, CHOICES

There are a lot of ways to live your life. Some ways are probably better than others, but there's no way of knowing in advance which choices are best.

As far as drugs and drinking are concerned, why not think the whole thing through and decide *before* you have to?

Because if you wait until you *have* to, when you're out after school or at a party and somebody whips out a pipe or pills or a bottle, you might find out what a lot of people have found out before: that it's easier to just go along with what everybody else is doing.

Then, your decision's made *for* you.

That's why you really need to think about the things we've talked about and make a decision beforehand.

And if you decide to say "no," consider and practice ways of getting the idea across in a way that's comfortable for you.

If it's already too late for you to decide not to try drugs or alcohol, why not think the whole thing through and decide *again*?

Who said you couldn't change your mind about something as important as your future?

It's still a free country, if you *choose* to be free.

Take some time, and think about it. You're busy, but you're not *that* busy. *Are you?*



*Whose life is it, anyway? Making up your mind about most things is tough enough. Deciding about drugs and alcohol can be tougher.*

## ■ GETTING HELP

**O**ften, the most important step in coming to grips with a drug or alcohol problem comes from simply recognizing that you've got one.

If drugs or alcohol are causing problems for you or someone you care about, do what it takes to get the situation under control. You'll like yourself better if you do.

### ■ If You Have a Problem

If you already have a problem with drugs or alcohol, admit the problem and get help.

Talk honestly to your parents—or to a counselor, minister, coach, or favorite teacher. But talk to *someone*, and get started in getting your life back together.

Things *can* be better—but the first move is up to you.

### ■ Resources

For referral to a program in your area, check the Yellow Pages under “Alcoholism” or “Drug Abuse and Addiction.”

For help with a problem involving drugs or alcohol, contact the hotline of the National Institute on Drug Abuse at 1-800-662-HELP.

For more information on drugs, alcohol, or other health topics, drop us a line, and we'll get right back to you. Our mailing address is Do It Now Foundation, Box 27568, Tempe, AZ 85285. If you'd rather call, our phone number is 1-480-736-0599.

And if you'd like to check out more of our publications, visit our web site at [www.doitnow.org](http://www.doitnow.org).

