



# CHAPTER 1

## Introduction to Drugs and Society

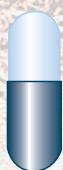
### Did You Know?

- The popular use of legal drugs, particularly alcohol and tobacco, has caused far more deaths, sickness, violent crimes, economic loss, and other social problems than the use of all illegal drugs combined.
- The effect a drug has depends on multiple factors: (1) the ingredients of the drug and its effect on the body, (2) the traditional use of the drug, (3) individual motivation, and (4) the social and physical surroundings in which the drug is taken.
- Attempts to regulate drug use were first made as long ago as 2240 BC.
- After marijuana, illicit prescription drugs are now the second leading drug of abuse.
- Drug abuse is an “equal-opportunity affliction.” This means that drug consumption is found across all income levels, social classes, genders, races, ethnicities, lifestyles, and age groups.
- Regarding race and ethnicity, the highest percentage of past-month users of illicit drugs reported two or more racial backgrounds.
- Approximately 73% of drug users in the United States are employed either full- or part-time, and 63% of full-time employees drink alcohol.
- In industry categories, the heaviest use of alcohol was found in construction; arts, entertainment, and recreation; and mining. The highest amount of illicit drug use was found in food services and construction types of industries.
- In 2008, nearly a third of state and a quarter of federal prisoners committed their offense under the influence of drugs.

### Learning Objectives

On completing this chapter you will be able to:

- Explain how drug use is affected by biological, genetic, and pharmacological factors as well as cultural, social, and contextual factors.
- Develop a basic understanding of drug use and abuse.
- Explain when drugs were first used and under what circumstances.
- Indicate how widespread drug use is and who the potential drug abusers are.
- List four reasons why drugs are used.
- Rank in descending order, from most common to least, the most commonly used licit and illicit drugs.
- Name three types of drug users, and explain how they differ.
- Describe how the mass media promote drug use.
- Explain when drug use leads to abuse.
- List and explain the stages of drug dependence.
- List the major findings regarding drugs and crime.
- Define employee assistance programs and explain their role in resolving productivity problems.
- Explain the holistic self-awareness approach.



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## Introduction

Each year, at an accelerating rate, social change driven by technology not only affects us individually but also our family, community, city, nation, and the world. These technological advancements affect our everyday lives. It is no exaggeration to say that today, more than ever before, technology is one of the primary forces driving social change at unprecedented and relentless speed, which is affecting our everyday lives. As an example, let us look at the transformation of the telephone into cellular phone technology. In all likelihood, your great-grandparents had a black stationary rotary type of landline phone at home to communicate with friends and neighbors living at a distance. Your grandparents experienced newer and more stylized versions of the same telephone with perhaps one other telephone installed in another part of their home. While growing up, your parent(s) had the same landline type of telephone, but it came in an array of colors and was even more stylized, and there were several phones throughout their home. Today, your available technology may still include a landline phone with additional accessories, such as a separate phone line for Internet access, an answering machine, and built-in voicemail capability.

An outgrowth of the landline phone and the radiophone, which was used in the military, is a gadget that most of us carry today without any sense of technological awe. The mobile phone or cell phone and its more recent cousin, the smartphone, are portable warehouses of technological services that connect to a cellular network. Current cell phones can include an array of accessories and services beyond making phone calls, including caller identification, voice messaging, voice memos, an alarm clock, a stopwatch, calendars, appointment scheduling, current times in different regions of the world, a calculator, video games, text messaging (or SMS), a camera with photo albums, Internet service, e-mail, infrared, Bluetooth, an MP3 player, storage for downloaded music and/or podcasts, GPS, a radio, and iTunes. The completely portable cellular phone with its keypad and touchscreen was never imagined 25 years ago. Further, newer generations of cellular phones will include unimaginable new applications, accessories, and services.

Consider another example. More than likely, your great-grandparents wrote letters on manual typewriters. Your grandparents wrote letters on electric typewriters, whereas your parents started writing letters on electric typewriters and then had to change to computers. Today, you often communi-

cate with family members and friends by e-mail, instant messaging, Facebook, Twitter, Skype, and MySpace. Although you may perceive many of the electronic devices surrounding your life as normal, a visit to a science and technology museum can offer many surprises and, more than likely, an appreciation for how things were and how much they have changed.

These examples illustrate how technology is in a continuous state of development and how it affects our day-to-day lives. In a sense, the technology we use today will be replaced tomorrow as newer and more advanced forms of innovation gives birth to advanced new technology and software.

What does this have to do with drug use and/or abuse? Just as electronics continually evolve, drugs follow similar paths of evolution. Today, there are thousands of new drugs available that are used either legally or illegally. These drugs are used for medicinal purposes, recreational purposes, or to achieve effects that do not include maintaining health. Other people in society use drugs to cope with pressures emanating from social change. Some people use and eventually abuse drugs to cope with, delay, or even avoid social change.

Despite the extensive amount of available information regarding the dangers of drug use and an increased number of laws prohibiting drug use, more people today continue to abuse legal and illegal types of drugs without medical approval.

## Drug Use

Anyone can become dependent on and addicted to a drug. The desire to use a drug before drug dependence (addiction) sets in is both seductive and indiscriminate of its users. Most people do not realize that drug use causes at least three major simultaneous changes:

1. The social and psychological basis of the attraction to a particular drug can be explained as feeling rewarded or satisfied because social pressures can appear to have become postponed, momentarily rectified, or neutralized and defined as nonproblematic.
2. Pharmacologically, the nonmedical use of most drugs alters body chemistry largely by interfering with its proper (homeostatic) functioning. Drugs enhance, slow down, accelerate, or distort the reception and transmission of reality.
3. The desire may satisfy an inborn or genetically programmed need or desire.

(More detail regarding this issue is presented later in this chapter and in Chapter 2.)

Many argue that our “reality” would become perilous and unpredictable if people were legally free to dabble in their drugs of choice. Many do not realize, however, that if abused, even legal drugs can alter our perception of reality, become severely addicting, and destroy our social relationships with loved ones. Before delving into more specific information, which forms the basis of the other chapters in this book, we begin by posing some key questions related to drug use that will be discussed in this chapter:

- What constitutes a drug?
- What are the most commonly abused drugs?
- What are designer drugs?
- How widespread is drug abuse?
- What is the extent and frequency of drug use in our society?
- What are the current statistics on and trends in drug use?
- What types of drug users exist?
- How do the media influence drug use?
- What attracts people to drug use?
- When does drug use lead to drug dependence?
- When does drug addiction occur?
- What are the costs of drug addiction to society?
- What can be gained by learning about the complexity of drug use and abuse?

## Dimensions of Drug Use

To determine the perception of drug use in our country, we asked several of the many people we interviewed for this book, “What do you think of the extent and the amount of drug use in our society?” The following are three of the more typical responses:

I think it is a huge problem, especially when you think about the fact that there are so many people doing drugs. Even in my own family, my sister’s kids have had drug problems. My niece became addicted to cocaine, nearly died one night from overdosing, had to leave college for a year and go into rehab. I cannot emphasize enough how this was one of the most beautiful (physically and mentally sharp) and polite nieces I ever had. The rest of the family had no idea why she left school last year. Then, just last week, my sister tearfully announced during a Christmas gathering that Cindee was heavily into drugs while attending her second year of college. We were all shocked by this informa-

tion. Now, just think how many other kids are addicted to such junk while the people who really care and love them do not have a clue. If the kids are having to deal with this, just stop and think how many other people in other jobs and professions are battling or have caved into their drugs of choice.

How many workers are there on a daily basis doing jobs that require safety and are “high” on drugs? This is a scary thought. Just think of a surgeon on drugs, or an airline pilot. Yes, we have big monster problems with controlling drug use. (*From Venturelli’s research files, female dietician in Chicago, age 43, February 9, 2003*)

A second response to the same question:

I use drugs, mainly weed and alcohol, and at least once a month I have a night of enjoying coke with several friends. As long as I am not a burden on my family, I think drug use is a personal choice. Locking up people for their drug use is a violation of my rights as a human being. For many years now, our government has not been able to stop recreational drug use, this is despite the millions that have been arrested, and countless numbers of other drug users incarcerated. What’s the point of all this? If after so many years of trying to enforce drug laws has met with failure, we need to take a long hard look at the small percentage of people like me who are fully employed, have families, pay our taxes regularly and outside of drug use, are fully functioning adults. The funny thing is that the two drugs [referring to alcohol and tobacco] that are legalized are far worse or at least as debilitating as the drugs that are legally prohibitive. Drug use is a personal choice and unless you are causing problems for other people, it should remain a personal choice. If I am using drugs on a particular night at home either by myself or with friends and we are not outside causing problems, we should not be in violation of any drug law or laws. Substances to get high have been around for hundreds and probably thousands of years, these substances that some of us like should not be any concern to others. Even my pet cat loves his catnip and appears to get a high from it; should I prohibit this little pleasure? I let him occasionally have it even if, for example, my neighbor thinks catnip is affecting the normal nature of my cat. How about if I get a rise from snorting or smoking one of the herbs in my kitchen cabinet? Whose business is it if I like to use herbs in this manner? Maybe we should also outlaw catnip and herbs? Again,

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drug use for whatever purpose is a personal decision and all the laws against the use of drugs are not going to stop me from using drugs.

*(From Venturelli's research files, male residing in a Midwestern town, age 27, May 6, 2010)*

A third response to the same question:

My drug use? Whose business is it anyway? As long as I don't affect your life when I do drugs, what business is it but my own? We come into the world alone and leave this world alone. I don't bother anyone else about whether or not so and so uses drugs, unless of course, their drug use puts me in jeopardy (like a bus driver or pilot high on drugs). On certain days when things are slow, I even get a little high on cocaine while trading stocks. These are the same clients who I have had for years and who really trust my advice. Ask my clients whether they are happy with my investment advice. I handle accounts with millions of dollars for corporations and even the board of education! Never was my judgment impaired or adversely affected because of too much coke. In fact, I know that I work even better under a little buzz. Now, I know this stuff has the potential to become addictive, but I don't let it. I know how to use it and when to lay off for a few weeks. *(From Venturelli's research files, male investment broker working in a major metropolitan city in California, age 48, June 2, 2000)*

These three interviews reflect contrasting views and attitudes about drug use. The first interview shows the most contrast from the second and third interviews. Both the second and third interview show a similarity of views about drug use, largely from an insider's (the user's) perspective, indicative of a strong determination and belief that drug use should not be legally controlled and should be left to the discretion of users. Although much about these viewpoints can certainly be debated, an interesting finding is that such vastly different views about drug use are not only evident, but more importantly

often divide drug users and non-drug users. Drug users and/or sympathizers of drug use are often considered **insiders** with regard to their drug use, whereas nonusers and/or those who are against drug use are **outsiders**. These two classifications result in very different sets of values and attitudes about drug usage. Such great differences of opinion and views about drugs and drug use often result from the following sources: (1) prior socialization experiences, such as family upbringing, relations with siblings, and types of peer group associations; (2) the amount of exposure to drug use and drug users; (3) the age of initial exposure to drug use; and (4) whether an attitude change has occurred regarding the acceptance or rejection of using drugs. (Most of these influencing factors are discussed further in Chapter 2.) Keep in mind that this book views the following four principal factors as affecting how a drug user experiences a drug:

- **Biological, genetic, and pharmacological factors:** Substance abuse and addiction involve biological and genetic factors. The pharmacology of drug use focuses on how the ingredients of a particular drug affect the body and the nervous system and in turn a person's experience with a particular drug.
- **Cultural factors:** Society's views of drug use, as determined by custom and tradition, affect our initial approach to and use of a particular drug.
- **Social factors:** The motivation for taking a particular drug is affected by needs such as diminishing physical pain; curing an illness; providing relaxation; relieving stress or anxiety; trying to escape reality; self-medicating; heightening awareness; wanting to distort and change visual, auditory, or sensory inputs; or strengthening confidence. Included in the category of social factors is the belief that attitudes about drug use develop from the values and attitudes of other drug users; the norms in their communities, subcultures, peer groups, and families; and the drug user's personal experiences with using drugs. These are also known as influencing social factors.
- **Contextual factors:** Specific contexts define and determine personal dispositions toward drug use, as demonstrated by moods and attitudes about such activity. Specifically, these factors encompass the drug-taking social behavior that develops from the physical surroundings where the drug is used. For example, drug use may be perceived as more acceptable at fraternity parties, while socializing with drug-using friends,

### KEY TERMS

#### **insiders**

people on the inside; those who approve of and/or use drugs

#### **outsiders**

people on the outside; those who do not approve of and/or use drugs





Examples of licit drugs that can be easily abused.

outdoors in a secluded area with other drug users, in private homes, secretly at work, or at music concerts.

Paying attention to the cultural, social, and contextual factors of drug use leads us to explore the sociology and psychology of drug use. Equally important are the biological, genetic, and pharmacological factors and consequences that directly focus on why and how drugs may be appealing and how they affect the body—primarily the central nervous system (CNS) and brain functions.

Although substances that affect both mind and body functioning are commonly called **drugs**, researchers in the field of drug or substance abuse use a more precise term: **psychoactive drugs (substances)**. Why the preference for using this term as opposed to *drugs*? Because the term *psychoactive drugs* is more precise in referring to how drugs affect the body. This term focuses on the particular effects these substances have on the CNS and emphasizes how they alter mood, consciousness, perception, and/or behavior. Because of their effects on the brain, psychoactive drugs can be used to treat physical, psychological, or mental illness. Because the body can tolerate increasingly larger doses of them, many psychoactive drugs are used in progressively greater and more uncontrollable amounts to achieve the same level of effect. For many substances, a user is at risk of moving from occasional to regular use or from moderate use to heavy and then chronic use. A chronic user may then risk **addiction** (a mostly psychological attachment) and experience **withdrawal symptoms** that are physical and/or psychological in nature whenever the drug is not supplied.

Generally speaking, any substance that modifies the nervous system and states of consciousness is a drug. Such modification includes one or more of the following: enhancement, inhibition, or dis-



Examples of illicit drugs that can become costly once drug dependence occurs.

tortion of the body, affecting patterns of behavior and social functioning. Psychoactive drugs are classified as either **licit** (legal) or **illicit** (illegal). (See **Table 1.1** for a list of slang terms used by drug users.) For example, coffee, tea, cocoa, alcohol, tobacco, and **over-the-counter (OTC)** drugs are licit. When licit drugs are used in moderation, they often go unnoticed and are often socially acceptable. Marijuana, cocaine, crack, and all of the hallucinogenic-

## KEY TERMS

### drug(s)

any substances that modify (either by enhancing, inhibiting, or distorting) mind and/or body functioning

### psychoactive drugs (substances)

drug compounds (substances) that affect the central nervous system and alter consciousness and/or perceptions

### addiction

generally refers to the psychological attachment to a drug(s); addiction to “harder” drugs such as heroin results in both psychological and physical attachment to the chemical properties of the drug, with the resulting satisfaction (reward) derived from using the drug in question

### withdrawal symptoms

psychological and physical symptoms that result when a drug is absent from the body; physical symptoms are generally present in cases of drug dependence to more addictive drugs such as heroin; physical and psychological symptoms of withdrawal include perspiration, nausea, boredom, anxiety, and muscle spasms

### licit drugs

legalized drugs such as coffee, alcohol, and tobacco

### illicit drugs

illegal drugs such as marijuana, cocaine, and LSD

### over-the-counter (OTC)

legalized drugs sold without a prescription



**Table 1.1 A Sampling of Slang Terms Relating to Drugs and Drug Use**

SLANG TERM	WHAT IT MEANS	SLANG TERM	WHAT IT MEANS
007s	Methylenedioxymethamphetamine (MDMA)	Bin Laden	Heroin (after 9/11)
24-7	Crack cocaine	Black beauties	Amphetamines, depressants
51	Crack + marijuana or tobacco	Blasted	Under the influence
80	Oxycontin pill	Blow your mind	Getting high on hallucinogens
Abolic	Veterinary steroids	Blunt	Marijuana inside a cigar
A-bomb	Marijuana cigarette with heroin or opium	Boost and shoot	Steal to support a drug habit
AC/DC	Codeine cough syrup	Brain ticklers	Amphetamines
Acid, acid cube	LSD, sugar cube with LSD	Brown bombers	LSD
Acid freak, head	Heavy user of LSD	Brown sugar	Heroin
Adam	Methylenedioxymethamphetamine (MDMA)	Buda	Marijuana joint and crack
Air blast	Inhalants	Buddha	Potent marijuana spiked with opium
All star	User of multiple drugs	Bundle	Heroin
Amped	High on amphetamines	Ditch weed	Inferior marijuana
Angel dust	PCP	Dr. Feelgood	Heroin
Author	Doctor who writes illegal prescriptions	Easy lay	Gamma hydroxybutyrate (GHB)
Babysit	Guide someone through their first drug experience	Fantasy	GHB
Balloon	A penny balloon with heroin	Flower tipping	Ecstasy (MDMA) mixed with mushrooms
Banano	Cigarette laced with cocaine	Forget-me-drug	Rohypnol
Barbies	Depressants	Fries	Crack cocaine
Battery acid	LSD	Garbage rock	Crack cocaine
Batu	Smokable methamphetamine	Hillbilly heroin	Methamphetamine
Beam me up, Scotty	PCP and crack	Hippie crack	Inhalants
Beanies	Methamphetamine	Hot ice	Smokable methamphetamine
Beast	Heroin plus LSD	Huff, huffing	Inhalants, to sniff an inhalant
Belladonna	PCP	Ice cream habit	Occasional use of drugs
Bender	Drug party	Idiot pills	Depressants
Biker's coffee	Methamphetamine + coffee	Kiddie dope	Prescription drugs



**Table 1.1** (continued)

SLANG TERM	WHAT IT MEANS	SLANG TERM	WHAT IT MEANS
Lemonade	Poor quality drugs	Special K	Ketamine
Lunch money drug	Rohypnol	Stacking	Use of steroids without a prescription
Magic mushroom	Psilocybin	Strawberry	LSD; female who trades sex for crack or money to buy crack
Monkey dust	PCP	The devil	Crack cocaine
Moon gas	Inhalants	Tornado	Crack cocaine
Mother's little helper	Depressants	Totally spent	Hangover after MDMA
Nose candy	Cocaine	Water-water	Marijuana cigarettes dipped in embalming fluid
Parachute	Smokable crack + heroin	West Coast	Ritalin (ADHD drug)
Pepsi habit	Occasional use of drugs	Working man's cocaine	Methamphetamine
Poor man's coke	Methamphetamine	Zig Zag man	Marijuana rolling papers
Ringer	Good hit of crack; hear bells	Zombie	PCP, heavy user of drugs
Shot	To inject a drug	Zoom	Marijuana laced with PCP

Source: Office of National Drug Control Policy. *Drug Facts: Street Terms*. Washington, DC: Author, 2010. Available at: <http://www.whitehousedrugpolicy.gov/streetterms>. Accessed March 15, 2011.

types of drugs are examples of illicit drugs. With the exception of marijuana—which some states allow for medical use and small amounts for personal use—federal law continues to prohibit the possession and use of all of these drugs.

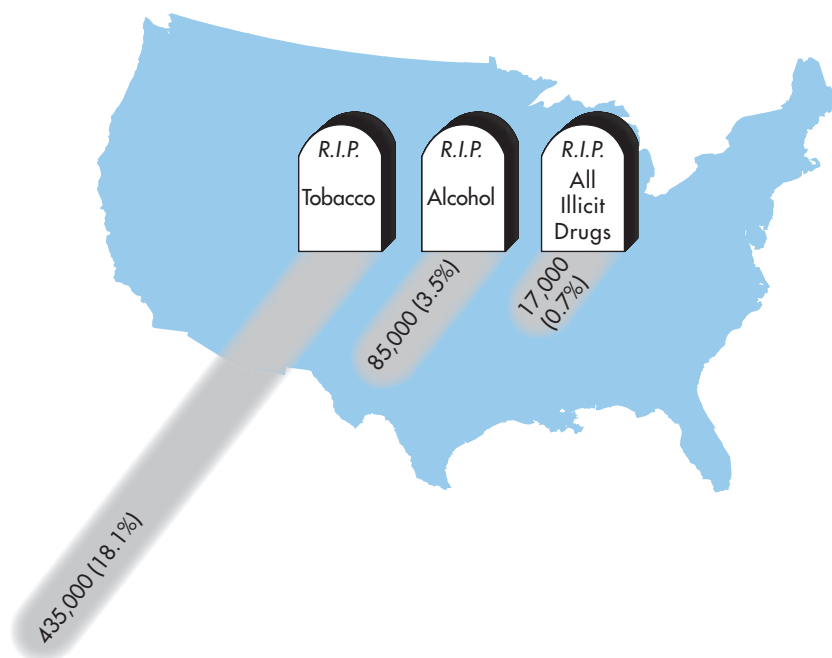
Researchers have made some interesting findings about legal and illegal drug use:

- The use of such legal substances as alcohol and tobacco is much more common than the use of illegal drugs such as marijuana, cocaine, heroin, and hallucinogens (psychedelics). Other legal drugs, such as depressants and stimulants, although less popular than alcohol and tobacco, are still more widely used than heroin and LSD. (See **Figure 1.1** for illustrated comparisons.)
- The popular use of licit drugs, particularly alcohol and tobacco, has caused far more deaths, sickness, violent crimes, economic loss, and other social problems than the combined use of all illicit drugs.
- Societal reaction to various drugs changes with time and place. Today, opium is an illegal drug

and widely condemned as a pan-pathogen (a cause of all ills). In the 18th and 19th centuries, however, it was a legal drug and was popularly praised as a panacea (a cure for all ills). Alcohol use was widespread in the United States in the early 1800s, became illegal during the 1920s, and then was legalized a second time and has been widely used since the 1930s. Cigarette smoking is legal in all countries today. In the 17th century, it was illegal in most countries, and smokers were sometimes harshly punished. For example, in Russia, smokers could lose their noses; in Hindustan (India), they could lose their lips; and in China, they could lose their heads (Thio 1983, 1995, 2000). Today, new emphasis in the United States on the public health hazards from cigarettes again is leading some people to consider new measures to restrict or even outlaw tobacco smoking.

**Table 1.2** introduces some of the terminology that you will encounter throughout this text. It is important that you understand how the definitions vary.



**FIGURE 1.1**

Annual U.S. deaths and likelihoods of dying from tobacco, alcohol, and illicit drug use.

The average American is 25 times more likely to die from tobacco-related illnesses (cardiovascular disease, respiratory disease, and cancer) than die from illicit drug-related illnesses. He or she is five times more likely to die from alcohol-related illnesses than illicit drug use.

Source: Data from Mokdad, A. H., J. S. Marks, D. F. Stroup, and J. L. Gerberding. "Actual Causes of Death in the United States, 2000." *Journal of the American Medical Association* 291 (10 March 2004):1238–1245.

## ■ Major Types of Commonly Abused Drugs

There are six types of major drugs in use: (1) prescription drugs, (2) over-the-counter drugs, (3) recreational drugs (coffee, tea, alcohol, tobacco, and chocolate), (4) illicit drugs, (5) herbal preparations (generally derived from plants), and (6) commercial drugs (paints, glues, pesticides, and household cleaning products).

In looking at drug use, this book examines the following topics: (1) OTC drugs; (2) prescription drugs; (3) other drugs and compounds not taken for a medical need or necessity but for pleasure or relief from boredom, stress, or anxiety; and (4) some of the most important information regarding drug use (for example, theories of why drugs are used, legality of drugs, addiction, bodily effects of drug use, lifestyles of drug users, use of drugs within specific subcultures [special populations or subpopulations] that share similar characteristics, and drug abuse treatment and prevention).

To begin, we now briefly examine the major drugs of use and often abuse. The drugs examined next are prescription drugs, performance-enhancing

drugs, stimulants, hallucinogens (psychedelics) and other similar compounds, depressants, alcohol, nicotine, cannabis (marijuana and hashish), anabolic steroids, inhalants/organic solvents, narcotics/opiates, and designer drugs. A brief overview is provided here, and these same drugs are discussed in much more detail in separate chapters throughout this book.

### Prescription and Performance-Enhancing Drugs

In the United States, young people frequently abuse prescription drugs; the only illicit drug that is abused more frequently is marijuana (Substance Abuse and Mental Health Services Administration [SAMHSA] 2009). In 2009, 2.5% of illicit drug users, over 6.2 million persons age 12 or older, used prescription-type psychotherapeutic drugs nonmedically. For example, according to the National Survey on Drug Use and Health (NSDUH), published in 2009, from 2002 through 2008, 2.9% of 12- to 17-year-olds reported past-year nonmedical prescription pain reliever use and abuse of marijuana was at 6.7%. "A number of national studies and published reports indicate that the intentional abuse of prescription drugs,

**Table 1.2 Commonly Used Terms**

TERM	DESCRIPTION
Gateway drugs	The word <i>gateway</i> suggests a path or entryway leading to an entrance. Gateway is a theory that the early use of alcohol, tobacco products, and marijuana (the most heavily used illicit types of drugs) lead to the use of more powerfully addictive drugs like cocaine, heroin, and highly addictive prescription medicines.
Medicines	Compounds generally prescribed by a physician that treat, prevent, or alleviate the symptoms of disease. (Can also include over-the-counter [OTC] drugs purchased at pharmacies.)
Prescription medicines	Drugs that are prescribed by a physician. Common examples include antibiotics, antidepressants, and drugs prescribed to relieve pain, induce stimulation, or induce relaxation. These drugs are taken under a physician's recommendation because they are more potent than OTC drugs. On a yearly basis, physicians write approximately 3.8 billion prescriptions (Fischer et al. 2010), with sales totaling \$234.1 billion in 2008 (Lundy 2010, p. 1).
Over-the-counter (OTC)	OTC drugs can be purchased at will without seeking medical advice or a prescription. Examples include aspirin, laxatives, diet pills, cough suppressants, and sore throat medicines. There are approximately 1000 active ingredients used in the more than 100,000 OTC products available in the marketplace today (Consumer Healthcare Products Association [CHPA] 2001). In 2009, \$16.9 billion was spent in the United States on OTC medicines.*
Drug misuse	The unintentional or inappropriate use of prescribed and OTC drugs. Misuse includes, but is not limited to, (1) taking more drugs than prescribed; (2) using OTC or psychoactive drugs in excess without medical supervision; (3) mixing drugs with alcohol or other drugs, often to accentuate euphoric effects or simply not caring about the effects of mixing drugs; (4) using old medicines to self-treat new symptoms of an illness or ailment; (5) discontinuing certain prescribed drugs at will or against a physician's recommendation; and (6) administering prescription drugs to family members or friends without medical approval and supervision.
Drug abuse	Also known as <i>chemical or substance abuse</i> . The willful misuse of either licit or illicit drugs for recreation, perceived necessity, or convenience. Drug abuse differs from drug use in that <i>drug use</i> is taking or using drugs, whereas <i>drug abuse</i> is a more intense and often willful misuse of drugs, often to the point of becoming addicted.
Drug addiction	Drug addiction involves noncasual or nonrecreational drug use. A frequent symptom is intense psychological preoccupation with obtaining and consuming drugs. Most often psychological and—in some cases, depending on the drug—physiological symptoms of withdrawal are manifested when the craving for the drug is not satisfied. Today, more emphasis is placed on the psychological craving (mental attachment) to the drug than on the more physiologically based withdrawal symptoms of addiction. (See Chapter 2 for more detailed information regarding addiction and the addiction process.)
<p>*This amount excludes OTC sales by Wal-Mart and does not include vitamins/minerals/nutritional supplements.</p> <p>Sources: Fischer, M. A., M. R. Stedman, J. Lii, et al. "Primary Medication Non-Adherence: Analysis of 195,930 Electronic Prescriptions." <i>Journal of General Internal Medicine</i> 25 (2010 April):284–290, Epub 4 February 2010; The Henry J. Kaiser Family Foundation. "Prescription Drug Trends." 2010. Available at: <a href="http://www.kff.org/rxdrugs/3057.cfm">http://www.kff.org/rxdrugs/3057.cfm</a>. Accessed February 7, 2011; and Consumer Healthcare Protection Association (CHPA). <i>OTC Retail Sales—1964–2009</i>. Available at: <a href="http://www.chpa-info.org/pressroom/Retail_Sales.aspx">http://www.chpa-info.org/pressroom/Retail_Sales.aspx</a>. Accessed February 7, 2011.</p>	

such as pain relievers, tranquilizers, stimulants and sedatives, to get high is a growing concern—particularly among teens—in the United States. In fact, among young people ages 12–17, prescription drugs have become the second most abused illegal drug, behind marijuana” (Office of National Drug Control Policy [ONDCP] 2007). In

2008, 15.2 million Americans age 12 or older had taken a prescription pain reliever, tranquilizer, stimulant, or sedative for nonmedical purposes at least once in the year prior to being surveyed (National Institute on Drug Abuse [NIDA] 2010). The Centers for Disease Control and Prevention (CDC 2010) reports that its national survey found



that 20.2% of high school students said they had taken a drug such as Ritalin, Xanax, or OxyContin without having a doctor's prescription.

Three categories of prescription drugs that are currently abused are narcotics, depressants, and stimulants. Narcotics (e.g., OxyContin, Vicodin, Percocet) include analgesics or **opioids** that are generally prescribed for physical pain. Abuse occurs when they are used nonmedically because of their euphoric and numbing effects. Depressants (e.g., Xanax, Valium, Librium) are generally used to treat anxiety and sleep disorders. These drugs are abused because of their sedating properties. Stimulants (e.g., Ritalin, Dexedrine, Meridia) are used to treat attention deficit disorder (ADD), attention deficit hyperactivity disorder (ADHD), and asthma. These drugs are abused because of their euphoric effects and energizing potential (Publishers Group 2004).

The two drugs in the stimulants category that are most often abused are Ritalin (methylphenidate hydrochloride) and Adderall (amphetamine). These prescription drugs are legitimately prescribed for ADHD, ADD, and narcolepsy (a sleep disorder) (Center for Substance Abuse Research [CESAR] 2003). When used nonmedically, they are taken orally as tablets or the tablets are crushed into a powder and snorted (a far more popular method). Students often illegally purchase these tablets for \$5 each from other students who have a legal prescription for the medication.

I feel like Dr. Pill. All these brothers [fraternity brothers] are always looking for me at parties so that I can sell them a few tabs. What the heck, I make extra money selling Ritalin, enough to buy essentials like beer and cigarettes. (From Venturelli's research files, male undergraduate student at a Midwestern university, age 20, December 9, 2004)

And,

Funny how when I go back to the frat house during homecoming there are other under-

grads who have taken over my business and continue to sell their prescribed Ritalin mostly for partying. (A second interview with the same former student quoted at age 26, now employed in real estate, October 2, 2010)

These drugs often are used in conjunction with alcohol or marijuana to enhance the "high" or for staying awake to increase comprehension and remain focused while reading or studying for an exam (CESAR 2003). Both prescription drugs (Ritalin and Adderall) are readily available and can be easily obtained by teenagers, who may abuse these drugs to experience a variety of desired effects. Increasingly, younger adolescents are obtaining prescription drugs from classmates, friends, and family members or are stealing the drugs from school medicine dispensaries and from other people for whom the drug has been legitimately prescribed.

Ritalin, Adderall, and other stimulant abusers tend to be late junior high school, high school, and college students. "A 2009 national survey found that 5.8% used amphetamines with 2.6% of students in grades 8, 10, and 12 reporting using Ritalin without medical supervision at least once in the past year" (National Survey on Drug Use and Health [NSDUH] 2009). Further, in 2008 it was reported that approximately 16% of college students used or had tried Ritalin for recreational purposes and/or felt it necessary to use this drug to study for longer hours (SAMHSA 2009).

### Stimulants

Some stimulants can be considered to be **gateway drugs** (see definition in Table 1.2), and these substances act on the central nervous system (CNS) by increasing alertness, excitement, euphoria, pulse rate, and blood pressure. Insomnia and loss of appetite are common outcomes. The user initially experiences pleasant effects, such as a sense of increased energy and a state of euphoria, or "high." In addition, users feel restless and talkative and have trouble sleeping. High doses used over the long term can produce personality changes. Some of the psychological risks associated with chronic stimulant use include violent, erratic, or paranoid behavior. Other effects can include confusion, anxiety and depression, and loss of interest in sex or food. Major stimulants include amphetamines, cocaine and crack, methamphetamine ("meth"), and methylphenidate. Minor stimulants include caffeine, tea, chocolate, and nicotine (the most addictive minor stimulant).

## KEY TERMS

### opioids

drugs derived from opium

### gateway drugs

alcohol, tobacco, and marijuana—types of drugs that when used excessively may lead to using other and more addictive drugs such as cocaine, heroin, or "crack"

### Hallucinogens/Psychedelics and Other Similar Drugs

Either synthetic or grown naturally, these drugs produce a very intense alteration of perceptions, thoughts, and feelings. They most certainly influence the complex inner workings of the human mind, causing users to refer to these drugs as psychedelics (because they cause hallucinations or distortion of reality and thinking). In addition to amplifying states of mind, hallucinogenic types of drugs induce a reality that is reported to be qualitatively different from those of ordinary consciousness. For example, while the user is under their influence, these drugs can affect the sense of taste, smell, hearing, and vision. Tolerance to hallucinogens builds very rapidly, which means that increasing amounts of this drug are needed for similar effects. Hallucinogens include LSD, mescaline, **MDMA** (Ecstasy), phenylcyclidine (PCP), psilocybin or “magic mushrooms,” ketamine, and the more potent (hybrid) varieties of marijuana, hashish, and opium that are smoked.

### Depressants

These drugs depress the CNS. If taken in a high enough quantity, they produce insensibility or stupor. Depressants are also taken for some of the same reasons as hallucinogens, such as to relieve boredom, stress, and anxiety. In addition, the effects of both opioids (drugs that are derived from opium) and morphine derivatives appeal to many people who are struggling with emotional problems and looking for physical and emotional relief, and in some cases to induce sleep. Depressants include alcohol (ethanol), barbiturates, benzodiazepines (such as diazepam [Valium]), and methaqualone (Quaaludes).

### Alcohol

Known as a gateway drug, **ethanol** is a colorless, volatile, and pungent liquid resulting from fermented grains, berries, and other fruits and vegetables. Alcohol is a depressant that mainly affects the CNS. Excessive amounts of alcohol often cause a progressive loss of inhibitions, flushing and dizziness, loss of coordination, impaired motor skills, blurred vision, slurred speech, sudden mood swings, vomiting, irregular pulse, and memory impairment. Chronic heavy use may lead to high blood pressure, arrhythmia (irregular heartbeat), and cirrhosis (severe liver deterioration).

### Nicotine

Nicotine is also considered a gateway drug. It is a very addictive, colorless, highly volatile liquid alkaloid found in all tobacco products, including cigarettes, chewing tobacco, pipe tobacco, and cigars.

Because nicotine is highly addictive and tobacco use is still socially acceptable under certain circumstances, smokers often start young and have a very difficult time quitting. Long-term use of tobacco products can lead to several different chronic respiratory ailments and cancers.

### Cannabis (Marijuana and Hashish)

Cannabis is the most widely used illicit drug in the United States. Marijuana consists of the dried and crushed leaves, flowers, and seeds of the *Cannabis sativa* plant, which readily grows in many parts of the world. Delta 9-tetrahydrocannabinol (THC) is the primary psychoactive, mind-altering ingredient in marijuana that produces euphoria (often referred to as a “high”). Plant parts (mainly the leaves and buds of the plant) are usually dried, crushed, and smoked much like tobacco products. Other ways of ingesting marijuana include crushing and mixing finely crushed leaves into the butter or oil that goes into cookie or brownie batter and baking the batter. Hashish is a cannabis derivative that contains the purest form of resin and the highest amount of THC.

### Synthetic Cannabis: Spice and K2

“A package of K2, a synthetic marijuana, is a concoction of dried herbs sprayed with chemicals, used in the herbal blends that are sold in head shops on the Internet to a growing number of teens and young adults” (Caldwell 2010, p. 30). A retired organic chemistry researcher from Clemson University reports such medical problems from synthetic cannabis use as “overdoses, cases of addiction and even suicide” (Caldwell 2010, p. 30).

K2 and Spice are genericized trademarks that first went on sale in 2000, initially as legal herbs. Several years later, it was discovered that this drug contained synthetic cannabinoids that affected the body in similar fashion as marijuana (cannabis). This drug is

## KEY TERMS

### **MDMA**

a type of illicit drug known as “Ecstasy” or “Adam” and having stimulant and hallucinogenic properties

### **ethanol**

the pharmacological term for alcohol; a consumable type of alcohol that is the psychoactive ingredient in alcoholic beverages; often called grain alcohol





K2 contains synthetic cannabinoids that affect the body in similar fashion as marijuana.

most often smoked like marijuana. Herbs listed on packages of Spice include *Nymphaea caerulea*, *Lonotis leonurus*, *Zornia latifolia*, *Canavalia maritima*, *Scutellaria nana*, *Pedicularis densiflora*, *Nelumbo nucifera*, and *Leonurus sibiricus*. Examination for the presence of these ingredients was not found by laboratories in Germany. Another finding was that Spice is a product line sold as a legal herb-based alternative to cannabis. The ingredients list contains only herbs and no cannabinoid constituents. Since it began being sold in 2006, the listed ingredients have seemed suspiciously unlikely to produce its reported effects. Numerous organizations have now tested the material, and three chemicals have been identified in various Spice products, including JWH-018, HU-210, and a homologue of CP-47,497 (Erowid 2008). Another study indicated that the following has been found in samples of Spice (USDOJ 2011):

- CP-47,497—a synthetic cannabinoid agonist without the classical cannabinoid chemical structure. Although CP-47,497 is likely to have similar effects in humans as  $\Delta^9$ -tetrahydrocannabinol ( $\Delta^9$ -THC), the main active ingredient of marijuana, CP-47,497, and its homologues are not controlled substances in the United States.
- HU-210 and HU-211 are structurally and pharmacologically similar to  $\Delta^9$ -tetrahydrocannabinol ( $\Delta^9$ -THC), the main active ingredient of marijuana, and it was synthesized around 1988. It was recently purported to be found in the herbal mixture Spice, sold in European countries mainly via Internet shops. HU-210 is a Schedule I controlled substance in the United States, and HU-211 is not a controlled substance in the United States.

- JWH-018, JWH-073, and JWH-074 are synthetic cannabinoid agonists without the classical cannabinoid chemical structure. The substances have been identified in the herbal products such as Spice, K2, and others sold via the Internet and head shops. Although JWH-018, JWH-073, and JWH-074 are likely to have the same effects in humans as  $\Delta^9$ -tetrahydrocannabinol ( $\Delta^9$ -THC), the main active ingredient of marijuana, they are not controlled in the United States. (USDOJ 2011).

To date, the U.S. Army, U.S. Marines, and U.S. Navy have banned this drug, and violators risk immediate expulsion. The U.S. Air Force prohibits it at Nellis Air force base in Las Vegas, Nevada. Currently, states in the United States have already banned the use and sale of this drug or are legislating fines for sale and possession. As of 2011, most states have outlawed or are moving to control and ban spice-type products.

### Anabolic Steroids

Steroids are a synthetic form of the male hormone testosterone. They are often used to increase muscle size and strength. Medically, steroids are used to increase body tissue, treat allergies, or reduce swelling. Steroids are available in either liquid or pill form. Athletes have a tendency to use and abuse these drugs because dramatic results can occur with regard to increased body mass and muscle tissue. Some side effects include heart disease, liver cancer, high blood pressure, septic shock, impotence, genital atrophy, manic episodes, depression, violence, and mood swings.

### Inhalants/Organic Solvents

Inhalants and organic solvents also are often considered gateway drugs and are very attractive to and popular among preteens and younger teenagers. Products used include gasoline, model airplane glue, and paint thinner. When inhaled, the vapors from these solvents can produce euphoric effects. Organic solvents can also refer to certain foods, herbs, and vitamins, such as “herbal Ecstasy.”

### Narcotics/Opiates

These drugs also depress the CNS and, if taken in a high enough quantity, produce insensibility or stupor. Narcotics or opiates are highly addictive. Narcotics include heroin, opium, morphine, codeine, meperidine (often a substitute for morphine, also known as Demerol), Darvon, and Percodan.



Inhalants are volatile chemicals, which include many common household substances, that are often the most dangerous drugs, per dose, a person can take. In addition, inhalants are most often used by preteens and younger teens.

### Designer Drugs/Synthetic Drugs or Synthetic Opioids

In addition to the most commonly abused illicit drug categories just described, innovations in technology have produced new categories known as **designer drugs/synthetic drugs or synthetic opioids**. These relatively new types of drugs are developed by people who seek to circumvent the illegality of a drug by modifying the drug into a new compound. Ecstasy is an example of a designer drug/synthetic drug or synthetic opioid. Such drugs are created as **structural analogs** of substances already scheduled and legally prohibited under the Controlled Substances Act (CSA). Structural analogs are the drugs that result from altered chemical structures of already existing illicit drugs. Generally, these drugs are created by an underground chemist whose goal is to make a profit by creating compounds that mimic, change, or intensify the psychoactive effects of controlled substances. The number of designer drugs that are created and sold illegally is very large.

Anyone with knowledge of college-level chemistry can alter the chemical ingredients and produce new designer drugs, although it may be nearly impossible to predict their properties or effects except by trial and error. Currently, three major types of synthetic analog drugs are available through the illicit drug market: analogs of PCP; analogs of fentanyl and meperidine (both synthetic narcotic analgesics) such as Demerol or MPPP (also called MPTP or PEPAP); and analogs of amphetamine and methamphetamine (which have stimulant and hallucinogenic properties) such as MDMA, known as “Ecstasy” or “Adam,” which is widely used on college campuses as a euphoriant.



Designer pills containing the illicit drug Ecstasy. This drug has some stimulant properties like amphetamines as well as hallucinogenic properties like LSD.

The production of these high-technology psychoactive substances is a sign of the new levels of risk and additional challenge to the criminal justice system. As the production and risk associated with the use of such substances increase, the need for a broader, better-informed view of drug use becomes even more important than in the past. Appendix B lists, among other information, (1) the most commonly abused drugs in society, (2) their more common street names/terms, (3) medical uses, (4) routes of administration, (5) Controlled Substances Act [CSA] schedules, and (6) duration of detection in the body.

## An Overview of Drugs in Society

Many people think that problems with drugs are unique to this era. In reality, drug use and abuse have always been part of nearly all—past and present—human societies. For example, the Grecian oracles of Delphi used drugs, Homer’s Cup of Helen induced sleep and provided freedom from care, and the mandrake root mentioned in

### KEY TERMS

#### designer drugs/synthetic drugs or synthetic opioids

new drugs that are developed by people intending to circumvent the illegality of a drug by modifying a drug into a new compound; Ecstasy is an example

#### structural analogs

a new molecular species created by modifying the basic molecular skeleton of a compound; structural analogs are structurally related to the parent compound



the first book of the Bible, Genesis, produced a hallucinogenic effect. In Genesis 30:14–16, the mandrake is mentioned in association with bartering for lovemaking:

In the time of wheat harvest Reuben went out, found some mandrakes in the open country, and brought them to his mother Leah. Then Rachel asked Leah for some of her son's mandrakes, but Leah said, "Is it so small a thing to have taken away my husband, that you should take my son's mandrakes as well?" However, Rachel said, "Very well, let him sleep with you tonight in exchange for your son's mandrakes." So when Jacob came in from the country in the evening, Leah went out to meet him and said, "You are to sleep with me tonight; I have hired you with my son's mandrakes." That night he slept with her.

Ancient literature is filled with references to the use of mushrooms, datura, hemp, marijuana, opium poppies, and so on. Under the influence of some of these drugs, many people experienced extreme ecstasy or sheer terror. Some old pictures of demons and devils look very much like those described by modern drug users during so-called bummers, or bad trips. The belief that witches could fly may also have been drug-induced because many natural preparations used in so-called witches' brews induced the sensation of disassociation from the body, as in flying or floating.

As far back as 2240 BC, attempts were made to regulate drug use. For instance, in that year, problem drinking was addressed in the Code of Hammurabi, where it was described as "a problem of men with too much leisure time and lazy dispositions." Nearly every culture has experienced drug abuse, and as found in the historical record, laws were enacted to control the use of certain types of drugs.

### ■ How Widespread Is Drug Abuse?

As mentioned earlier, drug abuse today is more acute and widespread than in any previous age (see "Here and Now: Persistence of Illicit Drug Use in

the United States, Rural–Urban Comparisons, and a New Drug 'Making the Scene'"). The evidence for this development is how often large quantities of illicit drugs are seized in the United States as well as throughout the world (see "Here and Now: Current Global Status of Illicit Drug Use in Selected Countries" on page 17). Media exposure about illicit drug use is more likely to occur today than in the past. On any given day, you can scan most major national and international newspapers and run across stories about illegal drug manufacture, storage and distribution, use and/or abuse, and convictions. Drug use is an **"equal-opportunity affliction."** This means that no one is immune from the use and/or abuse of both licit and illicit drugs. Research shows that drug consumption is found across the many different income, education, social class, occupation, race and ethnic, lifestyle, and age groups. To date, no one has proved to be immune from drug use and/or abuse.

Many of us, for example, are dismayed or surprised when we discover that certain individuals we admire—our family members (a mother, father, aunt, uncle, cousin, grandparent), close friends, workmates, celebrities, politicians, athletes, clergy, law enforcement personnel, physicians, academics, and even the seemingly upstanding man or woman next door—either admit to, are accused of, need treatment for, or are arrested for licit and/or illicit drug use.

We are also taken aback when we hear that cigarettes, alcohol, and marijuana abuse are commonplace in many public and private middle schools. Furthermore, most of us know of at least one (and many times more than one) close friend or family member who appears to secretly or not so secretly use drugs.



An example of a situation that requires clear thinking without the use of mind-altering drugs.

### KEY TERMS

#### **equal-opportunity affliction**

refers to the use of drugs, stressing that drug use cuts across all members of society regardless of income, education, occupation, social class, and age

## Here and Now

### Persistence of Illicit Drug Use in the United States, Rural–Urban Comparisons, and a New Drug “Making the Scene”

“Despite tough anti-drug laws, a new survey shows the U.S. has the highest level of illegal drug use in the world” and “. . . Americans report the highest level of cocaine and marijuana use” (WebMD, Warner, and CBS News 2009).

In the 1990s, a variety of factors came together in the United States to extend drug abuse beyond just the very rich or the urban poor. The ease of brewing cheaper, more potent strains of speed (methamphetamine, or “meth”) and heroin, coupled with the fact that enforcement officials tended to focus on drug abuse and traffic in urban areas on the East and West Coasts, left middle-class and rural populations throughout the country largely overlooked. Suddenly, the illicit drug market was booming where no one had been looking.

By the late 1990s, speed—which had gained popularity in the 1970s among outlaw bikers, college students facing exams, all-night partygoers, and long-haul truckers—was more sought after than ever. Teenagers, middle-class workers, and suburbanites joined the ranks of methamphetamine users. “We’ve been fighting it really strongly for nearly seven years,” Edward Synicky, a special agent with California’s Bureau of Narcotics Enforcement, told *Time* magazine in early 1996. “But cocaine gets all the publicity because it’s glamorous. And law enforcement in general doesn’t put the resources into meth that it should” (Toufonio et al. 1990).

Increasingly, the illegal substance was produced in clandestine labs set up by both major drug dealers and individual users. By January 1996, John Coonce, head of the U.S. Drug Enforcement Administration’s (DEA’s) meth-lab task force, said methamphetamine use was “absolutely epidemic.” The surge was attributed largely to powerful Mexican drug syndicates and motorcycle gangs that sold their goods on street corners. Speed acquired the nickname “crank” because it was frequently concealed in motorcycle crankcases.

Clandestine manufacture and use of speed were especially high in the West and Southwest. Speed kitchens flourished in California because it was relatively easy for the Mexican syndicates to smuggle in ephedrine, a key ingredient that is tightly controlled in the United States. From the mid-1980s to the mid-1990s, methamphetamine-related hospitalizations in California rose approximately 366%. In Arizona’s Maricopa County, methamphetamine-linked crimes jumped nearly 400% over a 3-year period in the early 1990s. (See the sections “The Costs of Drug Use to Society” and “Drugs, Crime, and Violence” later in this chapter.)

Soon this easy-access drug began spreading across the United States. In 1994, DEA field offices in Houston, Denver, Los Angeles, New Orleans, Phoenix, St. Louis, San Diego, and San Francisco were responsible for approximately 86% of the methamphetamine laboratory seizures in the country. By 1996, however, officials were seizing huge shipments of methamphetamine that originated in Mississippi and Tennessee.

Update: Recent information regarding this drug is very positive. The number of past-month methamphetamine users decreased by over half between 2006 and 2008. The numbers were 731,000 in 2006, 529,000 in 2007, and 314,000 in 2008. Further, the number of past-year initiates of methamphetamine among persons age 12 or older was 95,000 in 2008. This estimate was significantly lower than the estimates in 2007 (157,000) and was less than one-third of the number estimated in 2004 (318,000) (SAMHSA 2009).

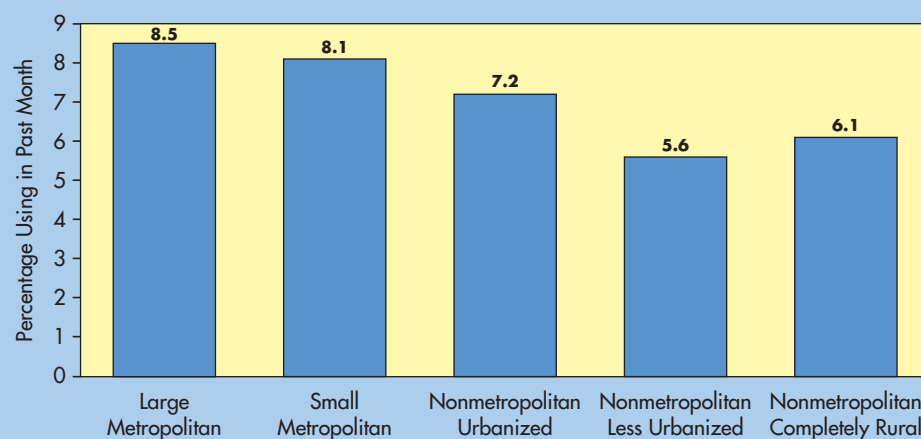
Although the recent drop in methamphetamine use is very encouraging, news about other types of illicit drug use is not. Some of the more alarming findings indicate that:

- Almost half (49.2%) of youths ages 12 to 17 reported in 2008 that it would be “fairly easy” or “very easy” for them to obtain marijuana if they wanted some. Around one-fifth (22.1%) reported it would be easy to get cocaine. About one in seven (13.8%) indicated that LSD would be “fairly” or “very” easily available, and 13% reported easy availability for heroin (SAMHSA 2009).
- In 2007 and 2008 the rate of illicit drug use among persons age 12 or older held steady at 8% current (past-month), 14.2% in the past year, and 47% during their lifetime (SAMHSA 2009).
- Among those ages 50 to 59 (baby boom cohort), the rate of past-month illicit drug use increased from 2.7% in 2002 to 4.6% in 2008 (SAMHSA 2009).
- Use of most of the several classes of psychotherapeutic drugs—sedatives (barbiturates), tranquilizers, and narcotics other than heroin—has become a larger part of the nation’s drug abuse problem. During much of the 1990s and into the 2000s, there was a virtually uninterrupted increase among 12th graders, college students, and young adults in the use of all these drugs (Johnston et al. 2009).

(continued)



**Persistence of Illicit Drug Use in the United States, Rural–Urban Comparisons,  
and a New Drug “Making the Scene” (continued)**



Past-month illicit drug use among persons age 12 or older, by county type: 2008.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Office of Applied Studies, NSDUH Series H-36, DHHS Publication No. SMA 09-4435. Rockville, MD, 2009.

#### Metropolitan vs. Nonmetropolitan Illicit Drug Use

- In comparing illicit drug use among persons age 12 or older by type of county in 2008, 8.5% admitted to past-month usage in large metropolitan areas, 8.1% in small metropolitan areas, 7.2% in nonmetropolitan urbanized areas, 5.6% in nonmetropolitan less urbanized areas, and 6.1% in nonmetropolitan completely rural areas.
- Rural teens have a greater risk of using drugs in general than both suburban and urban teens. “Five of the 13 measures of drug use show a significantly higher prevalence rate among rural teens: chewing tobacco (11.5%), chewing tobacco at school (7.6%), smoking cigarettes at school (14.8%), using crack/cocaine (5.9%), and using steroids (7.4%). Only one measure showed a significantly higher prevalence rate among urban teens (smoking marijuana at school, at 6.8%). The remaining seven measures in the study showed no differences by residence” (Mink et al. 2005).
- “The proportion of rural teens who reported ever using crystal meth (15.5%) was almost double the

proportion of urban (8.8%) and suburban teens (9.5%)” (Mink et al. 2005).

- Crystal meth was the fourth most commonly used drug among rural teens after alcohol, cigarettes, and marijuana, making it more popular among rural teens than chewing tobacco (Mink et al. 2005).

#### New Drug Making the Scene

“[I]ncreasing numbers of youths are turning to an herb-based product to get high, and unlike marijuana, it’s perfectly legal” (Aathun, 2010). Known as K2, Spice, or fake weed, it is synthetic and marketed as an herbal incense. It mimics THC, the chemical producing the high in marijuana. “Side effects include heart palpitations, respiratory issues, panic attacks, [and] hallucinations” (Aathun, 2010). “K2 may be a mixture of herbal and spice plant products, but it is sprayed with a potent psychotropic drug and likely contaminated with an unknown toxic substance that is causing many adverse effects . . .” (Bryner 2010).

Sources: Aathun, S. “Synthetic Marijuana a Growing Trend Among Teens, Authorities Say.” CNN.com. 2010. Available at: <http://www.cnn.com/2010/HEALTH/03/23/synthetic.marijuana/index.html?iref=allsearch>. Accessed February 25, 2011; Associated Press. “Survey: Drug Use Pervading New Bedford Fleet.” *Maine Sunday Telegram* (21 July 1996):1–2; Johnston, L. D., P. M. O’Malley, J. G. Bachman, and J. E. Schulenberg. *Monitoring the Future: National Survey Results on Drug Use, 1975–2008. Volume 1, Secondary School Students*. Bethesda, MD: National Institute on Drug Abuse (NIDA), 2009; Mink, M. D., C. G. Moore, A. O. Johnson, J. C. Probst, and A. B. Martin. *Violence and Rural Teens: Violence, Drug Use, and School-Based Prevention Services in Rural America*. Rockville, MD: South Carolina Rural Health Research Center, Office of Rural Health Policy, U.S. Department of Health and Human Services (USDHHS), U.S. Government Printing Office, 2005; National Narcotics Intelligence Consumers Committee. *The NNICC Report, 1994*. Washington, DC: U.S. Drug Enforcement Agency, 1994:70; National Public Radio (NPR). “All Things Considered.” PM News (18 September 1996); SAMHSA, Office of Applied Studies (OAS). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Rockville, MD: Office of Applied Studies, 2009; Toufano, A., et al. “There Is No Safe Speed.” *Time* (8 January 1990); Warner, J. “U.S. Leads the World in Illegal Drug Use.” CBS News (1 July 2009):1. Available at: <http://www.cbsnews.com/stories/2008/07/01/health/webmd/main4222322.shtml>. Accessed February 25, 2011; and Wilkie, C. “Crack Cocaine Moves South.” *Boston Globe* (23 June 1996):19.

## ■ Extent and Frequency of Drug Use in Society

Erich Goode (2008), a much-respected sociologist, lists four types of drug use:

1. *Legal instrumental use:* Taking prescribed drugs and OTC drugs to relieve or treat mental or physical symptoms.
2. *Legal recreational use:* Using such licit drugs as tobacco, alcohol, and caffeine to achieve a certain mental or psychic state.
3. *Illegal instrumental use:* Taking drugs without a prescription to accomplish a task or goal, such as taking nonprescription amphetamines to drive through the night or relying excessively on barbiturates to get through the day.
4. *Illegal recreational use:* Taking illicit drugs for fun or pleasure to experience euphoria, such as abusing prescribed methylphenidate (Ritalin) as a substitute for cocaine.

Why has the prevalence of licit and illicit drug use remained consistent since 1988? Why has this

## Here and Now

### Current Global Status of Illicit Drug Use in Selected Countries

#### Afghanistan

World's largest producer of opium; poppy cultivation decreased 22% to 157,000 hectares in 2008 but remains at a historically high level. Less favorable growing conditions in 2008 reduced potential opium production to 5500 metric tons, down 31% from 2007. If the entire opium crop were processed, 648 metric tons of pure heroin potentially could be produced. The Taliban and other antigovernment groups participate in and profit from the opiate trade, which is a key source of revenue for the Taliban inside Afghanistan. Widespread corruption and instability impede counterdrug efforts. Most of the heroin consumed in Europe and Eurasia is derived from Afghan opium. It is vulnerable to drug money laundering through informal financial networks. Also a regional source of hashish.

#### Argentina

A transshipment country for cocaine headed for Europe, heroin headed for the United States, and ephedrine and pseudoephedrine headed for Mexico. There is some money-laundering activity, especially in the Tri-Border Area. Law enforcement corruption, a source for precursor chemicals, and increasing domestic consumption of drugs in urban centers, especially cocaine base and synthetic drugs (2008).

#### Aruba

Transit point for U.S.- and Europe-bound narcotics with some accompanying money-laundering activity. A relatively high percentage of its population consumes cocaine.

#### Australia

Tasmania is one of the world's major suppliers of licit opiate products. The government maintains strict controls over areas of opium poppy cultivation and the output of

poppy straw concentrate. It is a major consumer of cocaine and amphetamines.

#### Bahamas

Transshipment point for cocaine and marijuana bound for the United States and Europe; also an offshore financial center.

#### Belgium

Growing producer of synthetic drugs and cannabis. A transit point for U.S.-bound Ecstasy and a source of precursor chemicals for South American cocaine processors. It is a transshipment point for cocaine, heroin, hashish, and marijuana entering Western Europe. Despite a strengthening of legislation, the country remains vulnerable to money laundering related to narcotics, automobiles, alcohol, and tobacco. There is also significant domestic consumption of Ecstasy.

#### Bolivia

World's third-largest cultivator of coca (after Colombia and Peru) with an estimated 29,500 hectares under cultivation in 2007, a slight increase compared to 2006. It is also the third largest producer of cocaine, estimated at 120 metric tons potential pure cocaine in 2007, and a transit country for Peruvian and Colombian cocaine destined for Brazil, Argentina, Chile, Paraguay, and Europe. Cultivation generally has been increasing since 2000, despite eradication and alternative crop programs. It has weak border controls and some money-laundering activity related to the narcotics trade. It also is a major cocaine consumer (2008).

#### Brazil

Second-largest consumer of cocaine in the world; it is an important market for Colombian, Bolivian, and Peruvian  
(continued)

Current Global Status of Illicit Drug Use in Selected Countries (*continued*)

cocaine. It is an illicit producer of cannabis and trace amounts of coca cultivation in the Amazon region, used for domestic consumption. The government has a large-scale eradication program to control cannabis. It is an important transshipment country for Bolivian, Colombian, and Peruvian cocaine headed for Europe, and is also used by traffickers as a way station for narcotics air transshipments between Peru and Colombia. There has been an upsurge in drug-related violence and weapons smuggling. Illicit narcotics proceeds are often laundered through the financial system. There is significant illicit financial activity in the Tri-Border Area (2008).

**Burma**

Remains the world's second largest producer of illicit opium with an estimated production in 2008 of 340 metric tons, an increase of 26%; poppy cultivation in 2008 totaled 22,500 hectares (a hectare is equivalent to 2.471 acres of surface or land), a 4% increase from 2007. Production in south and east Shan state, the Army's areas of greatest control, remains low. Shan state is the source of 94% of Burma's poppy cultivation. Lack of government will to take on major narcotrafficking groups and lack of serious commitment against money laundering continue to hinder the overall antidrug effort. It is a major source of methamphetamine and heroin for regional consumption (2008).

**Canada**

Illicit producer of cannabis for the domestic drug market and export to the United States. Use of hydroponics technology permits growers to plant large quantities of high-quality marijuana indoors. Ecstasy production is increasing, some of which is destined for the United States. It is vulnerable to narcotics money laundering because of its mature financial services sector.

**China**

Major transshipment point for heroin produced in the Golden Triangle region of Southeast Asia. There is growing domestic consumption of synthetic drugs and heroin from Southeast and Southwest Asia. It is a source country for methamphetamine and heroin chemical precursors, despite new regulations on its large chemical industry (2008).

**Colombia**

Illicit producer of coca, opium poppy, and cannabis. It is the world's leading coca cultivator with 167,000 hectares in coca cultivation in 2007, a 6% increase over 2006, producing a potential of 535 metric tons of pure cocaine. It is also the world's largest producer of coca derivatives. It

supplies cocaine to nearly all of the U.S. market and the great majority of other international drug markets. In 2005, aerial eradication dispensed herbicide to treat over 130,000 hectares, but aggressive replanting on the part of coca growers means Colombia remains a key producer. A significant portion of narcotics proceeds are either laundered or invested in Colombia through the black market peso exchange. It is also an important supplier of heroin to the U.S. market, though opium poppy cultivation is estimated to have fallen 25% between 2006 and 2007. Most Colombian heroin is destined for the U.S. market (2008).

**Germany**

Source of precursor chemicals for South American cocaine processors. It is a transshipment point for and consumer of Southwest Asian heroin, Latin American cocaine, and European-produced synthetic drugs; also a major financial center.

**Guatemala**

Major transit country for cocaine and heroin. In 2005, it cultivated 100 hectares of opium poppy after reemerging as a potential source of opium in 2004, with potential production of less than 1 metric ton of pure heroin. Marijuana cultivation is for mostly domestic consumption. Its proximity to Mexico makes Guatemala a major staging area for drugs (particularly for cocaine). Money laundering is a serious problem, as is corruption.

**Haiti**

Caribbean transshipment point for cocaine en route to the United States and Europe; substantial bulk cash smuggling activity; Colombian narcotics traffickers favor Haiti for illicit financial transactions; pervasive corruption; significant consumer of cannabis.

**Iran**

Despite substantial interdiction efforts and considerable control measures along the border with Afghanistan, Iran remains one of the primary transshipment routes for Southwest Asian heroin to Europe. It also suffers one of the highest opiate addiction rates in the world and has an increasing problem with synthetic drugs. It lacks anti-money laundering laws. Iran has reached out to neighboring countries to share counter-drug intelligence.

**Italy**

Important gateway for and consumer of Latin American cocaine and Southwest Asian heroin entering the European market. There is money laundering by organized crime and from smuggling.



### Current Global Status of Illicit Drug Use in Selected Countries (*continued*)

#### Mexico

Major drug-producing nation. Cultivation of opium poppy in 2007 rose to 6900 hectares, yielding a potential production of 18 metric tons of pure heroin, or 50 metric tons of "black tar" heroin, the dominant form of Mexican heroin in the western United States. Marijuana cultivation increased to 8900 hectares in 2007 and yielded a potential production of 15,800 metric tons. The government conducts the largest independent illicit-crop eradication program in the world. Mexico continues to be the primary transshipment country for U.S.-bound cocaine from South America, with an estimated 90% of annual cocaine movements toward the United States stopping in Mexico. Major drug syndicates control the majority of drug trafficking throughout the country. It is a producer and distributor of Ecstasy and a significant money-laundering center. It is also a major supplier of heroin and the largest foreign supplier of marijuana and methamphetamine to the U.S. market (2007).

#### Morocco

One of the world's largest producers of illicit hashish. Shipments of hashish are mostly directed to Western Europe. It is also a transit point for cocaine from South America destined for Western Europe. Morocco is a significant consumer of cannabis.

#### Netherlands

Major European producer of synthetic drugs, including Ecstasy, and a cannabis cultivator. It is an important gateway for cocaine, heroin, and hashish entering Europe and a major source of U.S.-bound Ecstasy. Its large financial sector is vulnerable to money laundering. The Netherlands is also a significant consumer of Ecstasy.

#### North Korea

For years, from the 1970s into the 2000s, citizens of the Democratic People's Republic of (North) Korea (DPRK), many of them diplomatic employees of the government, were apprehended abroad while trafficking in narcotics, including two in Turkey in December 2004. Police investigations in Taiwan and Japan in recent years have linked North Korea to large illicit shipments of heroin and methamphetamine, including an attempt by the North Korean merchant ship *Pong Su* to deliver 150 kilograms of heroin to Australia in April 2003.

#### Pakistan

Significant transit area for Afghan drugs, including heroin, opium, morphine, and hashish, bound for Iran, Western markets, the Gulf States, Africa, and Asia. Financial crimes

related to drug trafficking, terrorism, corruption, and smuggling remain problems. Opium poppy cultivation was estimated to be 2300 hectares in 2007, with 600 of those hectares eradicated. Federal and provincial authorities continue to conduct anti-poppy campaigns that utilize forced eradication, fines, and arrests.

#### Panama

Major cocaine transshipment point and primary money-laundering center for narcotics revenue. Money-laundering activity is especially heavy in the Colón Free Zone. It is an offshore financial center. There are negligible signs of coca cultivation. Monitoring of financial transactions is improving, but official corruption remains a major problem.

#### Peru

Until 1996 the world's largest coca leaf producer, Peru is now the world's second largest producer of coca leaf, though it lags far behind Colombia. Cultivation of coca in Peru declined to 36,000 hectares in 2007. It is also second largest producer of cocaine, estimated at 210 metric tons of potential pure cocaine in 2007. Finished cocaine is shipped out from Pacific ports to the international drug market. Increasing amounts of base and finished cocaine, however, are being moved to Brazil, Chile, Argentina, and Bolivia for use in the Southern Cone or transshipment to Europe and Africa. There is increasing domestic drug consumption.

#### Poland

Despite diligent counternarcotics measures and international information sharing on cross-border crimes, it is a major illicit producer of synthetic drugs for the international market as well as a minor transshipment point for Southwest Asian heroin and Latin American cocaine to Western Europe.

#### South Africa

A transshipment center for heroin, hashish, and cocaine, as well as a major cultivator of marijuana in its own right. Cocaine and heroin consumption in South Africa is on the rise. It is the world's largest market for illicit methaqualone, usually imported illegally from India through various east African countries, but it is increasingly producing its own synthetic drugs for domestic consumption. It is an attractive venue for money launderers given the increasing level of organized criminal and narcotics activity in the region and the size of the South African economy.

#### United States

World's largest consumer of cocaine (shipped from Colombia through Mexico and the Caribbean), Colombian  
(*continued*)

Current Global Status of Illicit Drug Use in Selected Countries (*continued*)

heroin, and Mexican heroin and marijuana. A major consumer of Ecstasy and Mexican methamphetamine and a minor consumer of high-quality Southeast Asian heroin. An illicit producer of cannabis, depressants, stimulants, hallucinogens, and methamphetamine; also a money-laundering center.

**Worldwide Facts****Cocaine**

Worldwide coca leaf cultivation in 2007 amounted to 232,500 hectares; Colombia produced slightly more than two-thirds of the worldwide crop, followed by Peru and Bolivia. Potential pure cocaine production decreased 7% to 865 metric tons in 2007. Colombia conducts an aggressive coca eradication campaign, but both the Peruvian and Bolivian governments are hesitant to eradicate coca in key growing areas. About 551 metric tons of export-quality

cocaine (85% pure) is documented to have been seized or destroyed in 2005. U.S. consumption of export-quality cocaine is estimated to have been in excess of 380 metric tons.

**Opiates**

Worldwide illicit opium poppy cultivation continued to increase in 2007, with a potential opium production of 8400 metric tons, reaching the highest levels recorded since estimates began in the mid-1980s. Afghanistan is the world's primary opium producer, accounting for 95% of the global supply. Southeast Asia—responsible for 9% of global opium—saw marginal increases in production. Latin America produced 1% of global opium, but most was refined into heroin destined for the U.S. market. If all potential opium was processed into pure heroin, the potential global production in 2007 would have been 1000 metric tons of heroin.

Source: Central Intelligence Agency. *The World Factbook 2009*. Washington, DC: U.S. Government Printing Office, 2009. Available at: [https://www.cia.gov/library/publications/the-world-factbook/fields/print\\_2086.html](https://www.cia.gov/library/publications/the-world-factbook/fields/print_2086.html). Accessed March 15, 2011.

trend occurred, when federal, state, and local government expenditures for fighting the drug war have been increasing at the same time? There are several possible answers, none of which, by itself, offers a satisfactory response. One perspective notes that practically all of us use drugs in some form, with what constitutes “drug use” being merely a matter of degree. A second explanation is that more varieties of both licit and illicit drugs are available today. One source estimated that approximately 80% of all currently marketed drugs were either unknown or unavailable 30 years ago (Critser 1996). Regarding prescriptions, Critser (2005, p. 23) states that “the average number of prescriptions per person, annually, in 1993 was seven, and in 2005 it was twelve.” Another source stated, “The retail sales of OTC drugs (aspirin, Tylenol, No-Doz, and so on) totaled \$16.9 billion in 2009” (Consumer Healthcare Products Association [CHPA] 2010) and yet another source stated “\$234.1 billion worth of pharmaceutical prescription drugs were sold in 2008” (Lundy 2010, p. 1). In the United States alone, the rate of yearly prescription growth was estimated between 5.5% and 6% in 2010 (World Pharmaceutical Market Summary 2010). In 2009, the total global prescription pharmaceutical market was \$837 billion in sales. Reuters reports, “[G]lobal pharmaceutical sales

are expected to reach \$1.1 trillion in 2014 . . .” (Berkrot 2010, p. 1). Such figures indicate that it may be more difficult to find people who do not use psychoactive drugs compared to individuals who do.

Further, a third category of drug sales has joined OTC and prescription drugs: herbal medicines, vitamins, minerals, enzymes, and other natural potions. “Out-of-pocket spending on herbal supplements, chiropractic visits, meditation, and other forms of complementary and alternative medicines (CAM) was estimated at \$34 billion in a single year” (Boyles 2009). “Americans spend almost a third as much money out-of-pocket on herbal supplements and other alternative medicines as they do on prescription drugs . . .” (Boyles 2009). Drug use is so common that the average household in the United States owns about five drugs, of which two are prescription drugs and the other three are OTC drugs. Of the many prescriptions written by physicians, approximately one-third modify moods and behaviors in one way or another. A National Institute on Drug Abuse (NIDA) study and other research indicates that more than 60% of adults in the United States have, at some time in their lives, taken a psychoactive drug (one that affects mood or consciousness). More than one-third of adults have used or are using depressants or sedatives.

A third explanation is that “. . . in the modern age, increased sophistication has brought with it techniques of drug production and distribution that have resulted in a worldwide epidemic of drug use” (Kusnitz 1988, p. 149). In the 1980s and 1990s, for example, illicit drug cartels proliferated, and varieties of marijuana with ever-increasing potency infiltrated all urban and rural areas in the United States as well as the world. Many of these varieties are crossbred with ultra-sophisticated techniques and equipment available everywhere.

Finally, even coffee (as discussed in Chapter 10, “Here and Now”) has undergone a technological revolution. Higher levels of caffeine content has become available worldwide. This trend has led to the phenomenal growth of the following: (1) franchise duplication of gourmet coffee bars in the United States (e.g., Starbucks, Peet’s, Three Brothers Coffee); (2) sales of espresso and cappuccino coffee makers for home use, with accompanying coffee grinders or coffee pods; and (3) sales of specialized coffees and teas through a multitude of e-mail coffee/tea clubs.

Approximately 25 years ago, it was difficult to purchase a cup of espresso or cappuccino in a typical restaurant; today, availability of such types of coffees is commonplace. Even at university unions and libraries, airports, shopping malls, and inner-city coffee shops, it is not unusual to see people lined up waiting to order and purchase their specially made and specially flavored coffee or tea. This is just one example of how caffeine (often seen as a benign drug) has evolved, with many new varieties of coffee beans from exotic islands and countries coming together with more sophisticated electronic equipment, with the result that the idea of simple brewing has been relegated to the past. The standard American “cup of coffee in the morning” has



Often the consumption of drugs (such as caffeine) complements social interaction.

spilled into including coffee during the afternoon and evening. This is a small example of a much-tolerated drug maintaining its own impressive history of development, increased use, complexity in developing many more varieties, and added sophistication.

### ■ Drug Use: Statistics, Trends, and Demographics

An incredible amount of money is spent each year for licit (legal) and illicit (illegal) chemicals that alter consciousness, awareness, or mood. Five classes of legal chemicals exist:

1. *Social drugs*: Approximately \$90 billion is spent on alcohol each year. Another \$51.9 billion goes toward tobacco products, of which 95% comes from cigarette sales. The other 5% accounts for the \$2 billion or so spent on cigars, chewing tobacco, pipe tobacco, roll-your-own tobacco, and snuff tobacco. In addition, \$5.7 billion is spent on coffee, tea, and cocoa.
2. *Prescription drugs*: As mentioned earlier, \$837 billion in worldwide sales was racked up for prescription pharmaceuticals in 2009. The United States is the world’s largest pharmaceutical market. In 2008, \$234.1 billion of pharmaceutical prescription drugs were sold (Lundy 2010, p. 1). Other figures “. . . [f]rom 1997 to 2004 indicate that total purchases of outpatient Rx medicines increased approximately 2 billion to nearly 3 billion scripts” (*Pharmacy Times* 2007, p. 2).
3. *Over-the-counter (patent) drugs*: These products, including cough and cold items, external and internal analgesics, antacids, laxatives, antidiarrhea products, sleep aids, sedatives, and so on, account for \$23.5 billion in sales.
4. *Nonmedical use of prescription-type drugs*: In recent years, an alarming statistic related to abuse is the growth of the nonmedical use of prescription-type drugs. In 2008, 51.9 million Americans (20.8% of persons age 12 or older) had used prescription-type drugs nonmedically at least once in their lifetime. Even the very young are not immune to significant nonmedical use of prescription-type drugs. For example, 2.5% of 8th graders, 5.1% of 10th graders, and 7.2% of 12th graders used narcotics, specifically OxyContin and Vicodin (Johnston et al. 2009) (see “Here and Now: Sources of Prescription Drugs Misused by Youths”). In addition, when looking at 12th graders alone, in 2007–2008, 8.2% had

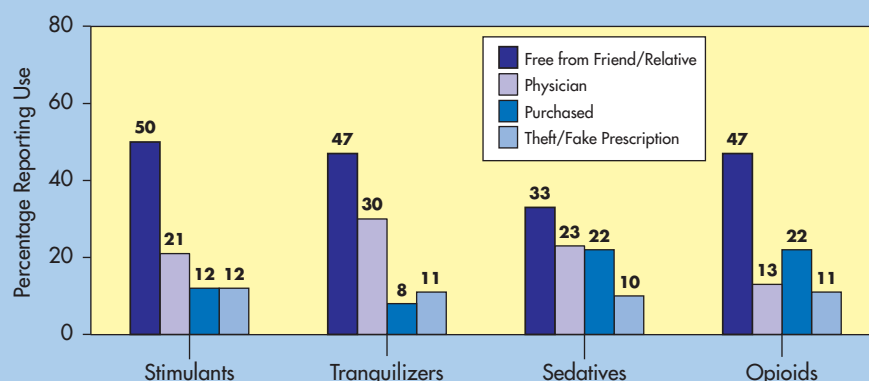


## Here and Now

### Sources of Prescription Drugs Misused by Youth

Friends and family are the most common source of prescription drugs misused\* by youths in the United States, according to an analysis of data from the National Survey on Drug Use and Health (NSDUH). Around one-half of youths who reported misusing prescription stimulants (50%), tranquilizers (47%), or sedatives (47%) in the past year said that they most recently obtained the medication free from friends or family, as did one-third of those who reported the misuse of prescription opioids. The second most common source for obtaining stimulants, tranquilizers, and sedatives was purchasing from a friend/

relative, drug dealer/stranger, or the Internet, and the second most common source for obtaining prescription opioids was acquiring them from a physician. Youths who obtained the medication by buying it were more likely to have concurrent substance use and to have 10 or more misuse episodes as compared to those who obtained the medications other ways (data not shown). According to the authors, “these results may help identify subgroups of adolescent prescription misusers who are most vulnerable to consequences from misuse or other substance use” (p. 828).



Most recent source of prescription medicines misused in the past year among youths (ages 12 to 17): 2005 and 2006.

\*Misuse was defined as “any intentional use of a medication with intoxicating properties outside of a physician’s prescription for a bona fide medical condition, excluding accidental misuse.”

Note: Respondents also reported that prescription medicines were obtained “some other way” (stimulants, 5%; tranquilizers, 4%; sedatives, 12%; opioids, 7%). Data are from 36,992 adolescents ages 12 to 17 participating in the 2005 and/or 2006 National Survey on Drug Use and Health. Of these youths, 8.3% reported any prescription drug misuse in the past year; 7% reported opioid misuse; 2% reported tranquilizer misuse; 2% reported stimulant misuse; and 0.4% reported sedative misuse.

Source: University of Maryland, Center for Substance Abuse Research (CESAR). “Friends and Family Are Most Common Source of Prescription Drugs Misused by Youths.” *CESAR FAX* 18(32), 2009, using data from Schepis, T. S., and S. Krishnan-Sarin. “Sources of Prescriptions for Misuse by Adolescents: Differences in Sex, Ethnicity, and Severity of Misuse in a Population-Based Study.” *Journal of the American Academy of Child and Adolescent Psychiatry* 48(8):828–836, 2009.

other types of stimulant and depressant-type prescription pills nonmedically within the past year. If we add up 12th graders’ nonmedical use of prescription pills, the total annual abuse is 15.4%, which is a significant percentage of younger youths taking prescription pills on an annual basis. Finally, the amount spent on inhalants and other miscellaneous drugs, such as nutmeg and morning glory seeds, cannot be estimated.

How much money goes to purchase illicit drugs? The Office of National Drug Control Policy

(ONDCP) estimates what Americans spent on illicit drugs. It found that in the 2000s, Americans spent \$64 billion on illicit drugs: \$36 billion on cocaine, \$10 billion on heroin, \$11 billion on marijuana, and \$2.7 billion on other illegal drugs and on legal drugs that were misused (ONDCP 2001).

Further, regarding the extent of drug use, studies carried out by the Social Research Group of George Washington University, the Institute for Research in Social Behavior in Berkeley, California, and others provide detailed, in-depth data showing that drug use is universal. A major purpose of their studies



**Table 1.4 National Household Survey on Drug Abuse: 2008**

Percentage of population and estimated number of alcohol, tobacco, and illicit drug users in the United States among persons aged 12 or older.

	LIFETIME*		PAST MONTH	
	PERCENTAGE	NUMBER OF USERS (IN THOUSANDS)	PERCENTAGE	NUMBER OF USERS (IN THOUSANDS)
Alcohol	82.2	205,404	51.6	128,974
Cigarettes	69.6	162,551	23.9	59,781
Marijuana/hashish	41.0	102,404	6.1	15,203
Nonmedical use of any psychotherapeutics†	20.8	51,970	2.5	6224
Smokeless tobacco	18.4	45,889	3.5	8670
Cocaine	14.7	36,773	0.7	1855
Crack	3.4	8554	0.1	359
Hallucinogens	14.4	35,963	0.4	1060
LSD	9.4	23,547	0.1	154
Ecstasy	5.2	12,924	0.3	555
PCP	2.7	6631	0.2	24
Pain Relievers	14.0	34,861	1.9	4747
Oxycontin	1.9	4842	0.2	435
Inhalants	8.9	2274	0.3	640
Tranquilizers	8.6	21,476	0.7	1800
Stimulants	8.5	21,206	0.4	904
Methamphetamine	5.0	12,598	0.1	314
Sedatives	3.6	8882	0.1	234
Heroin	1.5	3788	0.1	213
Any illicit drug‡	47.0	117,325	8.0	20,077

Notes: The results obtained from this national survey were completed at 142,938 addresses, and 68,736 completed interviews were obtained. The survey was conducted from January 2008 through December 2008. Weighted response rates for household screening and for interviewing were 89.0% and 74.4%, respectively.

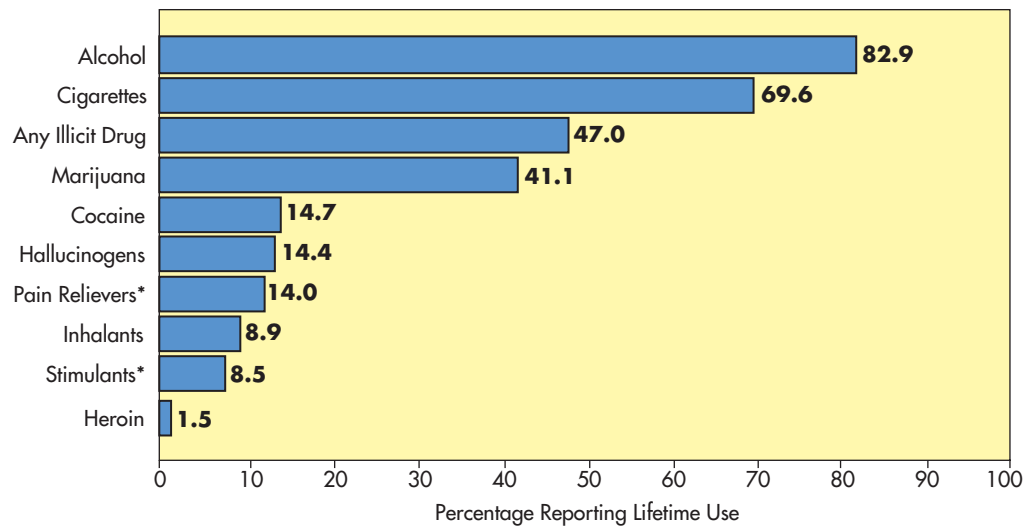
\* Lifetime refers to ever used. This column shows the use of drugs from highest to lowest percentages as well as the number of persons using.

† Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives but does not include over-the-counter drugs.

‡ Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Office of Applied Studies, NSDUH Series H-36, DHHS Publication No. SMA 09-4435. Rockville, MD, 2009.



**FIGURE 1.2**

Percentage of U.S. residents (age 12 or older) reporting lifetime use of alcohol, tobacco, and illicit drugs: 2008.

\*Does not include over-the-counter drugs.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Office of Applied Studies, NSDUH Series H-36, DHHS Publication No. SMA 09-4435. Rockville, MD, 2009.

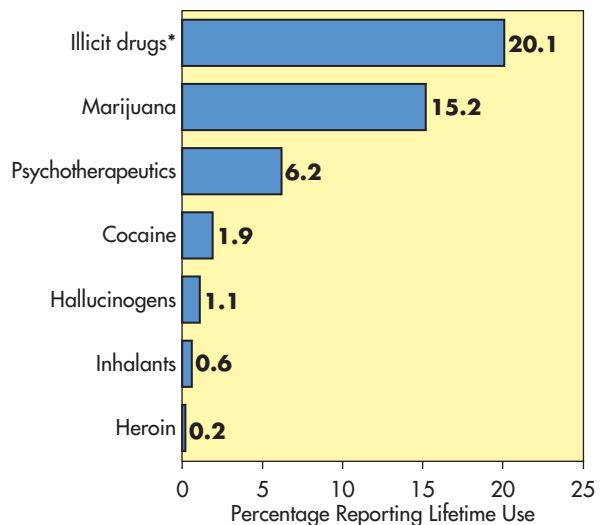
caine (14.7%), hallucinogens (mainly LSD and Ecstasy, 14.4%), pain relievers (14%), and inhalants (8.9%). Regarding the licit types of drugs used (lifetime use), from highest to lowest the most popular drugs were alcohol (82.2%), cigarettes (69.6%), and nonmedical use of psychotherapeutics (20.8%), which includes pain relievers (14%) and stimulants (8.5%); see Table 1.4.

**Figure 1.3** shows the past-month use of illicit drugs among persons age 12 or older. Again, the category “illicit drugs” shows the highest use (20.1 million), followed by use of marijuana (15.2 million), psychotherapeutics (6.2 million), cocaine (1.9 million), hallucinogens (1.1 million), inhalants (0.6 million), and heroin (0.2 million).

#### Nonmedical Use of Psychotherapeutics (Pain Relievers)

**Figure 1.4** shows the number of past-month nonmedical users of different types of psychotherapeutic drugs among persons age 12 or older from 2002–2008. For each of the four drug categories (pain relievers, tranquilizers, stimulants, and sedatives), there is a line showing use over the years from 2002–2008. The rates of past-month use of pain relievers is highest in 2008, with 1.9 million users, followed by tranquilizers (0.7 million), stimulants (0.4 million), and sedatives (0.1 million).

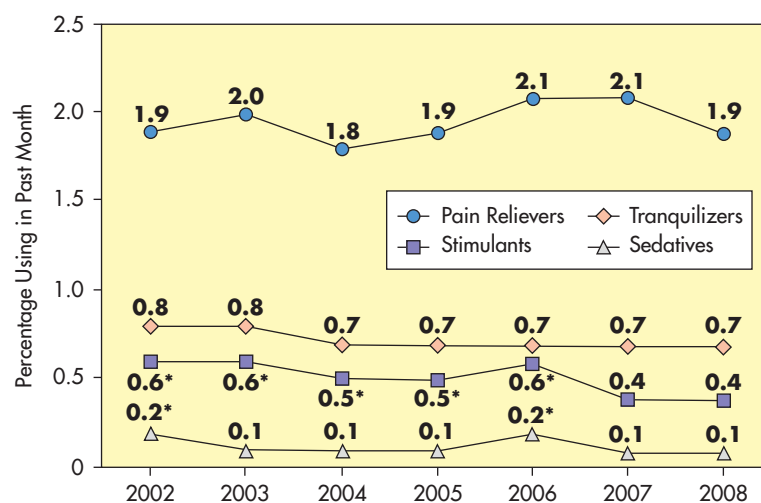
**Figure 1.5** looks at the nonmedical use of pain-

**FIGURE 1.3**

Past-month use of selected drugs among persons age 12 or older: 2008.

\*Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

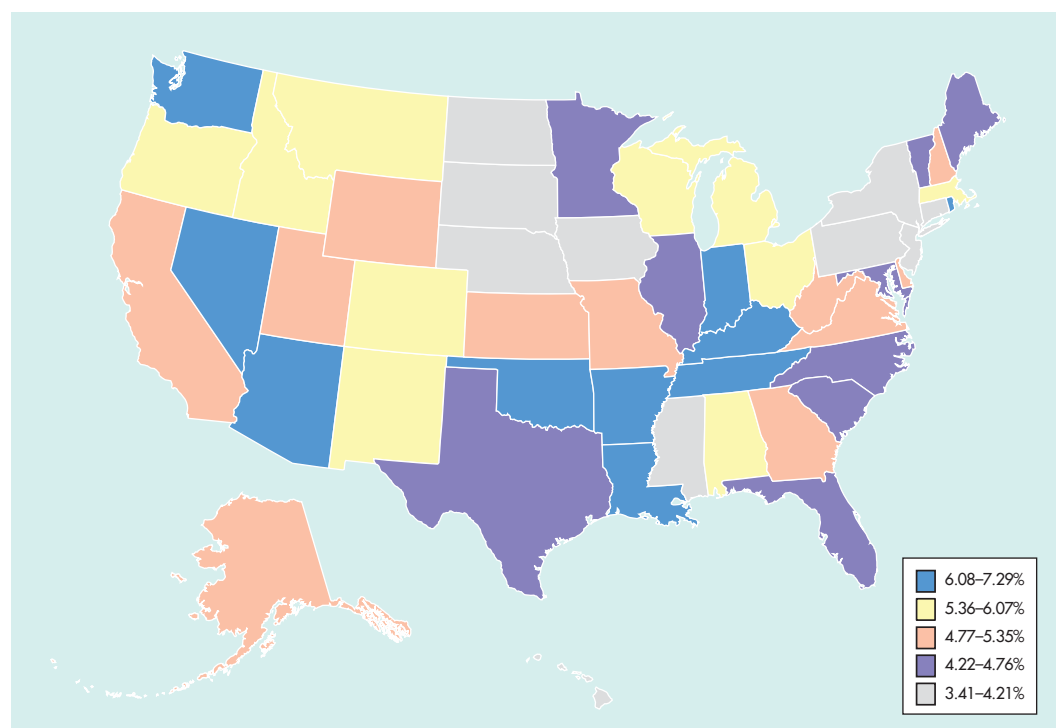
Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Office of Applied Studies, NSDUH Series H-36, DHHS Publication No. SMA 09-4435. Rockville, MD, 2009.

**FIGURE 1.4**

Past-month nonmedical use of various types of psychotherapeutic drugs among persons age 12 or older: 2002–2008.

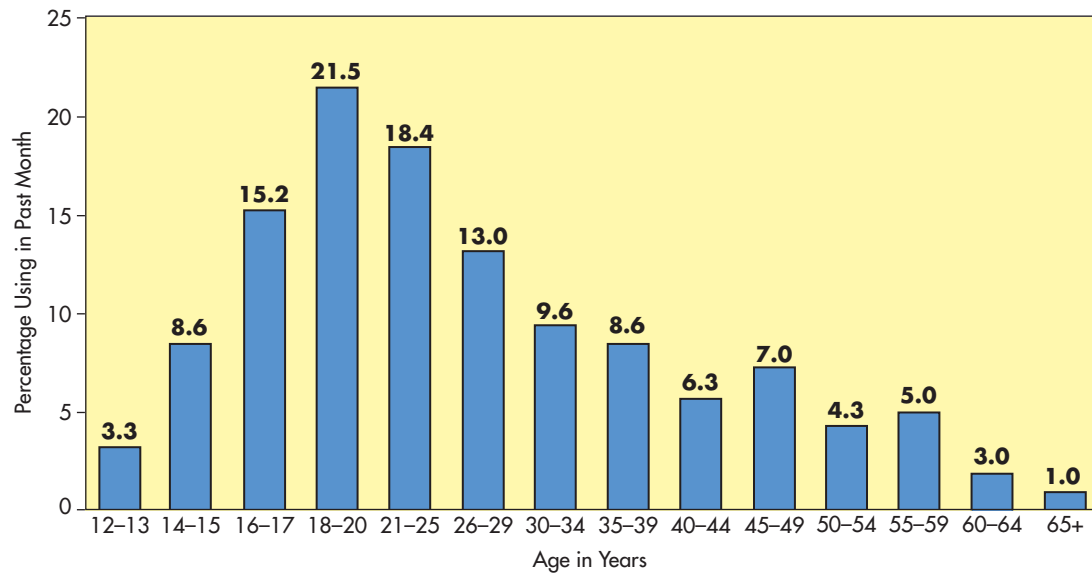
\*Difference between this estimate and the 2008 estimate is statistically significant at the 0.05 level.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Office of Applied Studies, NSDUH Series H-36, DHHS Publication No. SMA 09-4435. Rockville, MD, 2009.

**FIGURE 1.5**

Annual averages of nonmedical use of pain relievers in the past year among persons age 12 or older, by state: 2006 and 2007.

Source: Hughes, A., Sathe, N., and Spagnola, K. *State Estimates of Substance Use from the 2006–2007 National Surveys on Drug Use and Health*. Office of Applied Studies, Substance Abuse and Mental Health Services Administration, NSDUH Series H-35, DHHS Publication No. 09-4362, Rockville, MD, 2009.

**FIGURE 1.6**

Past-month illicit drug use among persons age 12 or older, by age: 2008.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Office of Applied Studies, NSDUH Series H-36, DHHS Publication No. SMA 09-4435. Rockville, MD, 2009.

relieving prescription drugs that are being used throughout the United States without a prescription, often taken for the experience or the euphoric effects. In 2006–2007, 5.1% of all persons age 12 or older reported having used pain relievers non-medically in the past year, a percentage that remained relatively unchanged from 2005–2006. Although not specifically listed in this figure, Arkansas had the highest percentage (7.3%) of persons age 12 or older using pain relievers for non-medical purposes in the past year; South Dakota had the lowest rate in the nation (3.4%). Arkansas, Kentucky, Oklahoma, and Tennessee ranked the top fifth of states for this measure across all age groups and for the total population age 12 or older. Nine states showed significant changes in the nonmedical use of pain relievers in the past year between 2005–2006 and 2006–2007: Connecticut, Florida, Iowa, Nebraska, and Utah had *declines*, and Arkansas, Arizona, Ohio, and Wisconsin had *increases*.

**Figure 1.6** shows the past-month use of illicit drugs by age in 2008. With regard to age patterns, the following trends are apparent:

- Rates of drug use showed substantial variation by age. For example, 3.3% of youths ages 12 or 13 reported current illicit drug use in 2008. As in other years, illicit drug use tended to increase

for each age category (12–13, 14–15, 16–17, 18–20) until 20, and then beginning at 21 years of age through 65+ illicit drug use showed continual decreases.

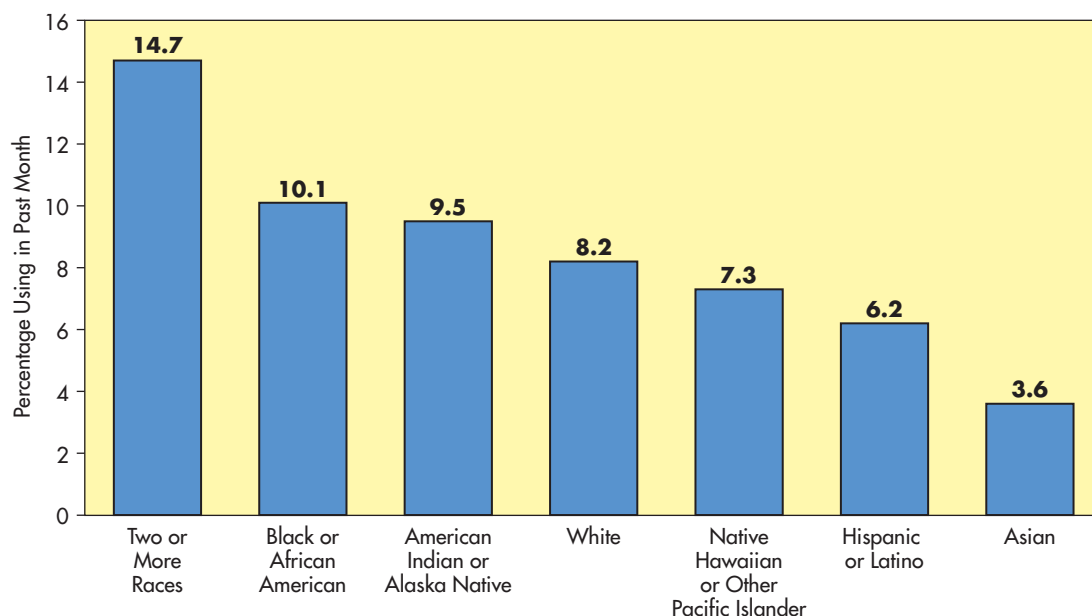
- The 18–25 age category showed the highest amount of illicit drug use (21.5%).
- Though not shown on any of the figures, among 18- to 25-year-olds, 19.6% used illicit drugs, 16.5% used marijuana, 1.7% used cocaine, and 1.5% used hallucinogens in 2008 during the past month before being surveyed (SAMHSA 2009).
- An estimated 70% of all psychoactive prescription drugs used by people under 30 years old were obtained without the user having a prescription (SAMHSA 2004).

### Racial and Ethnic Differences

**Figure 1.7** shows average past-month illicit drug use among persons age 12 or older by racial and ethnic differences in 2008. The figures in this chart reveal the following trends:

- In 2008, from highest to lowest, racial/ethnic groups had the following rates of illicit drug use: Two or more races (14.7%), black or African American (10.1%), American Indian or Alaska native (9.5%), white (8.2%), Native Hawaiian



**FIGURE 1.7**

Past-month illicit drug use among persons age 12 or older, by race/ethnicity: 2008.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Office of Applied Studies, NSDUH Series H-36, DHHS Publication No. SMA 09-4435. Rockville, MD, 2009.

or other Pacific Islander (7.3%), Hispanic or Latino (6.2%), and Asian (3.6%).

- As in past years when this research was conducted, Asians continue to have the lowest percentage of current illicit drug use, just as many other racial and ethnic group studies on drug use had found previously.
- Although not shown in this figure, among youths ages 12 to 17 in 2008, the rate of current past-month illicit drug use was as follows: Native Hawaiian or other Pacific Islander (18.2%), two or more races (13.5%), white (9.8%), Hispanic or Latino (8.9%), black or African American (8.2%), and Asian (2.7%).
- Among Hispanic groups, Puerto Ricans were the heaviest users of illicit drugs, followed by Mexican Americans and Cuban Americans. Central and South Americans had the lowest amount of current illicit drug use (SAMHSA 2007a).

### Gender

In 2008, the following were major findings regarding illicit drug use by gender (SAMHSA 2009):

- As in prior years, in 2008 males were more likely than females among persons age 12 or older to be current illicit drug users (9.9% vs. 6.3%, respectively). The rate of past-month marijuana usage was about twice as high for

males as for females. Males were more likely than females to be past-month users of marijuana (7.9% vs. 4.4%). However, males and females had similar rates of past-month non-medical use of psychotherapeutic drugs (2.6% vs. 2.4%), pain relievers (2.0% vs. 1.8%), tranquilizers (0.7% vs. 0.8%), stimulants (0.4% for both), methamphetamine (0.1% for both), and sedatives (0.1% for both).

- The rate of current illicit drug use among females age 12 or older increased from 5.8% in 2007 to 6.3% in 2008. However, the rate did not change significantly for males from 2007 to 2008 (10.4% and 9.9%, respectively). Current marijuana use also increased among females (from 3.8% to 4.4%), but for males there was no significant change (8% and 7.9%, respectively).
- Among youths ages 12 to 17 in 2008, males and females had similar rates of current use of an illicit drug (9.5% for males and 9.1% for females), cocaine (0.5% and 0.3%), hallucinogens (1.1% and 0.8%), and inhalants (1.1% for both).
- Generally, gender and licit/illicit drug use behavior correlate with specific age periods. Men have a tendency to prefer stimulants in their 30s, depressants in their 40s and 50s, and sedatives from age 60 on. In comparison to men, women are most likely to use stimulants from ages 21 through 39 and depressants more fre-

quently in their 30s. Women's use of sedatives shows a pattern similar to men's use, with the frequency of use increasing with age. Generally, women tend to take pills to cope with problems, whereas men tend to use alcohol and marijuana for the same purpose.

- People older than 35 are more likely to take pills, whereas younger people prefer alcohol and other licit and illicit types of drugs. Among those using pills, younger people and men are more likely to use stimulants than older people and women, who more frequently take sedatives. (The actual usage rates for all psychoactive drugs are probably 35% higher than the reported data.)
- Among younger people (ages 18 through 32 years), use of stimulants and depressants for nonmedical reasons often results from drug misuse or dependency. Methods for obtaining psychoactive drugs for nonmedical purposes include (1) getting drugs from friends and relatives who have legitimate prescriptions, (2) resorting to drug dealers, and (3) purchasing or shoplifting OTC medications.

### Pregnant Women

Among pregnant women ages 15 to 44 years, 5.1% used illicit drugs in the past month, based on data averaged for 2007 and 2008 (SAMHSA 2009). This rate was significantly lower than the rate among women in this age group who were not pregnant (9.8%). Among pregnant women, the average rate of current illicit drug use in 2007–2008 (5.1%) did not change significantly from 2005–2006 (4.0%) and was similar to the rate observed in 2003–2004 (4.6%). The rate of current illicit drug use in the combined 2007–2008 data was lower for pregnant women than for nonpregnant women among those ages 18 to 25 (7.1% vs. 16.2%, respectively) and among those ages 26 to 44 (3.0% vs. 6.7%). Among women ages 15 to 17, however, those who were pregnant had a higher rate of use than those who were not pregnant (21.6% vs. 12.9%). With exception of the 15–17 age group, we can generally conclude that pregnant women are less likely to use drugs than similar aged women who are not pregnant.

### Education

Illicit drug use rates in 2008 were correlated with educational status (SAMHSA 2009). Among adults age 18 or older, the rate of current illicit drug use was lower for college graduates (5.7%) than for those who did not graduate from high school (8.1%), high school graduates (8.6%), and those with some college (9.4%). However, adults who had graduated

from college were more likely to have tried illicit drugs in their lifetime when compared with adults who had not completed high school (51.8% vs. 37.7%). The rate of current illicit drug use declined from 9.3% in 2007 to 8.1% in 2008 among adults who had not completed high school.

### College Students

The most significant findings regarding college students and illicit drug use are as follows:

- In the college-age population (persons ages 18 to 22 years), the rate of current illicit drug use was the same among full-time undergraduate college students (20.2%) as for other persons ages 18 to 22 years, including part-time students, students in other grades, and non-students (21.9%).
- The rate of current illicit drug use among college students and other 18- to 22-year-olds did not change between 2007 and 2008 (SAMHSA 2009).
- Among full-time college students ages 18 to 22, there were increases from 2007 to 2008 in the current rate of use of hallucinogens (from 1.0% to 2.1%), including Ecstasy (from 0.5% to 1.2%) and LSD (from 0.3% to 0.6%). There were no significant changes in the rates of current use for any drugs among persons ages 18 to 22 who were not full-time college students.

### Geographic Area

Several of the more significant findings related to illicit drug use in specific geographic areas follow:

- The rate of illicit drug use in metropolitan areas is higher than the rate in nonmetropolitan counties. Rates were 8.5% in large metropolitan counties, 8.1% in small metropolitan counties, and 6.3% in nonmetropolitan counties.
- Within nonmetropolitan areas, counties that were urbanized had an illicit drug use rate of 7.2%, whereas completely rural counties had a lower rate (6.1%).
- Among persons age 12 or older, the rates of current illicit drug use in the United States were: 9.8% in the West, 8.2% in the Northeast, 7.6% in the Midwest, and 7.1% in the South (SAMHSA 2009).

### Criminal Justice Populations/Arrestees

Certain significant findings and correlations are unique to criminal justice populations:

- In 2008, an estimated 1.6 million adults age 18 or older were on parole or other supervised release from prison at some time during the past

year. Almost one-fifth of these (18.3%) were current illicit drug users, which was higher than the rate of 7.8% among adults not on parole or supervised release.

- Among the 5.2 million adults on probation at some time in the past year, 23.9% reported current illicit drug use in 2008. This was higher than the rate of 7.5% among adults not on probation in 2008 (SAMHSA 2009).
- In 2008, an estimated 333,000 prisoners were arrested for drug law violations—20% of state inmates and 52% of federal inmates (Sabol, West, and Cooper 2009).
- In 2008, nearly a third of state and a quarter of federal prisoners committed their offense under the influence of drugs, which was unchanged since 2004.
- Among federal inmates, men (50%) were slightly more likely than women (48%) to report drug use in the month before the offense in 2004 (Bureau of Justice Statistics [BJS] 2004).
- Among federal inmates in 2008, 56% of whites, 53% of blacks, and 39% of Hispanics reported using drugs in the month before the offense.
- One in three property offenders in state prisons report drug money as a motive in their crimes.
- Arrestee Drug Abuse Monitoring (ADAM) reports that at the time of arrest, 40% of arrestees tested positive for the presence of multiple drug substances. Approximately 40% tested positive for marijuana, 30% tested positive for cocaine, and 20% tested positive for crack (National Institute of Justice [NIJ] 2009). These three drugs are the most prevalent drugs testing positive for use at the time of arrest. (Very similar percentages were found in the 2004 estimates.) (BJS 2004).

## KEY TERMS

### experimenters

first category of drug users, typified as being in the initial stages of drug use; these people often use drugs for recreational purposes

### compulsive users

second category of drug users, typified by an insatiable attraction followed by a psychological dependence on drugs

### floaters or chippers

third category of drug users; these users vacillate between the need for pleasure seeking and the desire to relieve moderate to serious psychological problems; this category of drug user has two major characteristics: (1) a general focus mostly on using other people's drugs (often without maintaining a personal supply of the drug), and (2) vacillation between the characteristics of chronic drug users and experimenter types

## Types of Drug Users

Just as a diverse set of personality traits (for example, introverts, extroverts, type A, obsessive-compulsive, and so on) exists, so drug users vary according to their general approach or orientation, frequency of use, and types and amounts of the drugs they consume. Some are occasional or moderate users, whereas others display a much stronger attachment to drug use. In fact, some display such obsessive-compulsive behavior that they cannot let a morning, afternoon, or evening pass without using drugs. Some researchers have classified such variability in the frequency and extent of usage as fitting into three basic patterns: experimenters, compulsive users, and “floaters” or “chippers” (members of the last category drift between experimentation and compulsive use).

**Experimenters** begin using drugs largely because of peer pressure and curiosity, and they confine their use to recreational settings. Generally, they more often enjoy being with peers who also use drugs recreationally. Alcohol, tobacco, marijuana, prescription drugs, hallucinogens, and many of the major stimulants are the drugs they are most likely to use. They are usually able to set limits on when these drugs are taken (often preferred in social settings), and they are more likely to know the difference between light, moderate, and chronic use.

**Compulsive users**, in contrast, “. . . devote considerable time and energy to getting high, talk incessantly (sometimes exclusively) about drug use . . . [and ‘funny’ or ‘weird’ experiences] . . . and become connoisseurs of street drugs” (Beschner 1986, p. 7). For compulsive users, recreational fun is impossible without getting high. Other characteristics of these users include the need to escape or postpone personal problems, to avoid stress and anxiety, and to enjoy the sensation of the drug's euphoric effects. Often, they have difficulty assuming personal responsibility and suffer from low self-esteem. Many compulsive users are from dysfunctional families, have persistent problems with the law, and/or have serious psychological problems underlying their drug-taking behavior. Problems with personal and public identity, excessive confusion about their sexual orientation, boredom, family discord, childhood sexual and/or mental abuse, academic pressure, and chronic depression all contribute to the inability to cope with issues without drugs (see “Case in Point: Ignoring the Signs of Drug Abuse”).

**Floaters or chippers** focus more on using other people's drugs without maintaining a steady supply of drugs. Nonetheless, floaters or chippers,



## Case in Point Ignoring the Signs of Drug Abuse: A Hard Lesson Learned

**M**ichael Alig missed all of the warning signs of the dangers of drug abuse and addiction. He states, "There is no excuse for killing someone, no reason to justify being wholly or even partly responsible for the death of another human being. I have never been a violent person. I don't even like sports." Now in prison for the accidental death of a friend, Michael recalls the following warning signs he refused to note:

1. Michael was living without any real boundaries. Now that he looks back at his life, he says it was out of control, and his friends were out of control.
2. Michael overdosed many times on many different drugs and would often wake up unaware of where he was, where he had been, who he was with, what he was doing with whomever he was with, what took place while he was on drugs, and so on.
3. One time Michael regained consciousness and was in the presence of "... an entire dinner of cocaine on the floor!" which he admits was too tempting to pass up.

4. People around Michael were constantly warning him to stop using drugs, and these were the same people with whom he was annoyed.
5. Just before his arrest, Michael had overdosed numerous times with naloxone, barely escaping death several times.
6. Michael used heroin with the false sense of euphoric security that all was good.

Now Michael, who was called the King of the Club Kids, believes he has finally learned to accept responsibilities as an adult. After solitary confinement for several months to stop using heroin in prison, he says that his approach to life has completely changed. Michael says, "A smile or a laugh isn't just a reaction to the most extreme situations anymore, but to my average daily experiences like eating a piece of sour candy, or seeing a fat boy in the prison yard with the crack of his butt exposed for everyone to see." Michael believes it will take a lot of time for his brain to rewire itself toward enjoying the simple pleasures of life. He states, "Now it will be the small, subtle life experiences that will be my reinforcements ... [besides] parties in jail are dangerous." Today, Michael is over 50 years old.

Adapted from Michiana Point of View/Michael Alig. "Alig Missed Signs Along the Road to Tragedy." *The South Bend Tribune* (10 January 1999):B-3.

like experimenters, are generally light to moderate consumers of drugs. Chippers vacillate between the need for pleasure seeking and the desire to relieve moderate to serious psychological problems. As a result, although most are on the path to drug dependence, at this stage they drift between experimental drug-taking peers and chronic drug-using peers. In a sense, these drug users are marginal individuals who do not strongly identify with experimenters or compulsive users. (An example of how the various types of drug users are often adversely affected by peers is discussed in more detail in Chapters 2 and 16.)

### Drug Use: Mass Media and Family Influences

Studies continually show that the majority of young drug users come from homes in which drugs are liberally used (Goode 1999; National Association for Children of Alcoholics 2005; SAMHSA 1996). Often on a daily basis, children from these homes constantly witness drug use at home. For instance,

parents may consume large quantities of coffee to wake up in the morning and other forms of medication throughout the day: cigarettes with morning coffee, pills for either treating or relieving an upset stomach, vitamins for added nutrition, or aspirin for a headache. Finally, before going to bed, the grown-ups may take a few "nightcaps" or a sleeping pill to relax. The following is an interview related to the overuse of drugs:

Yeah, I always saw my mom smoking early in the morning while reading the newspaper and slowly sipping nearly a full pot of coffee. She took prescription drugs for asthma, used an inhaler, and took aspirin for headaches. When she accused me of using drugs at concerts, I would pick up her pack of cigarettes and several prescription bottles and while she was raging on me, I would quietly wave all her drugs close up in front of her face. She would stop nagging within seconds and actually one time I think she wanted to laugh but turned away toward the sink and just started washing cups and saucers. The way I figure it, she has her drugs,

and I have mine. She may not agree with my use of my drugs but then she is not better either. It's great to have a drug-using family ain't it? (From Venturelli's research files, male college student, age 20, June 12, 2000)

This next interview is an example of how “pill-pilfering” can easily occur:

Yes, I came from a home with dozens of pharmacy prescriptions and with medicine cabinets crammed with over-the-counter drugs. In fact, my mom noticed that certain friends of mine were helping themselves to our medicine cabinet. At first, she told my dad that I was taking the pills. Finally, she had to remove most of the prescription medicines from the guest bathroom and hide them in her bedroom bathroom. This was about four years ago when I was in high school. She was right, several of my friends had a knack of lifting tabs from other homes when visiting friends. I know that one of my friends was into this when he told another friend of mine that our home had a nice variety of great drugs in the bathroom. Now, I know why my friends always had to go to the bathroom whenever they would stop by to see me. (From Venturelli's research files, male attending a mid-size university in the Midwest, age 20, June 6, 2010)

Some social scientists believe that everyday consumption of legal drugs—caffeine, prescription and OTC drugs, and alcohol—is fueled by the pace of modern lifestyles and greatly accelerated by the influence of today's increasingly sophisticated mass media.

If you look around your classroom building, the dormitories at your college, your college library, or your own home, evidence of mass media and electronic equipment can be found everywhere. Cultural knowledge and information are transmitted via media through electronic gadgets we simply “can't live without,” to the point that they help us define and shape our everyday reality.

In regard to drug advertising, television remains the most influential medium. Most homes today have more than one television. “New findings from Nielsen's Television Audience Report show that in 2009 the average American home had 2.86 TV sets, which is roughly 18% higher than in 2000 (2.43 sets per home) and 43% higher than in 1990 (2.0 sets)” (Nielsenwire 2009, p. 1). Just as the number of televisions in the average home has been increasing over the last 30 years, “Drug firms . . . [have been increasing] . . . their spending on television advertis-

ing to consumers seven-fold from 1996 to 2000 . . .” (CBS News 2002). “Overall advertising spending aimed at ordinary people tripled between 1996 and 2000 to nearly \$2.5 billion a year. Drug companies spent \$1.6 billion in 2000 on television advertisements for Viagra, Claritin, Allegra, and other brand-name drugs that have become household names . . .” (CBS News 2002). As another example, “Each year, the alcohol industry spends more than a billion dollars on ‘measured media’ advertising, that is television, radio, print, and outdoor ads” (Federal Trade Commission [FTC] 2007). “The advertising budget for one beer—Budweiser—is more than the entire budget for research on alcoholism and alcohol abusers” (Kilbourne 1989, p. 13). More recent findings indicate that “Alcohol companies spent \$4.9 billion on television advertising between 2001 and 2005. They spent 2.1% of this amount (\$104 million) on ‘responsibility advertisements’ ” (Center on Alcohol Marketing and Youth [CAMY] 2007).

Radio, newspapers, and magazines are also saturated with advertisements for OTC drugs that constantly offer relief from whatever illness you may have. There are pills for inducing sleep and those for staying awake, as well as others for treating indigestion, headache, backache, tension, constipation, and the like. Using these medicinal compounds can significantly alter mood, level of consciousness, and physical discomfort. Experts warn that such drug advertising is likely to increase.

In the early 1990s, the Food and Drug Administration (FDA) lifted a 2-year ban on consumer advertising of prescription drugs; since then, there has been an onslaught of new sales pitches. In their attempts to sell drugs, product advertisers use the authority of a physician or health expert or the seemingly sincere testimony of a product user. Adults are strongly affected by testimonial advertising because these drug commercials can appear authentic and convincing to large numbers of viewers, listeners, or readers.

The constant barrage of commercials, including many for OTC drugs, relays the message that, if you are experiencing restlessness or uncomfortable symptoms, taking drugs is an acceptable and normal response. As a result, television viewers, newspaper and magazine readers, and radio listeners are led to believe or unconsciously select the particular brand advertised when confronted with dozens upon dozens of drug choices for a particular ailment. In effect, this advertising reaffirms the belief that drugs are necessary when taken for a real or an imagined symptom.

## Here and Now

### Are the Elderly Abusing Drugs?

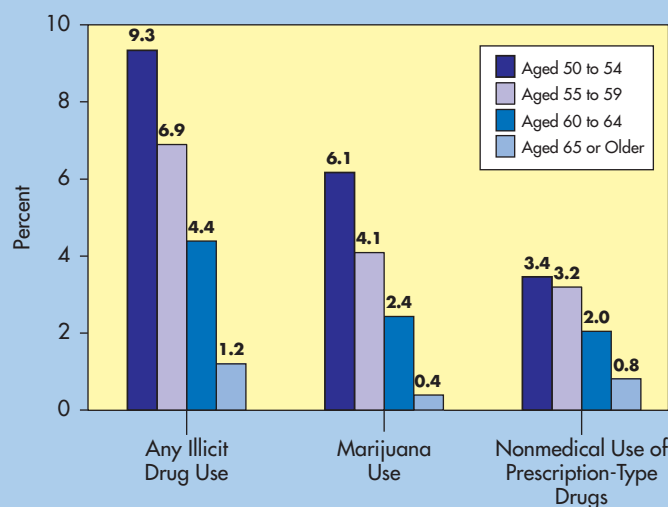
As the number of addicted drug abusers addicted to medically prescribed drugs is rapidly growing, “[a]n even more startling fact is that among those abusing prescription medication are the elderly” (Meyer 2005, p. 1). Another recent finding shows that “[d]rug abuse among our senior citizens in America may be rising faster than our younger generation, at least at the moment” (Mstywrl 2005, p. 1). Reported findings include:

- Alcohol is abused most, followed by prescription medications and marijuana. The list also includes some cocaine and heroin use.
- “[I]t is estimated that drug abuse among older adults has increased by 106% for men and 119% for women between 1995 and 2002” (Mstywrl 2005, p. 1).
- Drug addictions among those in this population are rapidly rising.

Other recent findings show that, in regard to the prevalence of substance use among older adults, an estimated 4.3 million adults aged 50 or older—4.7% of adults in this age range—had used an illicit drug in the past year. The illicit drugs most commonly used by older adults were marijuana (2.8%) and prescription-type drugs used non-medically (2.1%). These percentages translate to 2.5 million past year marijuana users and 1.9 million past year non-medical users of prescription-type drugs. Only 664,000 older adults (0.7%) reported use of illicit drugs other than marijuana or psychotherapeutics, including 0.5% for co-

caine, 0.1% for hallucinogens, and 0.1% for heroin. By age group, among older adults, the rates of any illicit drug use, marijuana use, and nonmedical use of prescription-type drugs in the past year were highest for those aged 50 to 54 and declined dramatically with increasing age. Marijuana use was more common than nonmedical use of prescription-type drugs for adults aged 50 to 54 and those aged 55 to 59 (6.1% vs. 3.4% and 4.1% vs. 3.2%, respectively). However, among adults aged 65 or older, nonmedical use of prescription-type drugs was more common than marijuana use (0.8% vs. 0.4%) (SAMHSA 2009).

One report showed that “the population of older adults ages 50 to 59 who reported using at least one illicit drug\* in the past year—primarily marijuana and nonmedical use of prescription drugs—increased from 5.1% in 2002 to 9.4% in 2007. Additional analyses show that this trend was driven by the aging of the baby boom generation, those born between 1946 and 1964” (CESAR 2009). SAMHSA estimates the current number of substance abusers over the age of 55 is approximately 62 million, with this number growing to 75 million by 2010 (SAMSHA 2009). If the number of users continues to increase, the number of adults over the age of 50 with substance abuse issues will double from 2.5 million in 1999 to 5 million in 2020” (Mstywrl 2005, p. 3). From these findings, it can be said that the extensive drug use the baby boomers experienced in the 60s, 70s, and early 80s follows this generation as they move into their senior years.



Past year illicit drug use among adults aged 50 or older, by age group: 2006 to 2008.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies (OAS). *The NSDUH Report: Illicit Drug Used Among Older Adults*. Rockville, MD, 2009.

(continued)



### Are the Elderly Abusing Drugs? (continued)

An example of elderly drug abuse include the following:

Oh, I started with cigarettes when I was fourteen. Then came the alcohol when I was sixteen, and now I am now 62-years-old and still playing around with drugs. I have several friends who still smoke weed, but not too many around who continue like I do. I generally smoke cigarettes, weed (as they call it today), sometimes buy a little bag of coke and smoke that, too, and drink alcohol. I don't do the coke much because I like to smoke it, and it is tough on the heart. My drug using friends who are around my age don't really know about the coke use; they think I stopped this years ago. I still have days when I long for it, but I have enough of a hard time with the weed and the drinking. My children do not know how much I drink since I live alone, and they even think I have nothing to do with weed. So, I guess I am a closet user. At times I am sorry to continue with these unnecessary drugs, and it's even darn right embarrassing if anyone finds out. Even the cigarettes are a pain in the

butt. I just need to get high every now and then, and I don't know why. I think it is something genetic since I want to quit all these drugs but simply do not do it. You asked if I think a lot of the elderly use drugs unnecessarily [drugs used without medical purposes]. Yes, there are many of us, especially the baby boomers who still smoke weed, but we kind of keep it secret. So, if the number of users my age are increasing, I would double the number of users. As I said, many of us just keep it secret because we still work, have good jobs with a lot of responsibilities, and our kids would look down on us if they knew. You asked if I feel addicted to these drugs. Yes, I am addicted since I really don't want to quit everything, yet it is not good for my health and still keep using these drugs. Isn't this a classic example of addiction, which is to keep using drugs even though you know they are not good for you? If it's not addiction, what else would it be? (From Venturelli's research files, male, age 62, April 22, 2011)

\* Illicit drug use: Any use of marijuana, cocaine, heroin, hallucinogens, inhalants, or nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives.

Sources: Meyer, C. "Prescription Drug Abuse in the Elderly." Associated Content from Yahoo! (15 July 2005). Available at: [http://www.associatedcontent.com/article/5731/prescription\\_drug\\_abuse\\_in\\_the\\_elderly.html?cat=5](http://www.associatedcontent.com/article/5731/prescription_drug_abuse_in_the_elderly.html?cat=5). Accessed April 25, 2011; Mstywrl. "Drug Abuse Among Seniors in America: An Ageless Predator." Associated Content from Yahoo! (21 July 2005). Available at: [http://www.associatedcontent.com/article/5556/drug\\_abuse\\_among\\_seniors\\_in\\_america.html?cat=71](http://www.associatedcontent.com/article/5556/drug_abuse_among_seniors_in_america.html?cat=71). Accessed April 25, 2011; Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies (OAS). "Illicit Drug Use among Older Adults." *The NSDUH Report* (29 December 2009): 1–4; and Center for Substance Abuse and Research (CESAR). "Illicit Drug Use Increases Among Adults Ages 50 to 59: Trend Driven by Aging Baby Boom Generation." *CESAR FAX* 18 (7 September 2009).

Amanda Geiger never saw the drunk driver.

#### Friends Don't Let Friends Drive Drunk.



Photo by Michael Mazzeo



U.S. Department of Transportation



Although the media is often credited with glamorizing dangerous drug use, many successful prevention campaigns have used television, radio, and print media as outlets. Since the Advertising Council began its "Friends Don't Let Friends Drive Drunk" campaign, 79% of Americans have stopped an intoxicated friend from getting behind the wheel.

### Drug Use and Drug Dependence

Why are so many people attracted to drugs and the effects of recreational drug use? Like the ancient Assyrians, who sucked on opium lozenges, and the Romans, who ate hashish sweets some 2000 years ago, many users claim to be bored, in pain, frustrated, unable to enjoy life, or alienated. Such people turn to drugs in the hope of finding oblivion, peace, inner connections, outer connections (togetherness), or euphoria. The fact that many OTC drugs never really cure the ailment, especially if taken for social and psychological reasons, and the fact that frequent use of most drugs increases the risk of addiction do not seem to be deterrents. People continue to take drugs for many reasons, including the following:

- Searching for pleasure and using drugs to heighten good feelings.

- Taking drugs to temporarily relieve stress or tension or provide a temporary escape for people with anxiety.
- Taking drugs to temporarily forget one's problems and avoid or postpone worries.
- Viewing certain drugs (such as alcohol, marijuana, and tobacco) as necessary to relax after a tension-filled day at work.
- Taking drugs to fit in with peers, especially when peer pressure is strong during early and late adolescence; seeing drugs as a rite of passage.
- Taking drugs to enhance religious or mystical experiences. (Very few cultures teach children how to use specific drugs for this purpose.)
- Taking drugs to relieve pain and some symptoms of illness.

It is important to understand why historically many people have been unsuccessful in eliminating the fascination with drugs. To reach such an understanding, we must address questions dealing with (1) why people are attracted to drugs, (2) how experiences with the different types of drugs vary (here, many attitudes are conveyed from the “inside”—the users themselves), (3) how each of the major drugs affects the body and the mind, (4) how patterns of use vary among different groups, and (5) what forms of treatment are available for the addicted. In Chapter 2, explanations and responses to such questions are addressed from a more theoretical (explanatory) level. In Chapters 8 through 15, each of the major types of drugs is examined separately.

### ■ When Does Use Lead to Abuse?

Views about the use of drugs depend on one's perspective. For example, from a pharmacological perspective, if a patient is suffering severe pain because of injuries sustained from an automobile accident, high doses of a narcotic such as morphine or Demerol should be given to control discomfort. While someone is in pain, no reason exists not to take the drug. From a medical standpoint, once healing has occurred and pain has been relieved, drug use should cease. If the patient continues using the narcotic because it provides a sense of well-being or he or she has become dependent to the point of addiction, the pattern of drug intake is then considered abuse. Thus, the amount of drug(s) taken or the frequency of dosing does not

necessarily determine abuse (even though individuals who abuse drugs usually consume increasingly higher doses). Most important is the motive for taking the drug, which is the principal factor in determining the presence of abuse.

Initial drug abuse symptoms include: (1) excessive use, (2) constant preoccupation about the availability and supply of the drug, (3) denial in admitting the excessive use, and (4) reliance on the drug. All of these four factors frequently result in producing the initial symptoms of withdrawal whenever the user attempts to stop taking the drug. As a result, the user often begins to neglect other responsibilities or ambitions in favor of using the drug.

Even the legitimate use of a drug can be controversial. Often, physicians cannot decide even among themselves what constitutes legitimate use of a drug. For example, MDMA (“Ecstasy”) is currently prohibited for therapeutic use, but in 1985, when the **Drug Enforcement Administration (DEA)** was deciding MDMA's status, some 35 to 200 physicians (mostly psychiatrists) were using the drug in their practice. These clinicians claimed that MDMA relaxed inhibitions and enhanced communication and was useful as a psychotherapeutic adjunct to assist in dealing with psychiatric patients (Levinthal 1996; Schecter 1989). From the perspective of these physicians, Ecstasy was a useful medicinal tool. However, the DEA did not agree and made Ecstasy a Schedule I drug (see Chapter 3). In a legal sense, Schedule I excludes any legitimate use of the drug in therapeutics; consequently, according to this ruling, anyone taking Ecstasy is guilty of drug abuse (Goode 1999) and is violating drug laws.

If the problem of drug abuse is to be understood and solutions are to be found, identifying the causes of the abuse is most important. When a drug is being abused, it is not legitimately therapeutic; that is, it does not improve the user's physical or mental health. When drug use is not used for therapeutic purposes, what is the motive for taking the drug?

There are many possible answers to this question. Initially, most drug abusers perceive some psychological advantage when using these compounds. For many, the psychological lift is significant enough that they are willing to risk social exclusion, health

### KEY TERMS

#### **Drug Enforcement Administration (DEA)**

the principle federal agency responsible for enforcing U.S. drug laws

problems, and dramatic changes in personality, arrest, incarceration, and fines to have their drug. The psychological effects that these drugs cause may entail an array of diverse feelings. Different types of drugs have different psychological effects. The type of drug an individual selects to abuse may ultimately reflect his or her own mental state.

For example, people who experience chronic depression, feel intense job pressures, are unable to focus on accomplishing goals, or have a sense of inferiority may find that a stimulant such as cocaine or an amphetamine type of drug appears to provide immediate relief—a solution to a set of psychological frustrations. These drugs cause a spurt of energy, a feeling of euphoria, a sense of superiority, and imagined self-confidence. In contrast, people who experience nervousness and anxiety and want instant relief from the pressures of life may choose a depressant such as alcohol or barbiturates. These agents sedate, relax, provide relief, and even have some amnesiac properties, allowing users to suspend or forget their immediate pressing concerns or problems. People who perceive themselves as creative or who have artistic talents may select hallucinogenic types of drugs to “expand” their minds, heighten their senses, and distort what appears to be a confining and sometimes monotonous nature of reality. As individuals come to rely more on drugs to inhibit, deny, accelerate, or distort their realities, they run the risk of becoming psychologically dependent on drugs—a process described in more detail in Chapters 2, 4, and 5.

Some have argued that taking a particular drug to meet a psychological need, especially if a person is over 21 years of age, is not very different from taking a drug to cure an ailment. The belief here is that physical needs and psychological needs are really indistinguishable. In fact, several drug researchers and writers, including Szasz (1992) and Lenson (1995), believe that drug taking is a citizen’s right and a personal matter involving individual decision making. They see drug taking as simply a personal choice to depart from or alter consciousness. Lenson states that taking drugs for recreational purposes is simply an additional form of diversity, a type of mental diversity that should exist with many other acceptable forms of diversity, such as cultural, racial, religious, gender, and sexual orientation diversity. (For additional elaboration on these views, see Venturelli 2000.) Obviously, this is a very different and often extremely controversial point of view that can easily cause polemic and very debatable perspectives!

## ■ Drug Dependence

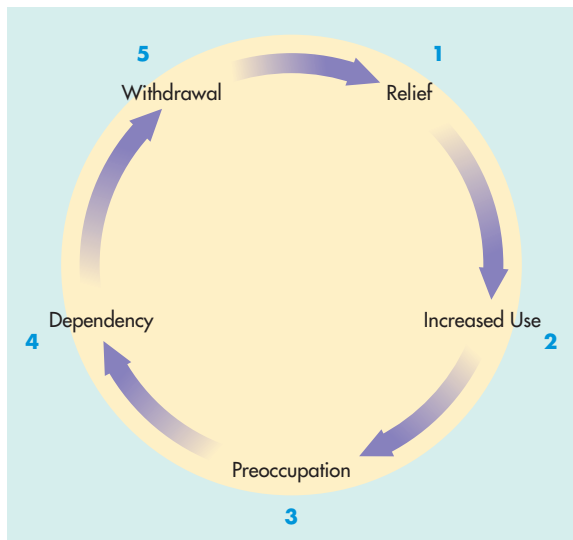
Although Chapters 2, 5, and 18 discuss addiction and drug dependence in detail, here we introduce some underlying factors that lead to drug dependence. Our discussion emphasizes drug dependence instead of addiction because the term *addiction* is both controversial and relative, as evidenced with rock and movie stars and their “escapades” with drug dependence. Stars such as Charlie Sheen, Mel Gibson, and Ben Affleck (alcoholism); John Belushi, Lindsay Lohan, and Robin Williams (alcoholism and cocaine); Robert Downey, Jr. (cocaine and heroin); Michael Jackson, Winona Ryder, and Eminem (analgesic prescription drugs) are just a few examples.

Even when drug dependence becomes full-fledged, addiction remains debatable, with many experts unable to agree on one set of characteristics that constitutes addiction. Furthermore, the term *addiction* is viewed by some as a pejorative that adds to the labeling process (see labeling theory in Chapter 2).

The main characteristics necessary for drug dependence are as follows:

- Both physical and psychological factors precipitate drug dependence. Recently, closer attention has been focused on the mental (psychological) attachments than on the physical addiction to drug use as principally indicative of addiction—mostly, the craving aspect of wanting the drug for consumption.
- More specifically, psychological dependence refers to the need that a user may feel for continued use of a drug to experience its effects. Physical dependence refers to the need to continue taking the drug to avoid withdrawal symptoms that often include feelings of discomfort and illness.
- With repeated use there is a tendency to become dependent and addicted to most psychoactive drugs.
- Addiction to a drug sets in when the drug user has advanced within the dependence phase. (Having an addiction to a drug is simply an advanced stage of dependence.)
- Generally, the addiction process involves mental (psychological) and physical (physiological/biophysiological) dependence.

**Figure 1.8** shows the process of addiction involves five separate phases: relief, increased use, pre-occupation, dependency, and withdrawal. Initially,

**FIGURE 1.8**

Stages of drug dependence.

the **relief phase** refers to the relief experienced by using a drug, which allows a potential addict to escape one or more of the following feelings: boredom, loneliness, tension, fatigue, anger, and anxiety. The **increased use phase** involves taking greater quantities of the drug. The **preoccupation phase** consists of a continuous interest with and concern for the substance—that is, always having a supply of the drug and taking the drug is perceived as “normal” behavior. The **dependency phase** is synonymous with addiction. In this phase, more of the drug is sought without regard for the presence of negative physical symptoms, such as congested coughing and/or shortness of breath in cases of cigarette and marijuana addiction, blackouts from advanced alcohol abuse, and moderate to acute soreness and inflammation of nasal passages from snorting cocaine. The **withdrawal phase** involves such symptoms as itching, chills, tension, stomach pain, or depression from the nonuse of the addictive drug and/or an entire set of psychological concerns mainly involving an insatiable craving for the drug (Monroe 1996).

## The Costs of Drug Use to Society

Many of the costs of drug addiction go beyond the user. Society pays a high price for drug addiction. Consider, for example, the loss of an addicted person’s connection with reality and the loss of responsible dedication to careers and professions, illnesses

experienced by the addicted individual, marital strife, shortened lives, and so on. Additionally, the dollar costs of addiction are also enormous.

The **National Institute on Drug Abuse (NIDA)** has estimated that the typical narcotic habit costs the user approximately \$150 a day to support his or her addiction. The precise dollar amount spent to support a narcotic addiction largely depends on the geographic location where the drug is procured and used, availability of the drug affecting the price, and numerous other factors. For example, if a heroin addict has a \$150-a-day habit, he or she needs about \$54,750 per year just to maintain the drug supply. It is impossible for most addicts to get this amount of money legally; therefore, many support their habits by resorting to criminal activity or working as or for drug dealers.

Most crimes related to drugs involve theft of personal property—primarily, burglary and shoplifting—and, less commonly, assault and robbery (often mugging). Estimates are that a heroin addict must steal three to five times the actual cost of the drugs to maintain the habit, or roughly \$200,000 per year. Especially with crack and heroin use, a large number of addicts resort to pimping and prostitution. No accurate figures are available regarding the cost of drug-related prostitution, although some law enforcement officials have estimated that prostitutes take in a total of \$10 to \$20 billion per year. It has also been estimated that nearly three out of every four prostitutes in major cities have a serious drug dependency.

Even though when looking at illicit drug users, yearly methamphetamine (meth) use has been steadily decreasing—from a high of 0.7% users in

## KEY TERMS

### relief phase

satisfaction derived from escaping negative feelings in using the drug

### increased use phase

taking increasing quantities of the drug

### preoccupation phase

constant concern with the supply of the drug

### dependency phase

synonym for addiction

### withdrawal phase

physical and/or psychological effects derived from not using the drug

### National Institute on Drug Abuse (NIDA)

the principle federal agency responsible for directing drug use- and abuse-related research



2002 (1.7 million) to 0.5% users (1.3 million) in 2007, to 0.3% users (850,000) in 2008 it is worth noting its past history. In the late 1990s there was a significant concern regarding the increase throughout the country in clandestine laboratories involved in synthesizing or processing this type of illicit drug. Such laboratories produced amphetamine-type drugs, heroin-type drugs, designer drugs, LSD, and processed other drugs of abuse such as cocaine and crack. Back then, the DEA reported that 390 laboratories were seized in 1993, a figure that increased to 967 in 1995. Another example of the phenomenal growth of methamphetamine laboratories was found in Missouri. From 1995 to 1997, seizures of such labs in Missouri increased by 535% (Steward and Sitarmiah 1997). "In Dawson County in western Nebraska . . . 'The percentage of meth-related crimes is through the roof' . . . as reiterated by an investigator with the county sheriff's office. . . . In the state as a whole, officials discovered 38 methamphetamine laboratories in 1999; last year [2001] they discovered 179" (Butterfield 2002, p. A23).

The reasons for such dramatic increases related to the enormous profits and relatively low risk associated with these operations. As a rule, clandestine laboratories are fairly mobile and relatively crude (often operating in a kitchen, basement, or garage) and are run by individuals with only elementary chemical skills.

Another interesting discovery was that these laboratories were not always stationary in locations such as garages, barns, homes, apartments, and so on. Though these stationary labs predominated, especially in the production of methamphetamine, more recently mobile labs have made an appearance:

Cooking in cars and trucks helped producers in two ways: It eludes identification by law enforcement and motion helps the chemical reaction [of methamphetamine production]. Motels are a new production setting. . . . [though fewer in number today]. Clandestine labs are also set up in federal parklands, where toxic byproducts pose a danger to hikers and campers (ONDCP 2002, p. 58).

To demonstrate how a drug such as methamphetamine affects society, in 2003, the following was reported:

With portable meth labs popping up everywhere from motel bathrooms to the back seat of a Chevy, it was only a matter of time before they made their way onto campus. Last November, a custodian notified campus police at [uni-

versity in Texas] about what appeared to be a lab set up in a music practice room in the [university's] Fine Arts Center. "We found beakers of red liquid, papers and other residue, and the room had this horrible odor. . . ." Students were on vacation, so the practice room, which had its windows blackened out, would have afforded the occupant a few days to cook. [One campus police official] . . . speculates that this is just the beginning: "Labs are popping up on campuses all over the country. It's just too easy now. You can get the recipe on the Internet. Still, how could someone be so brazen as to set up an operation next to the French horn section?" (Jellinek 2003, p. 54)

Because of a lack of training, inexperience, and the danger of experiencing the effects of methamphetamine while making the drug, the chemical "cooking" procedures are performed crudely, sometimes resulting in adulterants and impure products. Such contaminants can be very toxic, causing severe harm or even death to the unsuspecting user as well as a greater likelihood of sudden explosion (Drug Strategies 1995). Fortunately, when looking at all the illicit drugs produced by such underground laboratories, such outbreaks of physically harmful drugs do not occur very often. Partial proof of this is found in the small number of news stories of deaths or poisonings from illicit drugs. Nevertheless, because profit drives these clandestine labs, which obviously have no government supervision, impurities or "cheap fillers" are always possible so that greater profits can be made. Here, caution is very advisable in that drug purchasers do not have any guarantees when purchasing powerful illicit drugs.

Society continues paying a large sum even after users, addicts, and drug dealers are caught and sentenced because it takes from \$75 to \$1500 per day to keep one person incarcerated. Supporting programs such as methadone maintenance costs much less. New York officials estimate that methadone maintenance costs about \$3000 per year per patient. Some outpatient programs, such as those in Washington, DC, claim a cost as low as \$8 to \$12 per day (not counting cost of staff and facilities), which is much less than the cost of incarceration. A more long-term effect of drug abuse that has substantial impact on society is the medical and psychological care often required by addicts due to disease resulting from their drug habit. Particularly noteworthy are the communicable diseases spread because of needle sharing within the drug-abusing population, such as hepatitis and HIV. (See Chapter 16 for

extensive coverage of HIV/AIDS and injection drug use.)

In the United States, at the end of 2006, an estimated 1.1 million Americans were living with HIV—and one in four of them did not know it (CDC 2009b). (AIDS has a tendency to develop within 10 years of the onset of HIV.) Worldwide, approximately 33.4 million people are living with HIV/AIDS (CDC 2009a). This number includes people living in sub-Saharan Africa, Asia, Latin America and the Caribbean, Eastern Europe, Central Asia, North America, Western and Central Europe, North Africa and the Middle East, and Oceania (Clinton 2006). (See Chapter 16 for more detailed information on HIV and AIDS.)

In the United States, HIV is spread primarily through unprotected sexual intercourse and sharing of previously used needles to inject drugs. HIV in the injecting-drug-user subpopulation is transmitted in the small (minuscule) amount of contaminated blood remaining in the used needles. The likelihood of a member of the drug-abusing population contracting HIV directly correlates with the frequency of injections and the extent of needle sharing. Care for AIDS patients lasts a lifetime, and many of these medical expenses come from federal- and state-funded programs. Many cities throughout the United States have publicly funded programs that distribute new, uncontaminated needles to drug addicts. The needles are free of charge in exchange for used injection needles in order to prevent the spread of HIV and hepatitis B and C from contaminated needles. These programs are often referred to as **needle-exchange programs**.

Also of great concern is drug abuse by women during pregnancy. Some psychoactive drugs can have profound, permanent effects on a developing fetus. The best documented is fetal alcohol syndrome (FAS), which can affect the offspring of alcoholic mothers (see Chapter 7). Cocaine and amphetamine-related drugs can also cause irreversible congenital changes when used during pregnancy (see Chapter 10). All too often, the affected offspring of addicted mothers become the responsibility of welfare organizations. In addition to the costs to society just mentioned, other costs of drug abuse include drug-related deaths, emergency room visits and hospital stays, and automobile fatalities.

## ■ Drugs, Crime, and Violence

There is a long-established close association between drug abuse and criminality. The beliefs (hy-

potheses) for this association range along a continuum between two opposing views: (1) criminal behavior develops as a means to support addiction, and (2) criminality is inherently linked to the user's personality and occurs independently of drug use (Bureau of Justice Statistics [BJS] 2006; Drug Strategies 1995; McBride and McCoy 2003). In other words, does drug addiction cause a person to engage in criminal behavior such as burglary, theft, and larceny to pay for the drug habit? On the other hand, does criminal behavior stem from an already existing criminal personality such that drugs are used as an adjunct to commit such acts? In other words, are drugs used in conjunction with crime to sedate and give the added confidence needed to commit daring law violations?

The answers to these questions have never been clear because findings that contradict one view in favor of the other continue to mount on both sides. Part of the reason for the controversy about the relationship between criminal activity and drug abuse is that studies have been conducted in different settings and cultures, employing different research methods, and focusing on different addictive drugs. As a result, too many factors are involved to allow us to distinguish the cause from the result. We know that each type of drug has unique addictive potential and that interpretation of exactly when a deviant act is an offense (violation of law) varies. Furthermore, we know that people think differently while under the influence of drugs. Whether criminalistic behavior is *directly* caused by the drug use or whether prior socialization and peer influence work in concert to cause criminal behavior remains unclear. Certainly, we think it would be safe to believe that prior socialization, law-violating peers, and drugs are strong contributing factors for causing criminal behavior.

Although this controversy about the connection between drugs and crime continues to challenge our thinking, the following findings are also noteworthy:

- “The United States leads the world in the number of people incarcerated in federal and state correctional facilities. There are currently

## KEY TERMS

### **needle-exchange programs**

publically funded programs that distribute new, uncontaminated needles to drug addicts in exchange for used injection needles in order to prevent the spread of HIV and hepatitis B and C

more than 2 million people in American prisons or jails. Approximately one-quarter of those people held in U.S. prisons or jails have been convicted of a drug offense” (Natarajan et al. 2008, p. 1).

- “The United States incarcerates more people for drug offenses than any other country” (Natarajan et al. 2008, p. 1).
- With an estimated 6.8 million Americans struggling with drug abuse or dependence, the growth of the prison population continues to be driven largely by incarceration for drug offenses (Natarajan et al. 2008, p. 1).
- In 2004, “17% of State and 18% of Federal prisoners committed their crime to obtain money for drugs” (Mumola and Karberg 2007, p. 1). Approximately one out of every six major crimes is committed because of the offender’s need to obtain money for drugs.
- In 2006, “[o]f the estimated 265,800 prisoners under state jurisdiction sentenced for drug offenses in 2006, 72,100 were white (27.1%), 117,600 were black (44.2%), and 55,700 were Hispanic (21%)” (Sabol et al. 2009, p. 37).
- In 2008, more than two-thirds of jail inmates were found to be dependent on or to abuse alcohol or drugs.
- Two in five inmates were dependent on alcohol or drugs, and nearly one in four abused alcohol or drugs but were not dependent on them. Jail inmates who met the criteria for substance dependence or abuse (70%) were more likely than other inmates (46%) to have a criminal record.
- Fifty-two percent of female jail inmates were found to be dependent on alcohol or drugs, compared to 44% of male inmates.
- Half of all convicted jail inmates were under the influence of drugs or alcohol at the time of their offense.
- Jail inmates between ages 25 and 44 had the highest rate of substance dependence or abuse (7 in 10 inmates). Those age 55 or older had the lowest rate (nearly 5 in 10 inmates).
- More than 50% of drug or property offenders were dependent on or had abused a substance, compared to over 60% of violent and public-order offenders.
- Women and white inmates are more likely to have used drugs at the time of their offense (Karberg and James 2002).
- Thirty-two percent of state and 26.4% of federal prison inmates reported being under the influence of drugs at the time of their offense in

2004 (see **Table 1.5**). Approximately 44% were incarcerated for drug offenses in state prisons and 32% were incarcerated in federal prisons. Of these, 46% were arrested for possession in state prisons and 21% were arrested in federal prisons. Forty-two percent were serving time in state prisons and 34% were serving time in federal prisons for trafficking in drugs. One outcome of these findings is that one out of every four major crimes committed—violent, property, and drug offenses—involves an offender

**Table 1.5** Percentage of State and Federal Prison Inmates Who Reported Being Under the Influence of Drugs at the Time of Their Offense: 2004

	STATE	FEDERAL
<b>Total<sup>a</sup></b>	32.1%	26.4%
<b>Violent Offenses</b>	27.7%	24.0%
Homicide	27.3%	16.8%
Sexual Assault <sup>b</sup>	17.4%	13.8%
Robbery	40.7%	29.4%
Assault	24.1%	20.1%
<b>Property Offenses</b>	38.5%	13.6%
Burglary	41.1%	—
Larceny/theft	40.1%	—
Motor vehicle theft	38.7%	—
Fraud	34.1%	9.3%
<b>Drug Offenses</b>	43.6%	32.3%
Possession	46.0%	20.9%
Trafficking	42.3%	33.8%
<b>Public Order Offenses<sup>c</sup></b>	25.4%	18.7%
Weapons	27.6%	27.8%
Other public order offenses	24.6%	8.0%

<sup>a</sup> Includes offenses not shown  
<sup>b</sup> Includes rape and other sexual assault  
<sup>c</sup> Excluding DWI/DUI  
 — Not calculated; too few cases to permit calculation

Source: Mumola, C., and J. Karberg. *Drug Use and Dependence, State and Federal Prisoners, 2004*. Washington, DC: U.S. Department of Justice, Office of Justice Programs.

who is under the influence of drugs (Mumola and Karberg 2007).

- Another study also shows a dramatic increase in the correlation between drug use and crime. This study by the Robert Wood Johnson Foundation (2001) reported that with regard to homicide, theft, and assault, at least half of the adults arrested for such major crimes tested positive for drugs at the time of their arrest. “Among those convicted of violent crimes, approximately half of state prison inmates and 40% of federal prisoners had been drinking or taking drugs at the time of their offense” (p. 45).

In regard to the connection between drug use and crime, the following findings can be summarized: (1) drug users in comparison to non-drug users are more likely to commit crimes, (2) a high percentage of arrestees are often under the influence of a drug while committing crimes, and (3) a high percentage of drug users arrested for drug use and violence are more likely to be under the influence of alcohol and/or stimulant-types of drugs such as cocaine, crack, and methamphetamines.

Drug-related crimes are undoubtedly overwhelming the U.S. judicial system. Table 1.5 shows the percentage of state and federal inmates reporting being under the influence of drugs at the time of their offenses in 2004. Approximately 29% of state and federal prisoners were under the influence of drugs for violent offenses (e.g., homicide, sexual assault, robbery, assault), 26% for property offenses (e.g., burglary, larceny/theft, motor vehicle theft, fraud), 38% for drug offenses (possession, trafficking), and 22% for public order offenses (e.g., weapons, other public-order offenses) (Mumola and Karberg 2007). Furthermore, nearly 40% of the young people (often younger than 21 years of age) in adult correctional facilities reported drinking before committing a crime.

### Drug Cartels

**Drug cartels** are defined as large, highly sophisticated organizations composed of multiple drug trafficking organizations (DTOs) and **drug cells** with specific assignments such as drug transportation, security/enforcement, or money laundering. (A drug cell is similar to a terrorist cell, consisting of three to five members insuring operational security. Members of adjacent drug cells usually do not know each other or the identity of their leadership.) Drug cartel command-and-control structures are based outside the United States; however,

they produce, transport, and distribute illicit drugs domestically with the assistance of DTOs that are either a part of or in an alliance with the cartel. Here are some reports of incidents in the world of drugs, violence, and crime:

In Mexico, President Felipe Calderon may be the constitutionally elected leader of the nation, but in reality, drug cartels and warlords exercise de facto authority over much of the area. . . . Drug trafficking overwhelmingly is the prevailing social malady throughout the country, particularly along the border with the United States. In spite of lengthy declarations by government officials in Mexico City and Washington, and their insistence that important battles are being won against drug trafficking, criminal organizations like the Tijuana cartel continue to thrive, ruling over whole sections of the Mexican countryside like sectoral feudal lords. . . . The governor of the state of Nuevo Leon (bordering the United States), Natividad Gonzalez Parás, has declared that: “Unfortunately, the drug problem has escalated significantly in the past six to seven years. It is a national problem affecting most of the country’s states. It is a dispute between cartels or organizations to control locations, cities, and routes.” (Birns and Sánchez 2007)

In another news report:

Once known merely as “mules” for Colombia’s powerful cocaine cartels, today Mexico’s narcotics traffickers are the kingpins of this hemisphere’s drug trade, and the front line of the war on drugs has shifted from Colombia to America’s back door.

In August 2005, the *Christian Science Monitor* reported that according to senior U.S. officials, in the biggest reorganization since the 1980s, Mexican cartels had leveraged the profits from

### KEY TERMS

#### drug cartels

large, highly sophisticated organizations composed of multiple drug trafficking organizations (DTOs) and cells with specific assignments such as drug transportation, security/enforcement, or money laundering

#### drug cells

are similar to a terrorist cells, consisting of three to five members and ensuring operational security; members of adjacent drug cells usually do not know each other or the identity of their leadership



their delivery routes to wrest control from the Colombian producers. As a result, Mexican drug lords are in control of what the U.N. estimates is a \$142 billion a year business in cocaine, heroin, marijuana, methamphetamine, and other illicit drugs.

The new dominance of Mexican cartels has caused a spike in violence along the 2000-mile U.S.–Mexico border where rival cartels are warring against Mexican and U.S. authorities. Drugs are either flown from Colombia to Mexico in small planes, or, in the case of marijuana and methamphetamine, produced locally. Then, they're shipped into the U.S. by boat, private vehicles, or in commercial trucks crossing the border. . . .

The Sept. 26 edition of the *San Antonio Express-News* reported that a new method of intimidation is being utilized by Mexican drug cartels—beheadings. So far this year, at least 26 people have been decapitated in Mexico, with heads stuck on fences, dumped in trash piles, and even tossed onto a nightclub dance floor. In the latter act of violence, which took place in early morning hours of Wednesday, Sept. 6, five heads were scattered on the dance floor of a bar in the state of Michoacan, notorious for drug trafficking. No arrests for the killings have been announced. (Worldpress.org 2006)

And, in another news report:

The dead policeman is found propped against a tree off a dirt road on the outskirts of the city. He is dressed like a cartoon version of a Mexican cowboy wearing a blanket. The murder and symbolic mutilation of *policia* has become almost routine in Caliacán, capital of the Mexican state of Sinaloa: Pablo Aispuro Ramírez is one of 90 cops to be killed here this year. There is a note pinned to the body, a warning to anyone who dares to oppose the powerful drug lord who ordered the execution “I’m a copy-cowboy!” the note reads. “Ahoo-ya! There are going to be more soon.” (Lawson 2008, p. 76)

And finally,

The Tijuana-based Felix drug cartel and the Juarez-based Fuentes cartel began buying legitimate businesses in small towns in Los Angeles County in the early 1990s. . . . They purchased restaurants, used-car lots, auto-body shops and other small businesses. One of their purposes was to use these businesses for money-laundering operations. Once established in their commu-

nity, these cartel-financed business owners ran for city council and other local offices. (Farah 2006, quoting an excerpt from *In Mortal Danger* by Tom Tancredo, a former U.S. Congressman, Colorado)

These news briefs are just a very small sampling of the types of crimes and violence perpetrated by drug dealers. It is clear that production, merchandising, and distribution of illicit drugs have developed into a worldwide operation worth hundreds of billions of dollars (Goldstein 2001); one publication states that the United Nations (UN) estimates that the global world drug trade is worth \$320 billion annually (Stopthedrugwar.org 2005). These enormous profits have attracted organized crime, both in the United States and abroad, and all too frequently even corrupt law enforcement agencies (McShane 1994). For the participants in such operations, drugs can mean incredible wealth and power. For example, dating back to 1992, Pablo Escobar was recognized as a drug kingpin and leader of the cocaine cartel in Colombia, and he was acknowledged as one of the world’s richest men and Colombia’s most powerful man (Wire Services 1992). With his drug-related wealth, Escobar financed a private army to conduct a personal war against the government of Colombia (Associated Press 1992); until his death in 1993, he was a serious threat to his country’s stability.

In December 1999, the notorious Juarez drug cartel was believed to be responsible for burying more than 100 bodies (22 Americans) in a mass grave at a ranch in Mexico. All of the deaths were believed to be drug-related. According to a news story on this gruesome discovery, the alleged perpetrator, Vincente Carrillo Fuentes, is one among dozens of drug lords and lieutenants wanted by U.S. law enforcement agents (Associated Press 1999). A more current drug lord, Zambada, age 62, is “. . . one of Mexico’s most wanted drug lords, who has never been arrested despite a \$5 million reward offered in the United States” (Campbell 2010, p. 1). This same news release indicated that the drug trade would not end until drug cartels are eliminated. Such occurrences, which are often reported by the mass media, indicate the existence of powerful and dangerous drug cartels that are responsible for the availability of illicit drugs around the world.

Drug-related violence takes its toll at all levels, as rival gangs fight to control their “turf” and associated drug operations. Innocent bystanders often become unsuspecting victims of the indiscriminate violence. For example, a Roman Catholic cardinal

was killed on May 24, 1993, when a car he was a passenger in was inadvertently driven into the middle of a drug-related shoot-out between traffickers at the international airport in Guadalajara, Mexico. Five other innocent bystanders were killed in the incident (Associated Press 1993). Finally, it was recently reported that when spotted, the Mexican army engages in shooting at cartel members and likewise armed cartel members shoot back. When this occurs, mostly in border towns and cities in Mexico, innocent bystanders, many of them children, are often caught in the cross-fire and are routinely killed (Del Bosque 2010, 1). On April 13, 2010, one report cites just such an incident. In Acapulco, Mexico, 24 people died, half of whom were innocent bystanders. “[T]he shootout broke out in the middle of the day in the center of the town as it was full of bystanders” (Associated Press 2010, p. 38). In many other incidents, unsuspecting people have been injured or killed by drug users who, while under the influence of drugs, commit violent criminal acts.

### ■ Drugs in the Workplace: A Costly Affliction

“He was a good, solid worker, always on the job—until he suddenly backed his truck over a 4-inch gas line.” If the line had ruptured, there would have been a serious explosion, according to the driver’s employer. The accident raised a red flag: “. . . under the company’s standard policy, the employee was tested for drugs and alcohol. He was positive for both” (Edelson 2000, p. 3). Most adults spend the majority of their hours each day in some type of family environment. For most adults employed full time, the second greatest number of hours is spent in the workplace. Generally, once drug use becomes habitual, it often continues. The National Household Surveys, for example, found evidence of significant drug use among full time workers, with approximately 7% to 9% drinking while working. In the surveys, 65.6% of full-time workers reported alcohol use within the past month. Some 6.4% of full-time workers reported marijuana use within the past month. Part-time employees did not differ much in their use of alcohol and marijuana (SAMHSA 2007b).

#### Worker Substance Abuse in Different Industries

Substance use in the workplace negatively affects U.S. industry through lost productivity, workplace

accidents and injuries, employee absenteeism, low morale, and increased illness. The loss to U.S. companies due to employees’ alcohol and drug use and related problems is estimated at billions of dollars a year. Research shows that the rate of substance use varies by occupation and industry (Larson et al. 2007). Studies also have indicated that employers vary in their treatment of substance use issues and that workplace-based employee assistance programs (EAPs) can be a valuable resource for obtaining help for substance-using workers (Delaney, Grube, and Ames 1998; Reynolds and Lehman 2003).

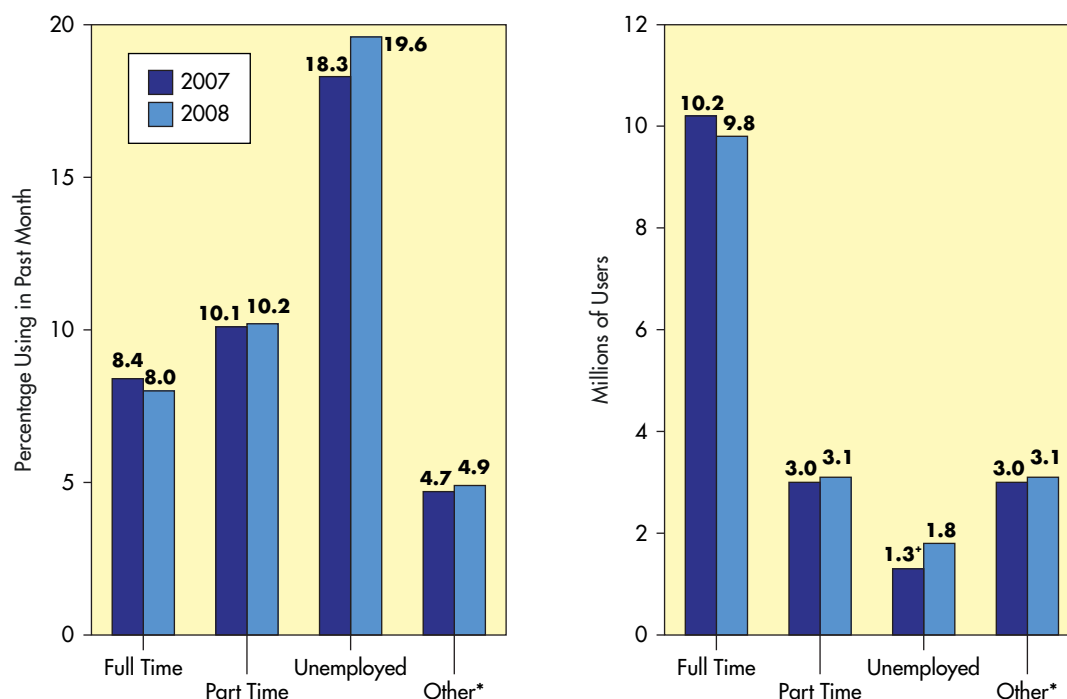
Regarding employment, highlights from SAMHSA (2009) indicate the following:

#### *Illicit Drug Use*

- Current illicit drug use differed by employment status in 2008. Among adults age 18 or older, the rate of illicit drug use was higher for unemployed persons (19.6%) than for those who were employed full time (8%) or part time (10.2%). These rates were all similar to the corresponding rates in 2007; see **Figure 1.9**.
- Although the rate of past-month illicit drug use was higher among unemployed persons compared with those from other employment groups, most drug users in 2008 were employed. Of the estimated 17.8 million current illicit drug users age 18 or older in 2008, 12.9 million (72.7%) were employed either full or part time.
- The number of unemployed illicit drug users increased from 1.3 million in 2007 to 1.8 million in 2008, primarily because of an overall increase in the number of unemployed persons between 2007 and 2008.

#### *Alcohol Use*

- The rate of current alcohol use was 63% for full-time employed adults age 18 or older in 2008, higher than the rate for unemployed adults (55.5%); however, the rate of heavy use for unemployed persons was 12.8%, which was higher than the rate of 8.8% for full-time employed persons. There was no significant difference in binge alcohol use rates between full-time employed adults (30.3%) and unemployed adults (33.4%).
- Among full-time workers ages 18 to 64, the highest rates of past-month heavy alcohol use were found in construction (15.9%); arts, entertainment, and recreation (13.6%); and mining (13.3%). The industry categories with the lowest rates of heavy alcohol use were edu-

**FIGURE 1.9**

Past-month illicit drug use among persons age 18 or older, by employment status: 2007 and 2008.

\*The "Other" employment category includes retired persons, disabled persons, homemakers, students, or other persons not in the labor force.

\*Difference between this estimate and the 2008 estimate is statistically significant at the 0.05 level.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2008 National Survey on Drug Use and Health: National Findings*. Office of Applied Studies, NSDUH Series H-36, DHHS Publication No. SMA 09-4435. Rockville, MD, 2009.

- cational services (4.0%) and health care and social assistance (4.3%).
- Most binge and heavy alcohol users were employed in 2008. Among 55.9 million adult binge drinkers, 44.6 million (79.7%) were employed either full or part time. Among 16.8 million heavy drinkers, 13.1 million (78.0%) were employed.
- Rates of binge and heavy alcohol use did not change significantly between 2007 and 2008 for full-time employed or unemployed adults. However, the number of unemployed binge and heavy drinkers did increase (from 2.3 million to 3.0 million for binge use and from 851,000 to 1.2 million for heavy use).

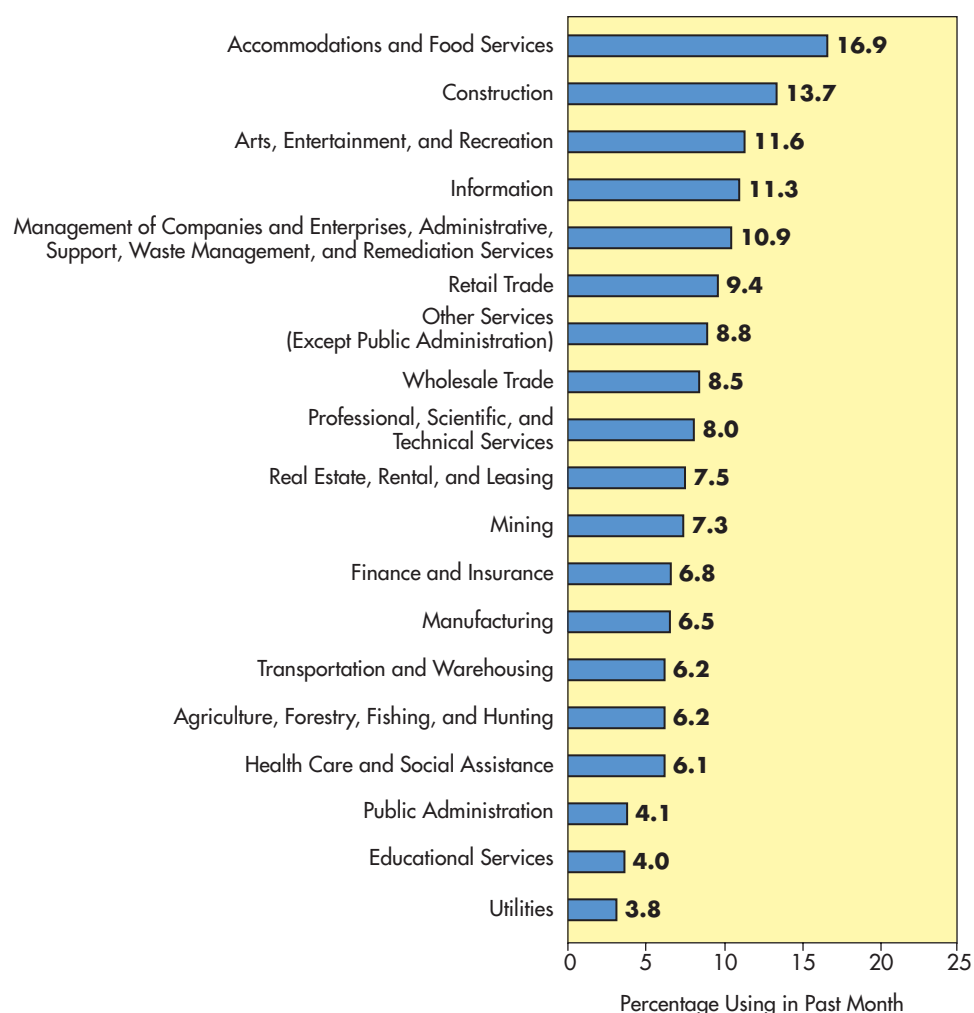
#### Substance Dependence

- Rates of substance dependence or abuse were associated with current employment status in 2008. A higher percentage of unemployed adults age 18 or older were classified with dependence or abuse (19.0%) than were full-time employed adults (10.2%) or part-time employed adults (11.0%).

- Most adults age 18 or older with substance dependence or abuse were employed full time in 2008. Of the 20.3 million adults classified with dependence or abuse, 12.5 million (61.5%) were employed full time.

Highlights from SAMHSA (2007) indicate the following (see **Figure 1.10**):

- Among the 19 major industry categories, the highest rates of past-month illicit drug use among full-time workers ages 18 to 64 were found in accommodations and food services (16.9%) and construction (13.7%).
- The industry categories with the lowest rates of past-month illicit drug use were utilities (3.8%), educational services (4%), and public administration (4.1%).
- From 2002 to 2004, over half of all past-month illicit drug users (57.5%) and past-month heavy alcohol users (67.3%) ages 18 to 64 were employed full time.
- Approximately 70% of large companies test for drug use. Approximately 50% of medium companies and 22% of small companies per-

**FIGURE 1.10**

Past-month illicit drug use among full-time workers ages 18 to 64, by industry categories: 2002–2004 combined.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA). *The National Survey on Drug Use and Health (NSDUH) Report: Worker Substance Use, by Industry Category*. Rockville, MD: Office of Applied Studies, 23 August 2007.

form such testing. Of those companies that drug test, more than 90% use urine analysis, less than 20% use blood analysis, and less than 6% use hair analysis.

- Most companies that administer drug tests test for marijuana, cocaine, opiates, amphetamines, and PCP.
- Age is the most significant predictor of marijuana and cocaine use. Younger employees (18 to 24 years old) are more likely to report drug use than older employees are (25 years or older).
- In general, unmarried workers report roughly twice as much illicit drug and heavy alcohol use as married workers. Among food preparation workers, transportation drivers, and me-

chanics, and in industries such as construction and machinery (not electrical), the discrepancy between married and unmarried workers is especially notable.

- Workers who report having three or more jobs in the previous 5 years are twice as likely to be current or past-year illicit drug users as those who held two or fewer jobs over the same period.
- Workers in occupations that affect public safety, including truck drivers, firefighters, and police officers, report the highest rate of participation in drug testing.
- “Among full-time workers, heavy drinkers and illicit drug users are more likely than those who do not drink heavily or use illicit drugs to



have skipped work in the past month or have worked for three or more employers in the past year” (Robert Wood Johnson Foundation 2001, p. 45).

- Most youths do not cease drug use when they begin working.

In summarizing this research on employees who abuse alcohol or other drugs, five major findings emerge: (1) these workers are 3 times more likely than the average employee to be late to work; (2) they are 3 times more likely to receive sickness benefits; (3) they are 16 times more likely to be absent from work; (4) they are 5 times more likely to be involved in on-the-job accidents (note that many of these hurt others, not themselves); and (5) they are 5 times more likely to file compensation claims.

### Employee Assistance Programs

Many industries have responded to drugs in the workplace by creating **drug testing** and **employee assistance programs (EAPs)**. Drug testing generally involves urine screening and/or hair follicle analysis that are undertaken to identify which employees are using drugs and which employees may have current or potential drug problems. EAPs are employer-financed programs administered by a company or through an outside contractor. More than 400,000 EAPs have been established in the United States. The most recent findings regarding workplace substance use policies and programs among full-time workers are (SAMHSA 2007b):

- Of employees ages 18 to 64 who had used an illicit drug in the past month, 32.1% worked for an employer who offered educational information about alcohol and drug use, 71% were aware of a written policy about drug and alcohol use in the workplace, and 45.4% worked for an employer who maintained an EAP or other type of counseling program for employees who have an alcohol- or drug-related problem.
- Among full-time workers who used alcohol heavily in the past month, 37.2% worked for an employer who provided educational infor-

mation about drug and alcohol use, 73.7% were aware of written policies about drug and alcohol use, and 51.1% had access to an EAP at their workplace.

These programs are designed to aid in identifying and resolving productivity problems associated with employees' emotional or physical concerns, such as those related to health, marital, family, financial, and substance abuse. EAPs have also expanded their focus to combat employee abuse of OTC and prescription drugs in addition to illicit psychoactive substances. Overall, the programs attempt to formally reduce problems associated with impaired job performance. Regarding drug testing today, the Society for Human Resource Management (SHRM) (U.S. Department of Labor 2009) conducted an online survey taken by 454 randomly selected human resource managers from diverse organizations. The following drug testing practices were in effect:

- Eighty-four percent of employers required new hires to pass drug screenings.
- Seventy-four percent used drug screening when reasonable suspicion of drug use was believed.
- Fifty-eight percent of organizations used post-accident drug screening.
- Thirty-nine percent used random drug screening.
- Fourteen percent used scheduled drug testing.

Further, 70% of those responding to this survey indicated that their organization has a written policy that addresses drug testing. From these survey results, we can see that the future for employee drug testing has a very bright future. In all probability, if you have not already experienced such a screening, you will experience these screenings throughout your working life.

### Venturing to a Higher Form of Consciousness: The Holistic Self-Awareness Approach to Drug Use

Throughout this book, we continually approach drug use from a multidisciplinary perspective, blending pharmacological, psychological, and sociological perspectives and interpretations of the most commonly used licit and illicit drugs. Most chapters discuss the major drugs and their common usage and abuse patterns and emphasize this multi-

#### KEY TERMS

##### drug testing

urine, blood screening, or hair analysis used to identify those who may be using drugs

##### employee assistance programs (EAPs)

drug assistance programs for drug-dependent employees

level approach in an effort to better comprehend how drugs affect both the mind and the body.

As you proceed through this book, it will become apparent that whenever drug use leads to abuse, it rarely results from a single, isolated cause. Instead, it is often caused or preceded by multiple factors, which may include combinations of the following:

- Hereditary (genetic) factors
- Psychological conditioning
- Peer group pressures
- Inability to cope with stress and anxiety of daily living
- Quality of role models
- Degree of attachment to a family structure
- Level of security with gender identity and sexual orientation
- Personality traits
- Perceived ethnic and racial compatibility with larger society and socioeconomic status (social class)

Gaining knowledge of the reasons for drug use, the effects of drugs, and their addictive potential is the purpose of this text. As authors, we strongly endorse and advocate a **holistic self-awareness approach** that emphasizes a healthy balance among mind, body, and spirit. Health and wellness can be achieved only when these three domains of existence are free from any unnecessary use of psychoactive substances. The holistic philosophy is based on the idea that the mind has a powerful influence on maintaining health. All three—mind, body, and spirit—work as a unified whole to promote health and wellness. Similarly, we are in agreement with holistic health advocates who emphasize the following viewpoint:

Holistic Health is based on the law of nature that a whole is made up of interdependent parts. The earth is made up of systems, such as air, land, water, plants and animals. If life is to be sustained, they cannot be separated, for what is happening to one is also felt by all the other systems. In the same way, an individual is a whole made up of interdependent parts, which are the physical, mental, emotional, and spiritual. While one part is not working at its best, it

impacts all the other parts of that person. . . . A common explanation is to view wellness as a continuum along a line. The line represents all possible degrees of health. The far left end of the line represents premature death. On the far right end is the highest possible level of wellness or maximum well-being. The center point of the line represents a lack of apparent disease. This places all levels of illness on the left half of the wellness continuum. The right half shows that even when no illness seems to be present, there is still a lot of room for improvement. . . . Holistic Health is an ongoing process. As a lifestyle, it includes a personal commitment to be moving toward the right end of the wellness continuum. No matter what their current status of health, people can improve their level of well-being. Even when there are temporary setbacks, movement is always headed toward wellness. (Walter 1999, pp. 1–2)<sup>1</sup>

The passage above embodies the essence of achieving a holistic self-awareness perspective by presenting a unified blend of different perspectives that can add to our awareness of what is at stake when the goal of drug use is for nonmedical purposes, such as using drugs for the sole purpose of achieving a “high.” Knowing about the holistic self-awareness perspective should expand people’s often limited and narrow values and attitudes about drug use so that the information about and the use of drugs are viewed and understood from pharmacological, psychological, and sociological perspectives.

As mentioned earlier, understanding drug use is important not only for comprehending our own health, but also for understanding the following:

- Why and how others can become attracted to drugs
- How to detect drug use and abuse in others
- What to do (remedies and solutions) when family members and/or friends abuse drugs
- How to help and advise drug abusers about the pitfalls of substance use
- What the best available educational, preventive, and treatment options are for victims of drug abuse
- What danger signals can arise when others you care about exceed normal and/or necessary drug usage

## KEY TERMS

### **holistic self-awareness approach**

emphasizes that nonmedical and often recreational drug use interferes with the healthy balance among the mind, the body, and the spirit

<sup>1</sup>From Walter, Susan. *The Illustrated Encyclopedia of Body-Mind Disciplines*. New York: Rosen Publishing Group, 1999. Used with permission.

Awareness and knowledge about drug use and/or abuse coupled with holistic health awareness can result in self-awareness, and self-awareness leads to self-understanding and self-assurance. Maintaining at least some belief in holistic self-awareness, either as a humanistic philosophy or adding this philosophy into a religious orientation you may already have, should increase an understanding of your own drug use practices as well as those of family members and close friends. By including at least some aspect of holistic self-awareness into the use of psychoactive substances, you will be better equipped to understand not only yourself, but also others who may be in need of advice and role modeling.

### Discussion Questions

1. Give an example of a drug-using friend and describe how he or she may be affected by biological, genetic, pharmacological, cultural, social, and contextual factors.
2. Discuss and debate whether the often considered “benign” drug known as marijuana is or is not addictive. In your discussion/debate, consider the finding by the Substance Abuse and Mental Health Services Administration (SAMHSA) that in 2008 for persons age 12 or older, 41% (102.4 million) of illicit drug users used marijuana during their lifetime, and past-month users of this drug accounted for 6.1% (14.2 million) of all illicit drug users. Do you think this often-considered “benign” drug is harmless to society?
3. What is the future of prescription drug abuse? For example, how much will it increase in the years to come? Do you think prescription drugs will ever become *the* drug of choice? Will prescription drug abuse ever surpass the use of marijuana? Should parents be prosecuted for not guarding their legally prescribed drugs, if their children are caught using their parents’ prescription pills?
4. In reviewing the ancient historical uses of drugs, how do you think drug use today is different from back then? Explain your answer.
5. Why do Americans use so many legal drugs (for example, alcohol, tobacco, and OTC drugs)? What aspects of our society could possibly cause such extensive drug use?
6. Table 1.3 shows that the amount of drug use remained stable (showing little change in usage rates) from 2003 to 2008. Cite two reasons why you think this trend has occurred despite the media campaigns against drug use promoted by private organizations, state and nationally sponsored media campaigns, and all the efforts of law enforcement organizations.
7. Because many casual and experimental drug users do not gravitate toward excessive drug use, should these two groups be left alone or perhaps be given legal warnings or fines? How should recreational drug users be treated by society?
8. Do the mass media promote drug use, or do they merely reflect our extensive use of drugs? Provide some evidence for your position.
9. At exactly what point do you think drug use leads to abuse? When do you think drug use does not lead to abuse?
10. What do you believe is the relationship between drug use and crime? Does drug use cause crime or is crime simply a manifestation of personality?
11. What principal factors are involved in the relationship between drugs and crime?
12. Should all employees be randomly tested for drug use? If not, which types of employees or occupations should randomly drug test?
13. List and rank order at least three things you found very interesting regarding drug use in this chapter.
14. Should all students and faculty be randomly drug tested at their schools and universities? Why or why not?
15. Do you think the approach advocated by the authors regarding a holistic self-awareness approach toward drug use is a viable one that can be used successfully for stopping drug use? Why or why not? What, if any, additional improvements can be made to strengthen this approach?

### Summary

**1** Biological issues, genetic issues, pharmacological issues, and cultural, social, and contextual issues are the four principal factors responsible for

determining how a drug user experiences drug use. Biological, genetic, and pharmacological factors take into account how a particular drug affects the body. Cultural factors examine how society's views, determined by custom and tradition, affect the use of a particular drug. Social factors include the specific reasons why a drug is taken and how drug use develops from social factors, such as family upbringing, peer group alliances, subcultures, and communities. Contextual factors account for how drug use behavior develops from the physical surroundings in which the drug is taken.

**2** Initial understanding of drug use includes the following key terms: drug, gateway drugs, medicines and prescription medicines, over-the-counter (OTC), drug misuse, drug abuse, and drug addiction.

**3** Mentions of drug use date back to biblical times and ancient literature that goes back to 2240 BC. Under the influence of drugs, many people experienced feelings ranging from extreme ecstasy to sheer terror. At times, drugs were used to induce sleep and provide freedom from care.

**4** Drug users are found in all occupations and professions, at all income and social class levels, and in all age groups. No one is immune to drug use. Thus, drug use is an equal-opportunity affliction.

**5** According to sociologist Erich Goode (1999), drugs are used for four reasons: (a) legal instrumental use, (b) legal recreational use, (c) illegal instrumental use, and (d) illegal recreational use.

**6** The most commonly used licit and illicit lifetime drug use (rated from highest to lowest in the frequency of use) are alcohol, cigarettes, marijuana/hashish, nonmedical use of any psychotherapeutic, smokeless tobacco, cocaine, hallucinogens, pain relievers, inhalants, tranquilizers, stimulants, sedatives, and heroin.

**7** The three types of drug users are experimenters, compulsive users, and floaters. Experimenters try drugs because of curiosity and peer pressure. Compulsive users use drugs on a full-time basis and seriously desire to escape from or alter reality. Floaters or chippers vacillate between experimental drug use and chronic drug use.

**8** The mass media tend to promote drug use through advertising. The constant barrage of OTC drug commercials relays the message that, if you are experiencing some symptom, taking drugs is an acceptable option.

**9** Drug use leads to abuse when the following occurs: (a) excessive use, (b) constant concern and preoccupation about the availability and supply of the drug, (c) refusal to admit excessive use, and (d) reliance on the drug.

**10** The stages of drug dependence are *relief* from using the drug, *increased use* of the drug, *preoccupation* with the supply of the drug, *dependency* or addiction to the drug, and experiencing (either or both) physical and/or psychological *withdrawal* effects from not using the drug.

**11** The following are the major findings of the connection between drugs and crime: (a) drug users are more likely to commit crimes, (b) arrestees are often under the influence of drugs while committing their crimes, and (c) drugs and violence often go hand in hand, especially when alcohol, cocaine, crack, methamphetamine, or other stimulant-types of drugs are used.

**12** Employee assistance programs (EAPs) are employer-financed programs administered by a company or through an outside contractor. They are designed to aid in identifying and resolving productivity problems associated with employees' emotional or physical concerns, such as those related to health, marriage, family, finances, and substance abuse. Recently, EAPs have expanded their focus to combat employee abuse of OTC and prescription drugs as well as illicit psychoactive substances.

**13** The holistic self-awareness philosophy is based on the idea that the mind, body, and spirit have a powerful influence on maintaining health. These three domains—mind, body, and spirit—work best when unobstructed by unnecessary drug use, and when all three domains work in a unified manner to promote health and wellness.

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