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PREFACE

Few other university courses impact upon the average college student in a more immediate and personal way than does a course on drugs and alcohol. Some students may be anxious about certain aspects of drug-taking behavior in general, not only for themselves but also for society as a whole. Others are aware of a need for basic information and a sense of perspective on the often-confusing drug and alcohol research literature. There is an almost-daily barrage of media information that bears upon issues concerning drug abuse and misuse. It is not always easy to digest so much information on one's own. Still others may be taking a course on drugs and alcohol with the attitude that it will be an easy class and that they already know all this is to know about the subject. They will be surprised.

This Instructor's Manual and Test Bank provides you with support material, classroom enrichment information, and more than 3,000 test questions for the sixth edition of *DRUGS, BEHAVIOR, AND MODERN SOCIETY*. The goal is to facilitate your presentation of this course and to enhance your use and your students' use of the main textbook. The specific contents are as follows:

**Discussion questions and assignments**

A number of issue-oriented topics are presented for classroom discussion and projects. Some of these topics can be assigned for responses prepared outside of class as exercises in critical thinking. In selected chapters, important web sites are listed for up-to-date statistical information related to drug use in the United States. Prevalence rates with respect to drug use are in constant flux, so you might want to consult these web sites on a regular basis for the latest developments.

**Lecture Outlines**

The sixth edition has an expanded Lecture Outline of individual chapters that can facilitate the preparation of your class lectures.

**Video suggestions**

A listing of commercially available videos in VHS or DVD formats, and in some cases English or Spanish.

**Test Bank questions**

Testing materials are provided in three formats. More than 130 essay questions address issues that require some integration of information and ideas, while approximately 1,000 true/false questions and more than 2,300 multiple-choice questions assess the factual and conceptual knowledge of the student with respect to his or her reading of the text.

For all questions, page references indicate the location of the information bearing on the answer. For each of the multiple-choice questions, a level of difficulty is indicated by 1 (easy), 2 (medium), or 3 (difficult). All essay, true/false, and multiple-choice questions are available to you as a computer software package, in your choice of Windows or Mac format, upon adoption of the text.

Please note that there are additional practice test questions available to students through MyPsychKit, tied to the sixth edition of *Drugs, Behavior, and Modern Society*. The content of these practice questions will overlap with those in the Test Bank since they cover the same material but they will not be duplicates.
We hope that you will find the materials in this Instructor’s Manual/Test Bank helpful in your course. We would appreciate any feedback or suggestions you may wish to provide. You can get in touch with us through the addresses listed below. Thanks.

Our great appreciation is extended to Vita Greco, Wendy Leonard, and Deborah Alper for the help in preparing questions for earlier editions.

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DISCUSSION QUESTIONS AND ASSIGNMENTS

1. Assign students to view a broadcast of a sports event (appropriate for the season) on commercial TV. They should pay particular attention to any commercial related to the sale of beer. Which brands were advertised and how many minutes during the entire game was devoted to such commercials? What message about the consumption of beer was conveyed? What associations were made with beer-drinking in the commercial? A discussion can be held on the students' reaction to the segment. How would a younger person, say 14 to 16 years old, react to it? (It may be easier to have the segments recorded and played on a VHS or DVD recorder in class.)

2. Assign students to keep a diary (with no personal identification) of their own consumption patterns of licit psychoactive drugs over a 14-day period (beginning on a Monday), specifically their intake of caffeinated beverages, alcohol, and tobacco products. Were there any patterns of weekday versus weekend consumption, daytime versus nighttime, work time versus relaxation time? On an anonymous basis, have them record the circumstances under which these drugs were consumed. Were there any relationships between the consumption of these drugs and levels of fatigue, opportunities for socializing, or perceived stress? Have the respondents specify their age range (under 18, 18-21, over 21) and examine this information in light of reports of underage alcohol and tobacco purchases/intake.

3. Have students discuss or write their remembrances of their high-school days with regard to drug-taking behavior. Was it cool or not cool to do drugs? Which drugs were cool and which ones were not? Was there a certain type of person who was known (or expected) to do drugs? Did the perception of drug-taking behavior change as students progressed from the sixth grade to the ninth grade and finally to their senior year? Has the pattern of drug-taking behavior changed since they have been in college for their younger siblings or acquaintances?

4. Assign students to find an article in a newspaper or magazine relating to some form of licit or illicit drug-taking behavior. They can discuss it in class, write their reactions to the article, or make a presentation, centered on the impact the article might have in their lives. Some examples include reports of new recreational drugs that are ordinarily used on a medicinal basis (Ritalin, Adderall, OxyContin), steroids and other performance-enhancing drugs in sports, economic issues related to prescription drugs among the elderly.

5. Organize a brief debate on the pro and con arguments for the legalization of psychoactive drugs. Assign two groups of people to organize among themselves their ideas supporting each side. They may wish to use some of the positions expressed in the Point/Counterpoint Debate "Should we legalize drugs?" at the end of Part I in the text as starting points for a debate. Articles and accompanying essays in Levinthal’s Point/Counterpoint: Opposing Perspectives on Drug Policy (Allyn and Bacon, 2003) are useful additional sources.

NOTE: Continual updating of statistical information related to prevalence rates in drug use in the United States can be accomplished by accessing the following Web sites:

The University of Michigan Monitoring the Future Study
http://monitoringthefuture.org
Results of an annual survey of adolescent drug use appear in mid-December of each year.

The National Survey on Drug Use and Health (NSDUH)
http://samhsa.gov
LECTURE OUTLINE FOR CHAPTER ONE

A. Social messages and social realities concerning drug use

1. **We live in a society that sends mixed messages with respect to drug use.** Warning labels on cigarette packs and public service announcements caution against serious health hazards of tobacco use, while cigarette smoking remains glamorized in movies. Public officials admit to drug use (primarily marijuana smoking) earlier in their lives; yet marijuana remains classified as an illegal drug in the same category as heroin. Public anti-drug campaigns co-exist with pro-drug-use messages on Internet Web sites.

2. Two themes predominate in the text. The first theme concerns the immense diversity of drugs in our society, both legal and illegal. As many problems arise from legal drugs as from illegal ones. The second theme focuses on acknowledging that drug abuse and its associated problems extend to men and women of all ages, all ethnic and racial groups, geographic regions, and socioeconomic levels.

B. Two ways of looking at drugs and behavior

1. We can focus on specific substances that alter our feelings, our thoughts, our perception of the world, and our behavior as well as the circumstances in our lives that lead to drug-taking behavior.

2. **Psychoactive drugs are those drugs that influence the functioning of the brain and hence our behavior.** Some psychoactive drugs are licit (legal) and others are illicit (illegal). In the case of licit drugs, there is legal availability to the general public in the United States, though in the cases of alcohol and nicotine, access carries a minimum-age requirement.

3. Drug dependence can be examined on three levels. On a behavioral level, dependence is characterized by intense craving and, in most cases, a need for increasingly greater quantities in order to get the same desired effect. On a physiological level, dependence corresponds to the appearance of long-lasting changes in the brain. On a social level, the pattern of dependence is influenced by the social context in which drug-taking behavior occurs.

4. A drug is typically defined as a chemical substance that, when taken into the body, alters the structure or functioning of the body in some way. Nutrients considered to be related to normal functioning are excluded from this definition.

5. Drugs can also be differentiated from non-drugs in terms of whether the substance has been intended to be used primarily as a way of inducing a bodily or psychological change.

6. Drug use can be considered as either instrumental or recreational, depending on the intention of the user. **Instrumental use means that a person is taking a drug with a specific socially-approved goal in mind. Recreational use means that a person is taking the drug for the purposes of acquiring the effect of the drug itself.**

7. **Drug abuse refers to drug-taking behavior that produces some form of physical, mental, or social impairment.** Drug misuse refers to cases in which a prescription or nonprescription drug is used in an inappropriate manner. Recreational use of prescription pain medications such as Vicodin, OxyContin, Percodan, Demerol, and Darvon is an example of drug misuse that can lead to drug abuse.

8. We need to understand the historical foundations of drug use, the ways in which our society has responded to problems associated with drug use and how our attitudes have changed over time.
C. Drugs in early times

1. Systematic drug use probably began thousands of years ago through shamanism, a practice among primitive societies in which an individual (shaman) acts as a healer through a combination of induced trances and plant-based medicines.

2. Examples of early medications are recorded in an Egyptian scroll called the Ebers Papyrus, dating back to 1500 B.C. More than 800 prescriptions are listed. Some contain ingredients with true medicinal value, such as castor oil and opium. However, it is difficult to evaluate the usefulness of most of these early medications because of the placebo effect. The placebo effect results in a change in a patient's condition on the basis of the patient's belief that he or she would be changed in some way, but not on the basis of the physical effects of the medication received.

D. Drugs in the 19th century and 20th century

1. During the 19th century, great strides were made in the field of medicine, such as the emerging development of vaccines and anesthetic drugs. Nonetheless, widespread and uncontrolled access to psychoactive drugs such as opium and cocaine through patent medicines during this period created significant social problems. The adverse societal and personal effects of these drugs eventually became increasingly evident in the early 20th century.

2. Beginning in the early 19th century, increasing opposition to alcohol use in the United States (the temperance movement) resulted in the Prohibition era (1920-1933).

3. Following World War II, antibiotic medications such as penicillin and streptomycin revolutionized efforts to control bacteria-borne infectious diseases. By the mid-1950s, psychiatric medications for treating schizophrenia such as chlorpromazine (Thorazine) emerged on the mental-health scene.

4. Beginning in the late 1960s, the recreational use and widespread popularity of marijuana, hallucinogens such as LSD, and other psychoactive substances among young people brought the concerns of drug use into segments of American society that had previously ignored them.

5. In the 1980s, increased use of cocaine and later crack cocaine emerged as a major social concern. By the 1990s, cocaine and crack cocaine prevalence rates subsided, but heroin abuse reemerged, along with new “designer drugs” (structural analogs) created by altering the chemical structure of illicit drugs while mimicking their psychoactive effects, and club drugs such as Ecstasy, GHB, ketamine, Rohypnol, methamphetamine, and LSD. By the late 1990s, a growing array of herbal and non-herbal dietary supplements purported to have psychoactive properties became available to the general public.

6. In the new millennium, there are new challenges and social concerns. First, there is increased attention to significant problems created by the abuse of alcohol, steroids, inhalants, nicotine as well as abuse of better-known illicit drugs such as marijuana, heroin, cocaine, and hallucinogens. Second, for the first time, there is a new generation of young people contending with drug-taking behavior who are children of an earlier generation that had recreational drug experiences of their own at the same age. Interestingly, a recent study has found no relationship between prior marijuana use among parents and marijuana use by their children. Indeed, a far stronger association exists between adolescent marijuana use and the adolescent’s own personal attitude toward the lack of harm involved.
E. Patterns of drug use in the United States

1. Confidential questionnaires and surveys are the only practical means for gaining information about the prevalence rates and patterns of drug use. For young people in the United States from Grade 8 through Grade 12, as well as college students and young adults, the most prominent survey is the Monitoring the Future study (see Web site address on page 1), conducted by the University of Michigan on an annual basis since 1975. The National Survey on Drug Use and Health (formerly known as the National Household Survey) obtains drug-prevalence information for populations within the United States across the life span (see Web site address on page 1).

2. In 2008, 37 percent of high school seniors reported use of any illicit drug over the previous year, and 32 percent reported marijuana use during this period. The 2008 figures are substantially lower than those reported during the illicit-drug prevalence peak in 1979 (54 percent and 51 percent, respectively). One in twenty-five seniors in 2008 had used cocaine, one in twenty-five had used inhalants on a recreational basis, and one in fifty had used LSD in the past year. Additionally, one in twenty-five had used Ecstasy, and one in forty had used LSD in the past year.

3. College students report slightly lower annual prevalence rates in the use of illicit drugs in general, compared to high school seniors, (35 percent for college students versus 36 percent for high school seniors) with the prominent exception of alcohol.

4. In 2008, almost half of high school seniors (43 percent) reported alcohol use in the last month, and 28 percent reported an instance of binge drinking. These figures are down substantially from comparable surveys in 1980, when 72 percent reported alcohol consumption and 41 percent reported binge drinking.

5. About 11 percent of high school seniors in 2008 smoked cigarettes on a regular basis, while 5 percent of seniors and 2 percent of tenth graders smoked at least a half a pack per day.

6. In general, fewer college students smoke cigarettes than high school seniors, a difference attributed more to the differences in the two populations than any developmental change in smoking behavior.

7. A troubling trend during the 1990s was the decline in the percentages of high school students, college students, and young adults who regarded regular drug use as potentially dangerous. In general, over the years, prevalence trends with regard to drug use form an almost perfect mirror-image to the percentages of young people who perceive drug use as presenting great risk of harm (see Figure 1.3).

8. In 2007, about 11 percent of the U.S. population over the age of 26 (more than 20 million people) reported using an illicit drug over the past year. About 7 percent (nearly 13 million people) reported using marijuana or hashish over the past year. About 5 percent reported engaged in the nonmedical (recreational) use of a prescription-type pain reliever, tranquilizer, stimulant, or sedative.

F. Factors influencing drug-taking behavior

1. Vulnerability toward drug-taking behavior is shaped by two separate groups of factors in a person’s life. **Risk factors are those circumstances that make it more likely that a person might be involved in drugs.** Protective factors are those circumstances that make it less likely that a person might be involved in drugs.

2. The most influential risk factor for drug-taking behavior is peer influence, as measured by the reported number of friends who use drugs. As many as 40 protective factors (referred to collectively as developmental assets) have been recently identified by the Search Institute in Minneapolis. These protective factors are influential in increasing the resistance toward several high-risk behaviors, besides drug-taking behavior.
G. Looking to the future and learning from the past

1. A general pattern of drug-taking behavior over time is that specific drugs will come into and fall out of favor. “There is always something old and something new in the U.S. drug scene.” As cocaine use declined in popularity during the 1990s, for example, heroin reemerged as a major drug of abuse. In recent years, prescription painkillers have become increasingly popular drugs of abuse.

2. A serious concern has been the popularity of so-called club drugs, typically ingested in dance clubs and bars. Examples include MDMA (Ecstasy), GHB, Rohypnol, ketamine, methamphetamine (speed, meth, crystal meth), and LSD. Toxicity increases substantially when these drugs are combined with alcohol.

3. While not as problematic as club drugs, the increasing prominence of herbal and non-herbal based products, packaged and marketed as dietary supplements, have raised significant concerns. They are not officially classified as drugs, and governmental regulations are substantially weaker than with regard to prescription or nonprescription (OTC) drugs. In some cases, dietary supplements are used recreationally and adverse reactions can occur. In the instance of ephedra, for example, serious medical risks are involved. In 2004, all sales of ephedra in the United States were banned. As of 2010, dietary supplements must be determined to be free of contaminants, and the labels must accurately reflect the contents.

4. Although the prevalence rates among young people for several categories of illicit drugs have shown declines since their most recent peaks in the late 1990s, the recreational use of prescription and over-the-counter (OTC) drugs has remained at relatively high levels. In 2008, 10 percent of high school seniors and 7 percent of tenth graders reported using prescription pain medication hydrocodone (brand name: Vicodin) for nonmedical reasons in the past year, and approximately 5 percent and 4 percent respectively, reported using the sustained-release form of oxycodone (brand name: OxyContin). The use of barbiturates among high school seniors rose gradually from 3 percent in 1993 to 6 percent in 2008. In addition, approximately 6 percent of high school seniors reported in 2008 taking OTC cough-and-cold medications containing dextromethorphan. In high doses, dextromethorphan can increase the risk of brain damage and seizure. It is a matter of great concern in today’s drug scene (see Portrait).
VIDEO SUGGESTIONS

“Addiction: The HBO Series” (2006), 18-86 min. each, 14-part series, Films for the Humanities and Sciences, P.O. Box 2053, Princeton NJ 08543-2053. Available on VHS or DVD.

   An outstanding far-reaching examination of the process of addiction, the understanding we have about its neurochemical basis, and the approaches toward addiction treatment and rehabilitation.


   This series offers advice by young adults who have wrestled with drug dependence and succeeded. Straight-talking testimonials make a strong anti-drug abuse statement.

"Altered States: A History of Drug Use in America" (1993), 58 min., Films for the Humanities and Sciences, P.O. Box 2053, Princeton NJ 08543-2053. Available on VHS or DVD.

   A look at the history of drug abuse and misuse in America, from the days of the earliest European settlers, through Prohibition, and up to today. This video traces the cultural, social, and political movements that impacted, or were impacted upon, by the use of drugs.


   This highly acclaimed PBS series spotlights the intimate experience of addiction as shared by the addicts themselves, their parents, children, and those helping them toward recovery. Part 1 examines the stories of nine men and women, all recovering from drug and/or alcohol abuse.

“The Addictive Personality” (2007). 25 min., Films for the Humanities and Sciences, P.O. Box 2053, Princeton NJ 08543-2053. Available on VHS or DVD.

   An insightful look at the biological/genetic factors in addiction.
ESSAY QUESTIONS FOR CHAPTER 1

1.1 Discuss the problems associated with definitions of drugs. Offer a reasonable definition, then give an example of a substance that might fall into a "gray area" within that definition. How might that substance qualify as a drug and how it might not?

1.2 "The 19th-century was a drug addict's paradise," a historian has said. Briefly discuss the status of psychoactive drugs in that period in light of this statement.

1.3 Given the prevalence rates from 1975 to the present, discuss the general trends in drug use among high school seniors in the United States with respect to marijuana, alcohol, and nicotine.

1.4 Given the research on risk factors and protective factors with regard to one’s involvement with drugs, describe a hypothetical young person who is highly vulnerable to drug-taking behavior and another hypothetical young person who is highly invulnerable to drug-taking behavior.

1.5 Select two of the six “club drugs” listed in the Drugs...in Focus feature on page 23 of Chapter 1 and discuss their behavioral effects and toxicities.

1.6 Distinguish the regulations regarding safety and effectiveness between prescription drugs and over-the-counter drugs on the one hand and dietary supplements on the other.

1.7 "What's new is sometimes really old." Discuss this statement in light of changing patterns of drug-taking behavior over the last 50 years, using specific examples from the textbook.

1.8 What is the particular dilemma we face in regulating herbal supplements, from a legal perspective, following passage of the Dietary Supplement Health and Education Act of 1994?

1.9 Discuss ways to prevent abuse of prescription and over-the-counter drug abuse.

Agree/Disagree: Should a prescription be required for current over-the-counter cold remedies?
### TRUE/FALSE QUESTIONS FOR CHAPTER 1

1.1 Since 1970, the U.S. government’s position on marijuana is that it has high potential for abuse and no accepted medical use.  
**Ans:** T

1.2 The potential for drug abuse presents a challenge for the elderly as well as adolescents and individuals under the age of 35.  
**Ans:** T

1.3 Drugs that are illegal are referred to as licit drugs.  
**Ans:** F

1.4 Ecstasy has been a licit drug since 2001.  
**Ans:** F

1.5 Alcohol has been an illicit drug since 1965.  
**Ans:** F

1.6 Psychoactive drugs do not modify brain functioning once drug-taking behavior stops.  
**Ans:** F

1.7 A flavonoid called naringenin, found in grapefruit, has a specific inhibitory effect on the secretion of hepatitis C virus from infected liver cells.  
**Ans:** T

1.8 The active ingredient in turmeric, called curcumin has a specific inhibitory effect on the secretion of hepatitis C virus from infected liver cells.  
**Ans:** F

1.9 The legality of psychoactive drugs may depend on cultural and historical circumstances.  
**Ans:** T

1.10 Some substances that can be harmful to the user are legal.  
**Ans:** T

1.11 Only legal drugs have instrumental uses.  
**Ans:** F

1.12 For a drug to have a recreational use, the user must take the drug for the purposes of acquiring the effect of the drug itself.  
**Ans:** T

1.13 Drug misuse typically applies to the inappropriate use of prescription or nonprescription drugs.  
**Ans:** T
1.14 The elderly are highly vulnerable to drug misuse.
Ans: T

1.15 Drug abuse can involve either licit or illicit substances.
Ans: T

1.16 Instrumental use is the primary motivation for drug abuse.
Ans: F

1.17 Willow bark is the source of present-day marijuana.
Ans: F

1.18 The senna plant has been successfully used for the treatment of constipation.
Ans: T

1.19 Shaman is a name for a healer in a primitive society.
Ans: T

1.20 The Egyptian scroll, referred to as the Ebers Papyrus, was eventually proved to be a hoax.
Ans: F

1.21 Patient records indicate that the Ebers Papyrus had a surprisingly high success rate for healing patients.
Ans: F

1.22 Patent medicines refer to products that have been patented and distributed by pharmaceutical companies, following a lengthy process of FDA approval.
Ans: F

1.23 Laudanum is a liquid form of nicotine, used in the 19th century.
Ans: F

1.24 In the 19th century, it was common for infants and children in the United States and England to take opium.
Ans: T

1.25 The degree of social acceptance of opium in the 19th century was dependent on the manner in which opium was ingested.
Ans: T

1.26 Until 1903, the formula for Coca-Cola contained opium.
Ans: F

1.27 Freud believed that an effective treatment for morphine addiction was the use of cocaine.
Ans: T
1.28  The era of Prohibition in the United States began when the 18th Amendment to the U.S. Constitution took effect in 1920.
Ans:T

1.29  Chlorpromazine (brand name: Thorazine) is considered to be one of the original drugs for the treatment of schizophrenia.
Ans:T

1.30  Neuroscience, a new branch of biological science, came into being in the early 1940s during World War II.
Ans:F

1.31  Crack, a form of smokable cocaine, appeared on the scene in the mid-1980s.
Ans:T

1.32  The University of Michigan drug-use surveys make use of the responses of all high-school seniors in the United States.
Ans:F

1.33  One of the best known surveys that examines drug taking patterns of young people annually since 1975, has been conducted by the University of Minnesota.
Ans:F

1.34  The University of Michigan surveys have revealed that current levels of drug use among high school seniors are substantially higher than drug use levels in the 1970s.
Ans:F

1.35  The prevalence rate in 2005 among high-school seniors with respect to marijuana and LSD is considerably lower than the prevalence rate during the mid-1970s.
Ans:T

1.36  Research has shown that during difficult times in life, an individual may be inclined to return to old patterns of drug-taking behavior.
Ans:T

1.37  Until recently, surveys have shown that fewer college students smoke cigarettes than high school seniors.
Ans:T

1.38  In the 1990s, the University of Michigan surveys showed that high school seniors showed a decreasing trend in viewing regular drug use as dangerous.
Ans:T

1.39  The National Survey on Drug Use and Health examines the prevalence rates of illicit drug use among Americans in several age groups across the life span.
Ans:T

1.40  "To have a good time with my friends" is a frequent answer of high-school seniors when asked why they take drugs.
Ans:T

1.41  A member of a socially deviant subculture is quite often an accomplished student in school.
Ans:F
1.42 Understanding individuals' risk factors and protective factors gives us some idea of which individuals are likely to use drugs and which will not.
Ans:T

1.43 Generally low educational aspirations represent a risk factor for drug use.
Ans:T

1.44 The presence of protective factors can provide the basis for resilience toward drug use among high-risk adolescents.
Ans:T

1.45 Protective factors are the negation (or the inverted image) of risk factors.
Ans:F

1.46 Though it is impossible to predict drug-taking behavior in the future, historical patterns can serve as guides.
Ans:T

1.47 Cocaine-snorting and heroin-smoking are two forms of drug-taking behavior that avoid the possibility of being infected with the AIDS virus.
Ans:T

1.48 Cocaine, heroin, and creatine are examples of “club drugs.”
Ans:F

1.49 Ketamine is not considered a “club drug.”
Ans:F

1.50 Club drugs include both stimulant drugs such as methamphetamine and hallucinogenic drugs such as LSD.
Ans:T

1.51 An example of an herb-based dietary supplement is gingko biloba.
Ans:T

1.52 According to the Dietary Supplement Health and Education Act of 1994, dietary supplements do not have to meet the same review and evaluation criteria as prescription and over-the-counter drugs.
Ans:T

1.53 Dextromethorphan (DXM) is the cough suppressant found in many over-the-counter cough-and-cold medications.
Ans:T
MULTIPLE CHOICE QUESTIONS FOR CHAPTER 1
(Difficulty levels: 1 - easy, 2 - medium, 3 - difficult)

1.1 Since 1970, marijuana has been officially classified in the United States as a controlled substance in the same category as
1. A. barbiturates
Ans:B B. heroin
C. cocaine
D. antianxiety medication (tranquilizers)

1.2 The potential for drug abuse in general presents a greater challenge for
1. A. men than for women
B. African Americans than for Latinos
Ans:D C. young people than for the elderly
D. none of the above

1.3 Which of the following is NOT an illicit drug in the United States?
1. A. cocaine
2. B. heroin
Ans:C C. nicotine
D. ketamine

1.4 Which of the following is an illicit drug in the United States?
1. A. alcohol
Ans:D B. nicotine
C. caffeine
D. LSD

1.5 Analogy: illicit drugs are to cocaine as licit drugs are to
1. A. crack
Ans:C B. heroin
C. alcohol
D. ecstasy

1.6 According to the text, drugs such as alcohol and nicotine are referred to as
1. A. illegal drugs
Ans:B B. licit drugs
C. illicit drugs
D. over-the-counter drugs

1.7 Signs of drug dependence include:
1. A. intense cravings for the drug
Ans:D B. need for increasingly greater quantities of the drug to get the same desired effect
C. becoming preoccupied with drug-taking behavior
D. all of the above

1.8 Which statement is true?
1. A. All psychoactive drugs produce dependence
3. B. Some psychoactive drugs produce dependence
Ans:B C. Only illicit psychoactive drugs produce dependence
D. All dependence-producing drugs are illicit
1.9 By the definition used in the textbook, a chemical substance would be considered a drug if

A. it intoxicated you
B. it had an impact on brain functioning
C. it served as a nutrient for your body
D. both A and B

Ans:D

1.10 An over-the-counter (OTC) cold remedy taken for a cold would be classified as a(n)

A. licit drug for instrumental use
B. illicit drug for instrumental use
C. licit drug for recreational use
D. illicit drug for recreational use

Ans:A

1.11 Alcohol and nicotine generally belong to a category of

A. licit drugs for instrumental use
B. licit drugs for recreational use
C. illicit drugs for recreational use
D. illicit drugs for instrumental use

Ans:B

1.12 Analogy: Licit recreational drug use is to smoking a cigarette as illicit recreational drug use is to

A. smoking marijuana
B. drinking a caffeinated beverage
C. injecting heroin
D. both A and C

Ans:D

1.13 Cathy needs to stay awake to study for her psychology midterm, so she decides to take an amphetamine to keep from falling asleep. In this case, the drug had a(n) _____ use.

A. recreational
B. instrumental
C. pre-instrumental
D. pre-creational

Ans:B

1.14 Dr. Smith recommends that drinking four ounces of an alcoholic beverage per day to his patient. The use of alcohol in this case is best described as

A. illicit
B. instrumental
C. recreational
D. forensic

Ans:B

1.15 Instances in which a prescription or nonprescription drug is used in an inappropriate way are regarded as

A. illicit drug-taking behavior
B. extremely rare
C. drug misuse
D. drug abuse

Ans:C

1.16 Which of the following is an example of drug misuse?

A. taking a sleeping pill while drinking beer
B. taking your mother’s prescription pain medication for a toothache
C. taking aspirin after its expiration date
D. all of the above

Ans:D
1.17 A particularly dangerous situation can result when medications are combined with

1.18 Instances of drug abuse involve

1.19 Which of the following plants has (have) been sources of hallucinogenic effects?

1.20 Analogy: Willow bark is to senna as

1.21 A shaman is

1.22 Which statement is NOT true?

1.23 The Ebers Papyrus contained

1.24 Analogy: Placebo effect is to a genuine effect as

1.25 Viking warriors known as Berserkers displayed wild behavior due to ingestion of which

1.26 The toads that were often included in "witch's brew" recipes

2 A. were quite poisonous
   B. produced hallucinatory and blood-pressure elevating effects
   Ans:B C. were effective only by virtue of a placebo effect
   D. had no effect whatsoever

1.27 ________ is the primary active ingredient in opium.

2 A. Cocaine
   B. Morphine
   Ans:B C. Nicotine
   D. Heroin

1.28 Analogy: Edward Jenner is to Louis Pasteur as

3 A. smallpox is to rabies
   B. bromides are to chloral hydrate
   Ans:A C. a placebo effect is to a vaccine
   D. morphine is to opium

1.29 Patent medicines in the 1800s were purchased through

2 A. peddlers
   B. general stores
   Ans:D C. mail-order advertisements
   D. all of the above

1.30 Patent medicines in the 19th century contained:

2 A. opium, heroin, and nicotine
   B. opium, cocaine, and heroin
   Ans:D C. alcohol, cocaine, and nicotine
   D. opium, cocaine, and alcohol

1.31 Laudanum was a drink containing which psychoactive drug?

2 A. cocaine
   B. alcohol and cocaine
   Ans:C C. opium
   D. extract of laudanum

1.32 Opium use in the 19th century was

2 A. limited to the wealthy
   B. primarily associated with the poor
   Ans:C C. associated with practically everyone
   D. limited to infants and children

1.33 The attraction of opium used prior to 1900 was related to its being

2 A. cheap
   B. legal
   Ans:D C. easily available
   D. all of the above

1.34 Which of the following was regarded as a respectable way to use opium?

2 A. snorting it
   B. smoking it
   Ans:D C. injecting it
   D. drinking it
1.35 Which of the following was regarded as a degrading and immoral way to use opium?
   p.10
   A. snorting it
   B. smoking it
   C. injecting it
   D. drinking it
   Ans:B

1.36 In the 19th century, opium-drinking was
   p.10
   A. associated with Coca-Cola beverages
   B. another name for opium-smoking
   C. generally tolerated and considered respectable
   D. associated with Chinese immigrants in America
   Ans:C

1.37 Until 1903, Coca-Cola contained which of the following psychoactive drugs?
   p.11
   A. opium
   B. cocaine
   C. alcohol
   D. a combination of opium and alcohol
   Ans:B

1.38 A prominent 19th-century advocate of cocaine use was
   p.11
   A. Louis Pasteur
   B. Alexander Fleming
   C. Edward Jenner
   D. Sigmund Freud
   Ans:D

1.39 If you were alive in 1900, you would consider heroin to be
   p.11
   A. safe and completely legal
   B. a dangerous alternative to morphine
   C. belonging to the cocaine family of drugs
   D. a menace to society
   Ans:A

1.40 In the early 20th century, for which of the following disorders would heroin NOT
   p.11
   have been advised as a medicine?
   A. pneumonia
   B. smallpox
   C. tuberculosis
   D. morphine addiction
   Ans:B

1.41 The Women's Christian Temperance Union (WCTU) and the temperance movement
   p.11
   in general were dedicated to the prohibition of which psychoactive drug?
   A. alcohol
   B. cocaine
   C. marijuana
   D. all drugs
   Ans:A

1.42 The 18th Amendment to the U.S. Constitution restricted which of the following
   p.11
   psychoactive drugs?
   A. heroin and other opiates
   B. cocaine
   C. tobacco
   D. alcohol
   Ans:D

1.43 The Prohibition era in U.S. history is associated with which prohibited drug?

A. opium  
B. cocaine  
C. alcohol  
D. marijuana  

Ans:C

1.44 The social problems associated with the Prohibition era have often been cited as an argument against

A. prevention programs for drug abuse  
B. restricting drugs in general  
C. encouraging chronic alcohol abuse  
D. all of the above  

Ans:B

1.45 Some molds and fungi have been sources of which class of drugs?

A. drugs effective in treating schizophrenia  
B. drugs effective in treating bacterial infections  
C. drugs effective in treating constipation  
D. aspirin and other headache medications  

Ans:B

1.46 Chlorpromazine was an early

A. antibiotic drug  
B. antispasmodic drug  
C. antischizophrenia drug  
D. antidiuretic drug  

Ans:C

1.47 Which decade is generally associated with the beginning of drug use among middle-class young Americans?

A. 1920s  
B. 1940s  
C. 1950s  
D. 1960s  

Ans:D

1.48 Neuroscience research has focused upon which of the following aspects of the body?

A. the functioning of the brain  
B. the workings of the small and large intestines  
C. the processes underlying bacterial infections  
D. the cardiovascular system  

Ans:A

1.49 The name for a branch of science joining the efforts of biochemists, pharmacologists, psychologists, and psychiatrists, among others in order to study brain functioning is

A. psychopharmacology  
B. endocrinology  
C. neuroscience  
D. neurology  

Ans:C

1.50 Neuroscience examines

A. the relationship between psychology and biology  
B. the relationship between brain functioning and biology  
C. the relationship between brain functioning and human behavior  
D. the relationship between pharmacology and brain functioning  

Ans:C

1.51 Crack is defined as

A. a smokable form of opium  
B. a smokable form of cocaine  
C. a smokable form of heroin  
D. an injectable form of tobacco  

Ans:B

1.52 In the 1980s, cocaine was
p.13 A. considered very glamorous
1 B. very inexpensive
Ans:D C. getting a great deal of media attention
D. both A and C.

1.53 The most recent attitude toward drug-taking behavior considers
pp.13-14 A. a wide range of licit and illicit drugs with varying levels of potential for misuse or abuse
2 Ans:A B. an increasingly narrow definition of psychoactive drugs
C. criteria that effectively exclude alcohol and nicotine from being classified as drugs
D. problems associated with illicit drugs to the exclusion of problems associated with licit drugs

1.54 According to the text, a recent study has found that
p.14 A. prior marijuana drug use among parents leads to increased marijuana use by their children
3 Ans:D B. prior marijuana drug use among parents leads to a slightly decreased level of marijuana use by their children
C. prior marijuana drug use among parents leads to absolutely no marijuana use by their children
D. there is no relationship between marijuana drug use among parents and marijuana drug use of their children

1.55 The University of Michigan survey is based upon reports of drug-taking behavior among
p.14 A. college students
2 B. eighth, tenth, and twelfth grade students
Ans:D C. young adults
D. all of the above

1.56 A major disadvantage of the University of Michigan survey is that
p.14 A. high school dropouts are not included
2 Ans:A B. it is conducted every five years
C. college students are included
D. it has only been conducted since 1995

1.57 In 1979, about _____ of U.S. high school seniors had reported illicit drug use.
pp.14-15 A. 3/4
2 B. 1/2
Ans:B C. 1/8
D. 1/4

1.58 Advantages of repeating the University of Michigan survey year after year include all of the following EXCEPT:
p.14 A. it allows us to examine trends in drug-taking behavior over time
2 Ans:D B. it allows us to compare the use of one drug relative to another
C. it allows prevalence rates to be examined from year to year
D. it allows us to examine the effects of drug-taking behavior on the participant sample as they grow up

1.59 Whether drug use has occurred within the previous 30 days is an indication of
p.14 A. drug experimentation
2 Ans:B B. moderate drug use
C. heavy drug use
D. the social problems associated with drug-taking behavior
1.60 According to the University of Michigan survey, in 2008 about _____ of U.S. high school seniors had used an illicit drug during the previous year.

3
A. 17 percent  
B. 37 percent  
C. 63 percent  
D. 77 percent

Ans:B

1.61 Illicit drug experimentation among high school seniors in 2008 has been reported to be

2
A. less than figures reported in 1979  
B. more than figures reported in 1979  
C. practically equal to figures reported in 1979  
D. at a record low, since the University of Michigan survey began in 1975

Ans:A

1.62 Relative to 1996, the prevalence rate in 2008 among eighth graders has declined for

3
A. amphetamines  
B. cigarettes  
C. marijuana  
D. all of the above

Ans:D

1.63 Studies following the lives of young adults for as long as fourteen years after their graduation from high school show that a return to drug use after years of abstinence frequently follows which of the following life-events?

2
A. raising a family  
B. marriage  
C. job relocation  
D. divorce

Ans:D

1.64 In 2008, high school seniors reported drinking an alcoholic beverage in the previous month at a prevalence rate that was approximately ______ the rate reported with respect to illicit drugs in the previous month.

3
A. three times  
B. one-half  
C. two times  
D. the same as

Ans:C

1.65 According to the 2008 University of Michigan survey, almost one-half of high school seniors reported having consumed ______ in the past month.

2
A. alcohol  
B. cigarettes  
C. cocaine  
D. a hallucinogenic drug

Ans:A

1.66 According to the University of Michigan survey, binge drinking is defined as consuming ______ or more alcoholic drinks in a row.

1
A. 5  
B. 7  
C. 10  
D. 15

Ans:A

1.67 Alcohol use among _____ has declined since 1980 to a lesser degree than alcohol use among high school seniors.

3
A. college students  
B. eighth graders  
C. tenth graders  
D. high school dropouts

Ans:A
1.68 According to the text, it is likely that the decline of alcohol consumption from the 1980s to the present among high school seniors has been attributed to
2 A. the increased use of cigarette smoking
Ans:B B. the reduced accessibility to alcohol for minors
C. the “know when to say when” message promoted by beer companies
D. a substantial increase in every other category of drug-taking behavior

1.69 The most frequently used drug on a daily basis by high school students is
p.17 1 A. alcohol
Ans:C B. marijuana
C. nicotine
D. some form of inhalants

1.70 In comparison to rates of nicotine use among high school seniors in 1977, current usage rates among high school seniors are
p.17 2 A. higher
Ans:B B. lower
C. the same
D. rates fluctuate too often to be accurate

1.71 When compared to high school seniors, fewer college students smoke cigarettes. This statistic is due to:
2 A. a change in smoking behavior from high school to college
Ans:B B. the heaviest smokers not being included in the college population
C. college students having less access to cigarettes
D. both A and C

1.72 Non-college bound high school seniors are ____ times more likely to smoke at least a half a pack of cigarettes a day than college bound high school seniors.
3 A. 2
Ans:B B. 2 ½
C. 3
D. 3 ¼

1.73 Societal changes in the 1990s which the text cites as reasons why youngsters did not have a tendency to view regular drug use as dangerous include
pp.17-18 2 A. lack of drug abuse prevention programs in schools
Ans:D B. poor communication between parents and children regarding drugs
C. lack of anti-drug public service messages in the media
D. all of the above

1.74 According to the National Survey on Drug Use and Health survey, about _____ of adults aged 26 or older in 2007 have used an illicit drug within the previous year.
pp.18-19 3 A. 4 percent
Ans:C B. 6 percent
C. 11 percent
D. 30 percent

1.75 A major limitation in interpreting the University of Michigan survey of adults is that
p.18 2 A. millions of adults refused to participate
Ans:C B. fewer adults were surveyed compared to high school seniors
C. institutionalized patients and homeless people failed to be represented in the sample
D. adults were more likely to report false data
1.76 When asked about their motivation for drug use, high school seniors have frequently cited:
   A. dissatisfaction with their parents
   B. parental abuse
   C. economic hardship
   D. peer influence
   Ans:D

1.77 Vulnerability toward drug-taking behavior is shaped by which type(s) of factors in a person's life:
   A. risk factors
   B. protective factors
   C. conjoint factors
   D. both A and B
   Ans:D

1.78 Analogy: Risk factors are to protective factors as:
   A. illicit drug use is to licit drug use
   B. daily drug use is to recreational drug use
   C. more likely to use drugs is to less likely to use drugs
   D. drug abuse is to drug misuse
   Ans:C

1.79 Which factor is considered a risk factor for drug use?
   A. socioeconomic status
   B. membership in a deviant subculture
   C. high self-esteem
   D. overly strong parent-child attachment
   Ans:B

1.80 Generally speaking, as the number of risk factors ____, the likelihood of drug use ____.
   A. increases; decreases
   B. decreases; increases
   C. increases; increases
   D. there is no relationship
   Ans:C

1.81 The leading risk factor(s) for marijuana use include:
   A. potential approval/disapproval of friends by one's parents
   B. degree of marijuana availability
   C. inclination towards other drug use
   D. all of the above
   Ans:D

1.82 Which is NOT a protective factor for drug use?
   A. parent's educational level
   B. closeness to an adult outside the family
   C. easy availability of drugs in one's environment
   D. socially conforming attitudes
   Ans:C

1.83 Having six or more protective factors in one's life produces the following:
   A. It lowers the level of resistance against drug use
   B. It raises the level of resistance against drug use
   C. It does next to nothing
   D. Sometimes it lowers the level of resistance, sometimes not
   Ans:B

1.84 According to a study cited in the text, as the number of protective factors _____, the resistance to drug use ______.
   A. increased; decreased
   B. decreased; increased
   C. increased; increased
   D. there was no relationship
   Ans:C
1.85 Developmental assets have been found to increase the resistance toward
p.21 A. illicit drug use
1 B. problem alcohol use
Ans:D C. high-risk behaviors, such as sexual activity and violence
D. all of the above

1.86 Drug use involving a hypodermic syringe carries a particular risk of
p.22 A. creating a cycle of dependence
1 B. being infected by the virus responsible for AIDS
Ans:B C. heroin abuse
D. cocaine abuse

1.87 In the 1990s, heroin regained popularity in part because:
2 A. injecting heroin with syringes became safer
B. snorting heroin attracted new users who previously avoided heroin due to
Ans:B C. it became a trend to use heroin while snorting cocaine
D. all of the above

1.88 ________ refer to substances often ingested at all-night dance parties.
p.22 A. rave drugs
1 B. club drugs
Ans:B C. night drugs
D. underground drugs

1.89 One of the following is NOT considered a “club drug.”
p.22 A. smokable heroin
1 B. MDMA (Ecstasy)
Ans:A C. ketamine
D. LSD

1.90 What is particularly dangerous about many club drugs?
p.22 A. they are colorless, odorless, and tasteless
1 B. they can be slipped into drinks unobtrusively
Ans:D C. they have been used in sexual assault cases
D. all of the above

1.91 Which is true about dietary supplements?
pp.22-24 A. They are used by a very small proportion of the U.S. population.
2 B. They are not officially classified as drugs.
Ans:B C. They are required to meet the same safety standards as prescription drugs
D. Rohypnol and MDMA are examples.

1.92 According to a federal ruling in 2000, toward which physical conditions can dietary
supplements claim to be directed?
p.24 A. aging and menopause
3 B. diabetes and cancer
Ans:A C. heart disease and stroke
D. syphilis and other venereal diseases
The Dietary Supplement Health and Education Act of 1994

A. ensures that all dietary supplements are safe and effective
B. requires that the supplement must include a disclaimer saying “the U.S. Food and Drug Administration has not evaluated the product”
C. recognizes dietary supplements as drugs so that they must fit FDA criteria
D. ensures dietary supplements have gone through rigorous review and evaluation procedures before being available to the public

An "herbal high" generally refers to the recreational use of
A. dietary supplements
B. raw sugar
C. marijuana
D. heroin

Medicines containing dextromethorphan were first banned from being sold to minors under the age of 18 in
A. Chicago
B. Alabama
C. New York
D. California

Dextromethorphan can be found in _______, and in high doses can increase risk of brain damage, seizure, and death.
A. OxyContin
B. Tylenol
C. aspirin products
D. cough-and-cold medications
DISCUSSION QUESTIONS AND ASSIGNMENTS

1. The listing of celebrities who have died under drug-related circumstances (page 34 of the text) does not include those cases in which the contributing reason was the consumption of alcohol or tobacco. Assign students to research one or two instances in which a well-known person has died from the toxic effects of these two products (acute or chronic toxicity in the case of alcohol, chronic toxicity in the case of tobacco). A discussion can ensue concerning instances of drug toxicity not only on well-known personalities but also people in their families or acquaintances. Some possible examples are Yul Brynner (lung cancer, tobacco), John Wayne (lung cancer, tobacco), Peter Jennings (lung cancer, tobacco), Walt Disney (lung cancer, tobacco), Edward R. Morrow (lung cancer, tobacco), and Mickey Mantle (cirrhosis, alcohol).

2. Have students collect over a 14-day period one or two articles in a newspaper or magazine that relate to drug-related violent acts or crimes. A selection might focus upon organized crime (e.g., a drug cartel in Colombia or Mexico) or a street-level incident (e.g., a homicide among gang members in a turf war). The selection should be analyzed in terms of whether the violence or crime would be categorized as pharmacological, economically compulsive, or systemic (pages 46-50 of the text).

3. Have students research the extent to which needle-exchange programs for intravenous drug abusers have been proposed or implemented in their community. If there are existing needle-exchange programs, are they officially sanctioned or merely ignored by authorities?

4. Invite a police officer or parole officer to class and invite questions from the class regarding his or her experiences with drug-related crime.

NOTE: Continual updating of statistical information about drug-related emergency cases in the United States can be accessed through the following Web sites:

The Drug Abuse Warning Network (DAWN) program
http://dawninfo.samhsa.gov

Substance Abuse and Mental Health Services Administration
http://www.oas.samhsa.gov

Continual updating of statistical information about arrestees and illicit drug use in the United States can be accessed through the following Web site:

The Arrestee Drug Abuse Monitoring (ADAM) program
http://www.ojp.usdoj.gov/nij/topics/drugs/adam.htm
LECTURE OUTLINE FOR CHAPTER TWO

A. Toxicity

1. The toxicity of a drug refers to the potential physical or psychological harm that a drug might present to a user. If harmful effects are short-term or temporary, the drug has some level of acute toxicity. If effects are long-term or acquired over time, the drug has some level of chronic toxicity. Issues of chronic toxicity are examined in the context of drug tolerance and/or drug dependence.

2. A dose-response curve is a graph of the percentage of a population that experiences some response as a function of dosage level. An “ED50” refers to the dosage that produces an response in 50 percent of the population. A “LD50” refers to the dosage that is lethal for 50 percent of the population. In general, the further apart the ED-response and LD-response curves, the safer (less toxic) the drug.

3. Two ratios, the therapeutic index (LD50 over ED50) and the margin of safety (LD1 over ED99), provide information regarding a drug’s relative safety. The higher the ratio, the safer (or less toxic) the drug. It should be pointed out, however, that these measures cannot be calculated for street drugs that have unknown dosage levels and possible contaminants.

4. News reports of well-known public individuals who have died as a direct consequence of drug misuse or abuse are vivid reminders of the hazards of drug use, but they can be misleading when attempting to arrive at an idea about the toxicity of particular drugs within a general population.

B. The DAWN reports

1. The Drug Abuse Warning Network (DAWN) is a system for reporting drug-related emergencies in U.S. metropolitan hospitals. These occurrences are referred to as drug-related ED visits (ED being an abbreviation for emergency department).

2. In 2006, nearly one-third (31 percent) of drug-related ED visits involved illicit drugs only, while 28 percent involved prescription or OTC medications alone, and 8 percent involved a combination of illicit drugs and medications.

3. In 2006, about one-fourth (26 percent) of drug-related ED visits were either the use of one or more illicit drugs, the use of alcohol in combination with other drugs, or the nonmedical use of prescription or OTC drugs. Among illicit drug-related ED visits, the use of cocaine accounted for 23 percent, marijuana 9 percent, heroin 3 percent, and stimulants (including amphetamines and methamphetamines) 2 percent.

4. DAWN statistics are not reported for ED visits involving alcohol use alone by individuals who are 21 years or older. If all emergencies related to alcohol use alone were reported, the numbers would far exceed those related to any other drug. An examination of other ED-related circumstances would be obscured. However, about one-fourth (26 percent) of all drug-related ED visits involve the use of a licit or illicit drug (or drugs) ingested in combination with alcohol.

5. Current DAWN statistics on drug-related deaths in the United States are not reported on a nationwide basis but instead in terms of individual metropolitan areas. Although the demographics and size of these areas vary widely, some generalizations can be made. Across regions, however, opiate drugs and cocaine are the two most frequently represented in drug-related deaths. Alcohol is commonly in third place. Medications to treat anxiety and depression are typically either in fourth or fifth place. Multiple-drug (polydrug) use is commonly responsible for drug-related deaths. Marijuana is far less prominent in drug-related deaths.

6. DAWN reports provide information only regarding the acute toxicity of drugs.

C. Behavioral tolerance and drug overdose

1. **Tolerance refers to the capacity of a certain dosage of a drug to have a gradually diminished effect as the drug is taken repeatedly.** Due to tolerance, a drug user requires a higher dosage in order to maintain an equivalent response.

2. Drug-taking behavior can be highly influenced by the surroundings in which that behavior occurs. In these cases, tolerance effects are maximized when drugs are used in the same environment or under the same circumstances. **This process, referred to as behavioral tolerance (alternatively, conditioned tolerance), is related to classical or Pavlovian conditioning principles.**

3. Environmentally-induced withdrawal symptoms can increase the chances of craving the drug when the individual is in an environment that is associated with prior drug-taking behavior.

D. Physical and psychological dependence

1. **In cases of physical dependence, the drug abuser continues the drug-taking behavior in order to avoid physical withdrawal symptoms that would occur when that behavior ceases. In cases of psychological dependence, the continuance of drug-taking behavior is motivated by a craving for the pleasurable effects of the drug.**

2. The concept of physical dependence is largely based upon the experiences of heroin abusers, since heroin cessation produces significant physical withdrawal symptoms. The cessation of other abused drugs, however, produces little or no physical withdrawal symptoms. In these cases, animals can be shown to demonstrate incessant and intense attraction to the drugs, resulting in patterns of self-administration.

3. **Current experts in the field of drug abuse assert that the distinction between physical and psychological dependence has outgrown its usefulness in understanding patterns of drug-taking behavior.**

E. Psychiatric definitions of substance dependence and substance abuse

1. The Diagnostic and Statistical Manual, Fourth Edition, Text Revision (DSM-IV-TR) of the American Psychiatric Association identifies two general conditions related to drug-taking behavior: Substance dependence and substance abuse. **Substance dependence identifies a situation in which an individual displays signs of dependence with respect to a certain drug: tolerance, withdrawal, unintentional overuse, preoccupation with the drug, or continued drug use despite major drug-related problems. Substance abuse identifies a situation in which drug-taking behavior continues despite recurrent social, occupational, interpersonal, or legal problems related to that behavior.**

2. “Substance dependence” and “substance abuse” are preferred terms rather than “drug dependence” and “drug abuse” because there is often confusion in the public mind as to the definition of a drug, particularly in instances of alcohol and nicotine use.

F. Special problems in drug abuse

1. **A particular problem in drug abuse involves drug-taking behavior of women who are pregnant at the time. The developing fetus is subject to the toxic effects of the ingested drug.**

2. Injecting drugs carry the additional hazard of spreading disease through shared or non-sterile needles. Hepatitis and HIV infections are two prominent examples of health hazards associated with injected drug use.
G. Drugs, violence, and crime

1. The Arrestee Drug Abuse Monitoring (ADAM) program in the U.S. Department of Justice tracks the percentage of arrestees in major U.S. cities who have tested positive for an illicit drug. It is an attempt to connect drug-taking behavior with violence and crime, though the connection between drugs and these behaviors is far from simple. **Drug-related violence can be discussed in three categories: pharmacological violence, economically-compulsive violence, and systemic violence.**

2. **Pharmacological violence refers to acts of violence resulting from the influence of a particular drug.** Some drugs can increase the likelihood of violent behavior, while others can decrease it. In general, ADAM statistics reflect the fact that many arrestees have some illicit drug in their system at the time of arrest. However, the length of the detection period in standard urinalysis tests for illicit drugs (ranging from a matter of several hours to two months, depending on the drug) makes it difficult to determine whether an offense was committed as a direct result of the influence of a particular drug. Nonetheless, there is no question that alcohol as a drug can induce pharmacological violence.

3. **Economically compulsive violence refers to acts of violence resulting from the need to finance the cost of purchasing a particular drug.** The market conditions for drug sales represent an influential factor for this form of violence. As drug prices increase, economically compulsive violence goes up. **The type of economically compulsive crime committed in association with drug use varies by gender.** Males are likely to commit crimes against persons or property, whereas females are more likely to commit crimes against the public order, such as prostitution.

4. **Systemic violence refers to acts of violence that are related to drug dealing and the heightened violence within a network of illicit drug distribution.** Systemic violence became a major social problem during the late 1980s, when crack cocaine abuse was at its height.

H. Governmental policy, regulation, and laws

1. Between 1900 and 1970, U.S. drug policy changed from a philosophy of laissez-faire (“do as you please”) to an increasingly restricted philosophy with respect to drug access and use.

2. The Harrison Act of 1914 was the first legislation to restrict access to opiate drugs and cocaine. At that time, the U.S. Treasury Department was entrusted with drug law enforcement responsibilities. After 1970, responsibilities moved to the U.S. Justice Department. Under the Harrison Act, opiate drugs were defined as “narcotics.” Eventually cocaine was included in the narcotic category, though its pharmacology and behavior effects are diametrically opposite to opiates.

3. **In 1970, the Comprehensive Drug Abuse Prevention and Control Act classified drugs in terms of five schedules of controlled substances.** Schedule I drugs include heroin, LSD, mescaline, and marijuana. By definition, Schedule I drugs have no acceptable medical use. **Schedule I and II refer to drugs presenting the highest level of abuse potential and carry the most stringent restrictions on their possession and access.** Schedule V drugs present the least abuse potential and are the most accessible among controlled substances.

4. In 1988, the Anti-Drug Abuse Act set penalties for money laundering when associated with drug smuggling and sales and established the position of a cabinet-level “drug czar” to coordinate federal drug-law enforcement. **Drug policy in the United States presently originates from the White House Office of National Drug Control Policy.**

5. Since 1970, the responsibility for drug-law enforcement has moved from the Department of the Treasury to the Department of Justice, ending the era of U.S. drug regulation based upon taxation.
I. Enforcement of drug laws on a local and international scale

1. The federal Drug Enforcement Administration (DEA) is responsible for limiting the supply of illicit drugs in the United States. A majority of the funds budgeted for drug control purposes are used for restricting the supply of drugs, as opposed to the demand for drugs by individuals. Several billions of dollars are currently spent each year in attempts to stop the trafficking of illicit drugs and their importation into the United States from other countries, principally nations in Central and South America.

2. Additional federal agencies involved in drug control include the U.S. Customs and Border Patrol Agency, the U.S. Coast Guard and other branches of the U.S. military, and the Immigration and Naturalization Service. Government agents are stationed overseas, working with the Departments of Defense and State, to limit exportation of illicit drugs at the source.

3. Increasing pressure is being placed on changing official drug-control policy from a goal of zero tolerance (i.e., a complete and total cessation of illicit drug trafficking and illicit drug-taking behavior) to a goal of harm reduction. The goal of a harm reduction policy focuses on minimizing the social and psychological costs associated with drug-taking behavior rather than the elimination of the behavior itself.
VIDEO SUGGESTIONS


This highly acclaimed PBS series spotlights the intimate experience of addiction as shared by the addicts themselves, their parents, children, and those helping them toward recovery. Part 5 deals with the ways our society is trying to meet the challenge of arriving at a rational public policy toward alcohol and other drug abuse.

“Substance Abuse in the Elderly” (2000), 30 min., Films for the Humanities and Sciences, P.O. Box 2053, Princeton NJ 08543-2053. Available on VHS or DVD.

Senior citizens discuss how they deal with the challenges of complex regimens of medication and diminished tolerance for alcohol, as they run the risk of falling into the trap of substance abuse.

“Fetal Abuse: The Effects of Drugs and Alcohol” (1997), 18 min., Films for the Humanities and Sciences, P.O. Box 2053, Princeton NJ 08543-2053. Available on VHS or DVD.

An examination of the physical, cognitive, and behavioral abnormalities of children born to mothers with substance abuse problems.

“If…Drugs Were Legal” (2005), 61 min., Films for the Humanities and Sciences, P.O. Box 2053, Princeton NJ 08543-2053. Available on VHS or DVD.

A projection to 2015 when a coalition of European nations has decriminalized most stimulants, narcotics, and hallucinogens. Interwoven with the fictional narrative are real-world interviews, highlighting both sides of the drug legalization debate.

“The War on Drugs: The Reality behind the Movie Traffic (2001), five-part series, 22 min. each, Films for the Humanities and Sciences, P.O. Box 2053, Princeton NJ 08543-2053. Available on VHS or DVD.

ABC News Anchor Ted Koppel and correspondent Deborah Amos update the subject of America’s war on drugs, addressing the gritty facts so realistically portrayed in the Steven Soderbergh film Traffic.

“The Battle over How to Fight the War on Drugs” (1998), 22 min., Films for the Humanities and Sciences, P.O. Box 2053, Princeton NJ 08543-2053. Available on VHS or DVD.

ABC News anchor Forrest Sawyer moderates a heated debate between Charles Blanchard, Chief Counsel of the White House Drug Control Policy Office, and Ethan Nadelmann, Director of the Lindesmith Center.
ESSAY QUESTIONS FOR CHAPTER 2

2.1 Describe the therapeutic index and margin of safety measures as a way of understanding drug toxicity. Include in your answer an explanation of the denominator and numerator that go into each ratio.

2.2 Picture yourself as an emergency-room physician at a metropolitan hospital that participates in the DAWN reporting system. What questions would you ask an incoming patient who is displaying symptoms that might be drug-related? What circumstances might prevent you from an accurate record of the role drugs may have played in these symptoms?

2.3 Define behavioral tolerance and explain how this phenomenon might account for a drug-related overdose fatality, even though the dose might have fallen short of the lethal range.

2.4 Distinguish between the major DSM-IV criteria for a diagnosis of substance dependence and a diagnosis of substance abuse, as defined by the American Psychiatric Association.

2.5 Distinguish between pharmacological, economically compulsive, and systemic types of drug-related violence. Give a specific example for each type.

2.6 Contrast the official (governmental) attitude toward supply-reduction versus demand-reduction in the 1940s and 1950s with the attitude in the 1990s.
TRUE/FALSE QUESTIONS FOR CHAPTER 2

2.1 Cocaine has been used as a local anesthetic in the United States.
p.31 Ans:T

2.2 Water has the potential for being a psychoactive substance.
p.31 Ans:T

2.3 There are substances that exist which do not have any potential for toxicity.
p.32 Ans:F

2.4 Drug safety depends on the possibility that the drug can be toxic at low doses compared to other drugs.
p.32 Ans:T

2.5 If a drug is ED50, it means the drug will become toxic if 50 mg of the drug is taken.
p.32 Ans:F

2.6 Each effect produced by a particular drug will have its own dose-response curves.
p.32 Ans:T

2.7 Examining the properties of a drug effect is that same as examining the properties of the drug itself.
p.32 Ans:F

2.8 If an LD100 dose were to be given to a group of 50 mice, all of them would have died.
p.32 Ans:T

2.9 The margin of safety measure of a particular drug is a more conservative (in the direction of safety) measure of drug toxicity than the therapeutic index for that drug.
p.32 Ans:T

2.10 The higher the margin of safety ratio, the more toxic the drug.
p.33 Ans:F

2.11 A problem with street drugs is that the user doesn’t know the toxicity risks until the drug has been used.
p.33 Ans:T

2.12 The DAWN reporting program reaches practically all emergency-department patients in the United States.
p.35 Ans:F

2.13 According to 2006 DAWN statistics, nearly one-third of drug-related ED visits were due to use of illicit drugs only.
pp.35-36 Ans:T
2.14 According to 2006 DAWN statistics, most ED visits involved alcohol only. Ans:F

2.15 Toxicity can occur from the misuse of licit drugs. Ans:T

2.16 Men outnumber women two-to-one in terms of ED visits involving illicit drug use. Ans:T

2.17 A patient mentions drinking eight glasses of vodka and gin during a drug-related ED visit. This is an example of an alcohol-in-combination DAWN case. Ans:F

2.18 Polydrug use refers to the use of a drug at different dosage levels from administration to administration. Ans:F

2.19 Multiple substance use is another name for polydrug use. Ans:T

2.20 Injecting heroin followed by snorting heroin is an example of polydrug use. Ans:F

2.21 In the DAWN reports, cocaine, heroin, and alcohol-in-combination cases are almost always lethal. Ans:F

2.22 According to recent DAWN statistics, drug-related ED visits involving illicit club drugs and narcotic analgesics are on the rise. Ans:T

2.23 There are more fatalities from chronic smoking of tobacco than from illicit drug use. Ans:T

2.24 If an individual experiences drug tolerance, an increasing dose must be taken over time in order to maintain the same level of drug effect. Ans:T

2.25 Drug abusers take drug doses which are well beyond the LD-response curve amounts. Ans:F

2.26 In most cases, the dosage levels taken by drug abusers would be lethal if taken by a first-time user. Ans:T

2.27 Tolerance is maximized when the user always takes the drug in the same setting. Ans:T
2.28  Drug tolerance is to setting as behavioral tolerance is to repetition.  
pp.39-40  
Ans:F

2.29  Behavioral tolerance is based on Pavlovian conditioning.  
p.40  
Ans:T

2.30  Conditioning effects have been demonstrated with nicotine.  
p.40  
Ans:T

2.31  The existence of physical dependence in a particular drug hinges upon the presence of 
physical withdrawal syndromes, should the individual stop taking the drug.  
pp.40-41  
Ans:T

2.32  Withdrawal symptoms are the approximately the same for every psychoactive drug.  
p.41  
Ans:F

2.33  Continuing drug-taking behavior in order to avoid withdrawal is one indication of physical 
dependence.  
p.41  
Ans:T

2.34  Withdrawal symptoms involve symptoms generally opposite from the original effect of the 
drug.  
p.41  
Ans:T

2.35  Most addicts completing the withdrawal process in its entirety do not become re-addicted.  
p.41  
Ans:F

2.36  In an experiment discussed in the text, laboratory animals would choose cocaine over 
food even if the animal was starving to death.  
p.42  
Ans:T

2.37  Tolerance, withdrawal symptoms, and unintentional overuse are three of the seven 
criteria for substance dependence.  
p.43  
Ans:T

2.38  The placental barrier protects a fetus from toxic substances in the mother.  
p.44  
Ans:F

2.39  The greater the extent of drug-taking behavior during pregnancy, the more likely there will 
adverse consequences during labor and delivery.  
p.44  
Ans:T

2.40  Prescription drugs have little effect on pregnant woman and the newborn.  
p.45  
Ans:F

2.41  All psychoactive drugs have the same adverse effects on the fetus.  
p.45  
Ans:F
2.42 Fetal effects of methamphetamine are unknown but likely to be similar to effects of cocaine, reducing normal fetal blood flow. Ans:T

2.43 A dirty needle carries the risk of HIV-infection but not of hepatitis. Ans:F

2.44 Due to political resistance towards needle exchange programs, many operate underground. Ans:T

2.45 Needle exchange programs in many parts of the United States are illegal. Ans:T

2.46 Needle-exchange programs have increased the prevalence of heroin abuse in recent studies. Ans:F

2.47 There is a statistical association between the use of illicit drugs and crime. Ans:T

2.48 Violence resulting directly from the physiological effects of an injected drug is referred to as systemic violence. Ans:F

2.49 Tendencies toward violence have been observed during times of crack withdrawal as well as crack intoxication. Ans:T

2.50 The high price of illicit drugs on the street contributes to the incidence of economically compulsive violence. Ans:T

2.51 Systemic violence might include robbing a shopkeeper in order to get money to buy drugs. Ans:F

2.52 Under a laissez-faire philosophy, the government would assert little or no regulatory control with respect to drugs. Ans:T

2.53 Under the Harrison Act, cocaine was defined as a narcotic but opiate drugs were not. Ans:F

2.54 The smoking of opium in the United States was opposed at least in part because of the association with Chinese immigrants. Ans:T

2.55 Though cocaine was not defined as a narcotic, it was still affected by the Harrison Act of 1914. Ans:T
2.56 The Marijuana Tax Act of 1937 did not apply to growers of marijuana.

2.57 Harry J. Anslinger was the Director of the Federal Bureau of Investigation (FBI) during the 1930s.


2.59 Schedule IV drugs have the highest potential for abuse.

2.60 Heroin is an example of a Schedule I drug.

2.61 "Drug czars" were established as a result of the 1988 Anti-Drug Abuse Act.

2.62 After the overthrow of the Taliban regime in Afghanistan, opium production in that country rose sharply.

2.63 Expenditures to carry out the war on drugs are up by more than 1,400 percent since 1981.

2.64 Year to year, there is a clear-cut correlation of budget allocations used for drug regulation and the availability of illicit drugs.
MULTIPLE-CHOICE QUESTIONS FOR CHAPTER 2
(1 - easy, 2 - medium, 3 - difficult)

2.1 According to the text, the controversial part of the “drug problem” in the United States concerns
2
Ans:D
   A. where the problems are
   B. which problems are most deserving of our efforts
   C. the level of drug abuse in Asia
   D. both A and B

2.2 An extreme case of intoxication can involve which of the following non-drug substances?
2
Ans:C
   A. broccoli
   B. chocolate
   C. water
   D. sushi

2.3 If a drug is dangerous, poisonous or in some way interferes with a person’s normal functioning, that drug is said to be
1
Ans:A
   A. toxic
   B. addictive
   C. illicit
   D. acute

2.4 ________ is defined as the possibility that the short-term effects of a particular drug will
2
p.32 trigger a toxic reaction.
Ans:A
   A. Acute toxicity
   B. Collateral toxicity
   C. Conditional toxicity
   D. Chronic toxicity

2.5 A dose-response curve is generally shaped as a(n)
1
Ans:A
   A. S
   B. U
   C. inverted U
   D. inverted V

2.6 An S-shaped graph (dose-response curve) helps explain:
1
Ans:C
   A. drug addiction
   B. drug elasticity
   C. drug toxicity
   D. none of the above

2.7 As dose level rises, it is likely that the effect produced by the drug
1
Ans:A
   A. rises as well
   B. rises then falls
   C. falls then rises
   D. remains the same

2.8 An effective dose (ED) of a drug depends upon
2
Ans:C
   A. what drug effect is being observed
   B. what percentage of the test population you have specified
   C. both A and B
   D. neither A nor B
2.9 When reporting the ED50 of a drug, the “50” refers to
p.32
A. 50 milligrams of the drug
2
B. 50 percent of the test population
Ans:B
C. volunteers 50 years of age or older
D. 50 percent of the maximal dose that is possible to administer

2.10 The LD-response curve for a particular drug will always be positioned _______ with
p.32
A. on top
3
B. farther to the left
Ans:C
C. farther to the right
D. at the bottom

2.11 Analogy: The ED-response curve is to the LD-response curve as
p.32
A. effective is to lethal
2
B. emotional is to linguistic
Ans:A
C. early is to late
D. illicit is to licit

2.12 The therapeutic index is a way of comparing
p.32
A. the LD50 against the LD1
3
B. the LD1 against the ED99
Ans:D
C. the ED99 against the ED50
D. the LD50 against the ED50

2.13 The ratio of the LD50 over the ED50 is called the
p.32
A. therapeutic index
2
B. margin of safety
Ans:A
C. effective dose for a particular drug effect
D. lethal dose

2.14 The margin of safety is _______ than the therapeutic index
p.32
A. less accurate in gauging drug toxicity
2
B. simpler to calculate
Ans:C
C. more conservative in the direction of safety
D. less meaningful in general

2.15 The margin of safety is a way of comparing
p.32
A. the LD50 against the LD1
3
B. the LD1 against the ED99
 Ans:B
C. the ED99 against the ED50
D. the LD50 against the ED50

2.16 The ratio of the LD1 over the ED99 is called the
p.32
A. therapeutic index
2
B. margin of safety
Ans:B
C. effective dose for a particular drug effect
D. lethal dose

2.17 In terms of toxicity, a drug with a therapeutic index of 2 ______ a drug with a therapeutic
p.32
A. is roughly equivalent to
3
B. is safer than
Ans:C
C. is more dangerous than
D. cannot be compared to
2.18 A dash of quinine is sometimes added to street “heroin” in order to
p.33  A. simulate the bitter taste of real heroin
     B. make the heroin more injectable
Ans:A  C. strengthen the effect of the heroin
     D. weaken the effect of the heroin

2.19 The margin of safety regarding the response to illicit drugs
p.33  A. is carefully monitored by the FDA
     B. is totally unregulated
Ans:B  C. is increasingly monitored in several U.S. states
     D. is monitored by the FDA with respect to heroin

2.20 According to the text, drugs that are unauthorized copies of prescription medications are
p.33  known as:
1     A. customized drugs
Ans:C  B. copy-cat drugs
     C. look-alike drugs
     D. bootleg drugs

2.21 Drug-related deaths among celebrities
p.33  A. can give you a fairly accurate idea about the relative toxicities of psychoactive
     2 drugs
Ans:B  B. can be misleading with respect to the relative toxicity levels
     C. involve drugs that are relatively inexpensive
     D. involve information that is largely unreported

2.22 DAWN stands for the
p.35  A. District Attorney Wait-list Number (for arrests)
     1 B. Distribution of Abuse in White Non-adults
Ans:D  C. Drug Abuse Wait-list Number (for treatment)
     D. Drug Abuse Warning Network

2.23 Which of the following statements is true?
p.35  A. DAWN statistics come from analysis of data from all U.S. hospitals.
     3 B. DAWN statistics come from major U.S. metropolitan hospitals.
Ans:B  C. DAWN statistics come from primarily rural hospitals in the U.S.
     D. DAWN statistics only come from U.S. hospitals with minority populations.

2.24 Information about drug-related medical emergencies is collected by the
p.35  A. Drug Abuse Warning Network
     1 B. Omnibus Drug Act
Ans:A  C. U.S. Government in cooperation with the Canadian Government
     D. both A and C

2.25 As assessed by DAWN, drug-related ED visits refer to occurrences resulting from
p.35  A. adverse reactions to medications
     1 B. the use of dietary supplements
Ans:D  C. the use of illicit drugs
     D. all of the above

2.26 Drug-related ED visits:
p.35  A. include any and all visits to an emergency department that are related to
     recent drug use
Ans:A  B. are not counted in DAWN statistics if they result in a fatality
     C. are by definition the result of illicit drug use
     D. exclude suicide attempts
2.27 Which of the following would NOT be included as a drug-related ED visit in DAWN statistics?

A. nonmedical use of a prescription or OTC drug
B. alcohol-only consumption if the patient is younger than 21 years old
C. malicious poisoning
D. alcohol-only consumption if the patient is 21 or older

Ans:D

2.28 DAWN statistics do not include drug-related ED visits involve the ingestion of

A. alcohol in combination with other drugs
B. hallucinogens alone
C. alcohol alone, unless the patient is under the age of 21
D. hallucinogens in combination with other drugs

Ans:C

2.29 According to recent DAWN statistics, alcohol-in-combination is responsible for _______ of drug-related ED visits.

A. one-tenth
B. one-third
C. one-fourth
D. three quarters

Ans:C

2.30 Alcohol-in-combination ED visits are described as:

A. Consuming two or more different alcoholic beverages at one time
B. Using alcohol in conjunction with some other drug
C. Alcohol being combined with non-alcoholic beverages
D. None of the above

Ans:B

2.31 Which of the following is an example of an alcohol-in-combination ED visit?

A. drinking beer directly after drinking a glass of wine
B. mixing gin, whiskey, and vodka in the same beverage
C. smoking a marijuana joint while drinking beer
D. mixing vodka and orange juice in the same beverage

Ans:C

2.32 Which of the following would NOT be an example of polydrug use?

A. alcohol combined with heroin
B. alcohol combined with marijuana
C. Motrin combined with Tylenol
D. all of the above would be examples

Ans:D

2.33 According to DAWN statistics, very few drug-related deaths resulted from the use of __________ alone.

A. marijuana
B. methamphetamine
C. cocaine
D. opiates

Ans:A

2.34 Which of the following is an example of polydrug use?

A. snorting cocaine and injecting cocaine
B. drinking whiskey and drinking vodka
C. taking LSD and smoking cocaine
D. both A and C

Ans:C
2.35 If Drug A and Drug B have the same number of drug-related ED visits but Drug A is used by ten times the number of individuals as Drug B, what are the relative toxicities of the two drugs?

Ans:B
A. Drug A is more toxic than Drug B
B. Drug B is more toxic than Drug A
C. Drugs A and B have equivalent toxicities
D. Not enough information is present to judge the relative toxicities of Drugs A and B

2.36 Drug A has ten times the number of drug-related ED visits in the DAWN statistics as Drug B. Drug A is used by ten times the number of individuals as Drug B. What are the relative toxicities of the two drugs?

Ans:C
A. Drug A is more toxic than Drug B
B. Drug B is more toxic than Drug A
C. Drugs A and B have equivalent toxicities
D. Not enough information is present to judge the relative toxicities of Drugs A and B

2.37 In recent years, DAWN statistics indicate

Ans:C
A. an decline in emergencies involving methamphetamine (speed)
B. a slow decline in the number of emergencies in general
C. an increase in emergencies involving methamphetamine (speed)
D. no essential change in methamphetamine (speed) emergencies

2.38 In recent years, DAWN statistics indicate

Ans:C
A. a decline in emergencies involving narcotic analgesics (prescription pain medication)
B. a slow decline in the number of emergencies in general
C. an increase in emergencies involving narcotic analgesics
D. no essential change in emergencies involving narcotic analgesics

2.39 Heroin-related emergencies have tended to increase since the 1990s because

Ans:B
A. heroin can be injected safely
B. heroin can be used without a needle injection
C. heroin can be ingested by mouth
D. all of the above

2.40 The DAWN reports mainly focus on emergency-department cases caused by

Ans:A
A. acute toxicity
B. chronic toxicity
C. illicit drugs only
D. licit drugs only

2.41 Analogy: Acute toxicity is to chronic toxicity as

Ans:A
A. short-term is to long-term
B. licit is to illicit
C. non-lethal is to lethal
D. stimulants are to depressants

2.42 DAWN statistics provide information predominantly about

Ans:A
A. acute toxicity
B. chronic toxicity
C. drug dependence
D. alcohol abuse