**CHAPTER 1**

**Understanding the Drug Problem in America**

**Chapter 1 Multiple Choice**

Select the correct answer.

1. When there is a possibility that the *short-term* effects of a particular drug will trigger a toxic

reaction, then this drug is identified as having what level of toxicity?

a. emergency

b. acute

c. substantial

d. deadly

Answer: b

Objective: Basic terminology concerning drugs and drug-taking behavior.

Page number: 9

Level: Basic

2. Typically, medications used to treat what type of illness(s) are in the top five most

frequently reported drugs in drug-related death cases?

a. hyperactivity

b. anxiety and depression

c. alcohol psychosis

c. attention deficit disorder

Answer: b

Objective: Judging drug toxicity from drug-related deaths.

Page number: 13

Level: Intermediate

3. In nearly all metropolitan areas surveyed in the DAWN report, what are the two most frequently reported drugs?

a. opiates and cocaine

b. marijuana and alcohol

c. methamphetamines and alcohol

d. GHB and marijuana

Answer: a

Objective: The DAWN statistics as measures of acute drug toxicity.

Page number: 13

Level: Intermediate

4. What drug (*normally in combination with another drug*) is commonly the third top drug and almost always in the top five drug in the DAWN reports?

a. steroids

b. cocaine

c. alcohol

d. marijuana

Answer: c

Objective: The DAWN statistics as measures of acute drug toxicity.

Page number: 12

Level: Basic

5. According to the DAWN reports, the chronic use of what two drugs causes by far the greatest adverse health effects?

a. cocaine and alcohol

b. marijuana and GHB

c. cocaine and methamphetamines

d. alcohol and tobacco

Answer: d

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 15

Level: Intermediate

6. According to the University of Michigan study, in 2013, what percent of eighth graders

found it “fairly easy” or “very easy” to obtain alcohol beverages?

a. 38 percent

b. 44 percent

c. 56 percent

d. 89 percent

Answer: c

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 18

Level: Basic

7. What is the most frequently used drug on a daily basis by high school students?

a. alcohol

b. marijuana

c. nicotine

d. some form of inhalants

Answer: c

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 18

Level: Basic

8. A comprehensive examination of the prevalence rates of illicit drug use among Americans in

across the life span was accomplished by what survey?

a. Federal Drug Crisis Domestic Survey

b. National Survey on Drug Use and Health

c. University of Michigan Drug Survey

d. Substance Abuse and Mental Health Services Administration survey

Answer: b

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 19

Level: Basic

9. Since cocaine popularity declined in the 1990’s, what drug reemerged as a major drug of abuse since the 1990s?

a. codeine

b. heroin

c. alcohol

d. methamphetamines

Answer: b

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 15

Level: Basic

10. What is the name of the federal program in which metropolitan hospitals report the incidence of drug-related lethal and nonlethal emergencies?

a. Federal Drug Hospital Reporting System (FEDHRS)

b. Hospital Drug Abuse Reporting Network (HDARN)

c. Drug Abuse Warning Network (DAWN)

d. Drug Abuse Mandatory Reporting System (DARMS)

Answer: c

Objective: The DAWN statistics as measures of acute drug toxicity.

Page number: 12

Level: Intermediate

11. It is more common for drug-related deaths to be a result of what of drug – taking behavior?

a. multiple-drug (polydrug)

b. overdose of a single drug

c. drug abuse after

d. alcohol poisoning

Answer: a

Objective: Judging drug toxicity from drug-related deaths.

Page number: 12

Level: Basic

12. What Federal agency regulates pharmaceutical company’s drugs within the Unites States?

a. U.S. Food and Drug Administration (FDA),

b. Drug Enforcement Agency

c. Occupational Safety and Health Administration (OSHA)

d. Federal Health and Welfare Department

Answer: a

Objective: The nature of drug toxicity.

Page number: 10

Level: Basic

13. Since 1997, there has been a steady decline in illicit drug use among what grade levels?

a. eight and tenth graders.

b. fourth and sixth graders

c. six and seventh graders

d. tenth and eleventh graders

Answer: a

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 22

Level: Intermediate

14. According to the text, what illicit drug is number one most likely to result in an ED visit?

a. marijuana

b. alcohol

c. GHB

d. cocaine

Answer: d

Objective: Judging drug toxicity from drug-related deaths.

Page number: 13

Level: Intermediate

15. According to the text, what six drugs are typical examples of club drugs that are normally ingested at all night “raves” and dance clubs and parties?

a. alcohol, GHB, codeine, cocaine, Rohypnol and LSD

b. MDMA (Ecstasy), GHB, ketamine, Rohypnol, methamphetamine, and LSD.

c. marijuana, alcohol, methamphetamines, cocaine, codeine, and GHB.

d. cocaine, alcohol, Rohypnol, Ecstasy, LSD and GHB

Answer: b

Objective: Problems associated with new drugs and new drug formulations.

Page number: 15

Level: Difficult

16. The Monitoring the Future National survey is collected by which university?

a. University of Phoenix

b. Harvard University

c. University of Michigan

d. University of Nevada

Answer: c

Objective: Problems associated with new drugs and new drug formulations.

Page number: 16

Level: Basic

17. Today, Marijuana is more available and its use is more prevalent than which of the following years?

a. 1980

b. 1982

c. 1984

d. 1985

Answer: a

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 19

Level: Basic

18. What is the name for the measure of a drug’s relative safety for use, computed by the ratio of the lethal dose for 50 percent of the population over the effective dose?

a. ratio dose

b. therapeutic index:

c. toxicity index

d. lethal dose index

Answer: b

Objective: The nature of drug toxicity.

Page number: 10

Level: Intermediate

19. The majority of chemical laboratories that produce “designer drugs” are located where?

a. North America

b. Europe

c. Australia

d. Asia

Answer: d

Objective: Problems associated with new drugs and new drug formulations.

Page number: 20

Level: Basic

20. Drinking alcohol and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are two examples of licit recreational drug-taking behavior.

a. smoking tobacco

b. smoking meth

c. injecting heroin

d. snorting cocaine

Answer: a

Objective: The nature of drug toxicity.

Page number: 7

Level: Intermediate

**Chapter 1 True or False**

Select the appropriate answer, based on whether the statement is true or false.

1. When there is a possibility that the *short-term* effects of a particular drug will trigger a toxic

reaction, then this drug is identified as having what an “emergence” level of toxicity.

a. True

b. False

Answer: b

Objective: Basic terminology concerning drugs and drug-taking behavior.

Page number: 9

Level: Basic

2. Typically, medications used to treat anxiety and depression are the in the top five most frequently reported drugs in drug-related death cases.

a. True

b. False

Answer: a

Objective: The nature of drug toxicity.

Page number: 13

Level: Intermediate

3. According to the DAWN reports, the chronic use of cocaine and alcohol causes by far the greatest adverse health effects.

a. True

b. False

Answer: b

Objective: The nature of drug toxicity.

Page number: 13

Level: Intermediate

4. There are more instances of heroin use in drug-related deaths than instances of cocaine use.

a. True

b. False

Answer: a

Objective: The nature of drug toxicity.

Page number: 13

Level: Basic

5. The Federal program where metropolitan hospitals report the incidence of drug-related lethal and nonlethal emergencies is called the Federal Drug Hospital Reporting System (FEDHRS).

a. True

b. False

Answer: b

Objective: The DAWN statistics as measures of acute drug toxicity.

Page number: 22

Level: Basic

6. It is far more common for drug-related deaths to be a result of using multiple drugs (poly drug) than single drug usage.

a. True

b. False

Answer: a

Objective: Judging drug toxicity from drug-related deaths.

Page number: 12

Level: Basic

7. The Federal agency that regulates pharmaceutical companies’ drugs within the Unites States is the US Food and Drug Administration (FDA).

a. True

b. False

Answer: a

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 10

Level: Basic

8. More than four times as many Americans die from tobacco-related illnesses such as cardiovascular and respiratory diseases and cancer as those that die from alcohol and illicit drug related problems.

a. True

b. False

Answer: a

Objective: The nature of drug toxicity.

Page number: 15

Level: Intermediate

9. The Monitoring the Future National asks students in eighth, tenth, and twelfth grades to participate in order to examine trends in drug taking behavior.

a. True

b. False

Answer: a

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 16

Level: Intermediate

10. The name for the measure of a drug’s relative safety for use, computed by the ratio of the lethal dose for 50 percent of the population over the effective dose is called toxicity index.

a. True

b. False

Answer: b

Objective: The nature of drug toxicity.

Page number: 22

Level: Basic

11. Acute toxicity is the physical or psychological harm a drug might present to the user immediately or soon after the drug enters the body.

a. True

b. False

Answer: a

Objective: Basic terminology concerning drugs and drug taking behavior.

Page number: 9

Level: Basic

12. Brain damage and seizure are two serious risks associated with high doses of alcohol content in OTC products such as Dextromethorphan found in cold medicines and Nyquil.

a. True

b. False

Answer: a

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 7

Level: Intermediate

13. The most frequently used drug on a daily basis by high school students is marijuana.

a. True

b. False

Answer: b

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 18

Level: Basic

14. In 2011, patients admitted for drug- related ED visits were twice as likely to be females compared to males.

a. True

b. False

Answer: b

Objective: Judging drug toxicity from drug-related deaths.

Page number: 13

Level: Basic

15. Alcohol (*normally in combination with another drug*) is commonly the third top drug and almost always in the top five in the DAWN reports.

a. True

b. False

Answer: a

Objective: The DAWN statistics as measures of acute drug toxicity.

Page number: 13

Level: Basic

16. Marijuana is far less prominent in drug-related deaths, and when there are reports of its involvement, it is almost exclusively in the context of multiple-drug rather than single-drug use.

a. True

b. False

Answer: a

Objective: Judging drug toxicity from drug-related deaths.

Page number: 13

Level: Intermediate

17. In 2011, patients were about twice as likely to be female as male in ED visits involving illicit drugs, with the ratio increasing to about six to one in cases involving LSD.

a. True

b. False

Answer: b

Objective: The DAWN statistics as measures of acute drug toxicity.

Page number: 13

Level: Basic

18. Since 1997, there has been a steady decline in illicit drug use among eighth and tenth graders

and young adults.

a. True

b. False

Answer: a

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 22

Level: Basic

19. Over the last 30 years or so, the prevalence trends for regular drug use and perceived risk form an almost exact mirror image of each other. As perceived risk goes up, the level of regular drug use goes down.

Answer: a

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 22

Level: Intermediate

**Chapter 1 Fill in the Blank**

Fill in the appropriate answer.

1. In nearly all metropolitan areas surveyed in the DAWN report, the two drugs \_\_\_\_\_\_\_\_\_\_ and cocaine are the two most frequently reported drugs.

Answer: opiates

Objective: The DAWN statistics as measures of acute drug toxicity.

Page number: 13

Level: Intermediate

2. When there is a possibility that the *short-term* effects of a particular drug will trigger a toxic reaction, then this drug is identified as having some level of \_\_\_\_\_\_\_\_\_\_ toxicity.

Answer: acute

Objective: The nature of drug toxicity.

Page number: 9

Level: Intermediate

3. Typically, medications used to treat \_\_\_\_\_\_\_\_\_\_ and / or anxiety are the in the top five most frequently reported drugs in drug-related death cases.

Answer: depression

Objective: Judging drug toxicity from drug-related deaths.

Page number: 13

Level: Intermediate

4. It is far more common for drug-related deaths to be a result of using multiple drugs termed \_\_\_\_\_\_\_\_\_\_ than single drug usage.

Answer: polydrug

Objective: Judging drug toxicity from drug-related deaths.

Page number: 13

Level: Basic

5. The Federal agency \_\_\_\_\_\_\_\_\_\_ regulates pharmaceutical company’s drugs within the Unites States.

Answer: FDA

Objective: Basic terminology concerning drugs and drug taking behavior.

Page number: 10

Level: Basic

6. \_\_\_\_\_\_\_\_\_\_ drugs are drugs whose manufacture, sale, or possession is illegal.

Answer: Illicit

Objective: Basic terminology concerning drugs and drug taking behavior.

Page number: 4

Level: Basic

7. The \_\_\_\_\_\_\_\_\_\_ index is the measure of a drug’s relative safety for use, computed by the ratio of the lethal dose for 50 percent of the population.

Answer: therapeutic

Objective: The nature of drug toxicity.

Page number: 10

Level: Intermediate

8. The \_\_\_\_\_\_\_\_\_\_ of safety is the ratio of lethal dose for 1 percent of the population to the effective dose for 99 percent of the population.

Answer: margin

Objective: The nature of drug toxicity.

Page number: 10

Level: Intermediate

9. In 2011 patients were about\_\_\_\_\_\_\_\_\_\_ as likely to be male as female in ED visits involving illicit drugs.

Answer: twice

Objective: Judging drug toxicity from drug-related deaths.

Page number: 13

Level: Intermediate

10. The physical or psychological harm a drug might cause over a long period of time is called \_\_\_\_\_\_\_\_\_\_\_\_ toxicity.

Answer: chronic

Objective: Prevalence rates of illicit and licit drug use in the United States.

Page number: 15

Level: Intermediate

11. Drug\_\_\_\_\_\_\_\_\_\_ is a condition in which an individual feels a compulsive need to continue taking a drug.

Answer: dependence

Objective: Basic terminology concerning drugs and drug taking behavior.

Page number: 4

Level: Basic

12. Drug taking behavior resulting in some form of physical, mental, or social impairment is called drug \_\_\_\_\_\_\_\_\_\_.

Answer: abuse

Objective: Basic terminology concerning drugs and drug taking behavior.

Page number: 7

Level: Basic

13. The higher the margin of \_\_\_\_\_\_\_\_\_\_ ratio, the less toxic the drug.

Answer: safety

Objective: Basic terminology concerning drugs and drug taking behavior.

Page number: 10

Level: Basic

**Chapter 1 Matching**

Match up the terminology in the left column to the definitions in the right column.

|  |  |
| --- | --- |
| 1. Margin of safety: | a. The physical or psychological harm a drug might present to the user immediately or soon after the drug is ingested into the body |
| 2. Therapeutic index | b. The minimal dose of a particular drug necessary to produce the intended drug effect in a given percentage of the population |
| 3. Acute toxicity | c. The ratio of a lethal dose for 1 percent of the population to the effective dose for 99 percent |
| 4. Effective dose (ED): | d. A measure of a drug’s relative safety for use, computed by the ratio of the lethal dose for 50 percent of the population over the effective dose for 50 percent of the population |
| 5. Lethal dose (LD): | e. The minimal dose of a particular drug capable of producing death in a given percentage of the population |
| 6. Drug Abuse Warning Network (DAWN) | f. the physical or psychological harm a drug might cause over long period of use |
| 7. Poly drug | g. the physical or psychological harm that a drug might present to the user |
| 8. Drug related ED visit | h. a Federal program in which metropolitan hospitals report the incidence of drug-related lethal and non-lethal emergencies |
| 9. Chronic toxicity | i. an occasion on which a person visits an emergency department (ED)for a purpose that is related to recent drug use |
| 10. Toxicity | j. involving multiple drugs. |

Answers:

1. \*c

2. \*d

3. \*a

4. \*b

5. \*e

6. \*h

7. \*j

8. \*i

9. \*f

10. \*g

Objective: The nature of drug toxicity

Page number: 8-10

Level: Intermediate

**Chapter 1 Essay**

Explain in detail the concepts listed below.

1. Define the definition of toxicity and explain the relationship it has with acute toxicity, effective dose, and the dose – response curve.

Answer: Any substance, no matter how benign, has the potential for toxicity if the dose—the amount in which the substance is taken—is high enough. The question of a drug’s safety, or its relative safety when compared to other drugs, centers on the possibility that it may be toxic at relatively low doses.

Toxicity is the physical or psychological harm that a drug might present to the user. When there is a possibility that the *short-term* effects of a particular drug will trigger a toxic reaction, then this drug is identified as having some level of acute toxicity. Acute toxicity is the physical or psychological harm a drug might present to the user immediately or soon after the drug is ingested into the body.

The dose-response curve is the increasing probability of a certain drug effect as the dose level rises. The effective dose is the minimal dose of a particular drug necessary to produce the intended drug effect in a given percentage of the population.

Objective: The nature of drug toxicity.

Page number: 9

Level: Intermediate

2. Explain what US government agency gathers data concerning drug – related medical emergencies in hospitals. Be sure to include the Network’s two major concerns, the seven major circumstances most frequently addressed, and at least 2 statistics relating to the emergencies reported.

Answer: The U.S. government currently gathers data concerning drug-related medical emergencies in major metropolitan hospitals through a program called the Drug Abuse Warning Network (DAWN).

Two basic types of information are reported. The first concerns the number of times an individual visits an emergency department These drug - related EDvisits involve a wide range of drug-related situations: suicide attempts, malicious poisoning, overmedication, and adverse reactions to medications, as well as the use of illicit drugs, the use of dietary supplements, and the nonmedical use of prescription or over-the-counter (OTC) drugs.

The second type of information concerns the number of drug-related deaths, as determined by a coroner or medical examiner. The proportion of drug-related ED visits involving alcohol use requires some explanation.

The seven major concerns are: (1) Illicit drugs with alcohol and medications, (2) alcohol with medications, (3) illicit drugs with medications, (4) illicit drugs with alcohol, (5) illicit drugs only, (6) alcohol only, and (7) medications only.

About one-fourth (26 percent) of drug related ED visits in 2008 involved some use of alcohol in combination with an illicit drug, with a prescription or OTC medication, or with an illicit drug and a medication. Approximately 46 percent of all ED visits in 2008 were associated with either drug abuse or drug misuse. Two-thirds of all drug-related ED visitsinvolved an adverse experience with either a prescription or an OTC medication (33 percent), with illicit drugs alone (25 percent) or with a combination of medications and illicit drugs (8 percent).

Objective: Judging drug toxicity from drug-related deaths.

Page number: 12-14

Level: Difficult

3. Distinguish between brand names, generic names, and street names of drugs.

Answer: Brand names are given once a pharmaceutical manufacturer receives official governmental approval to hold a patent on the new drug. Generic names are the chemical names of drugs. Street names refer to slang terms generated by a subculture of drug users for a particular illicit drug or combination.

Objective: Basic terminology concerning drugs and drug taking behavior

Page number: 6

Level: Basic

**Chapter 1 Critical Thinking**

Explain in detail.

1. Define “Club Drugs”, and discuss what types of drugs are included in this category and the health risks when individuals participate in this drug – taking behavior. Conclude with why this category of is important to watch and what trends of use or changes in legislature has occurred. (Outside research may be required.)

Answer: A serious concern in today’s drug scene has been the popularity of “club drugs,” a term referring to substances typically ingested at all-night dance parties (“raves”), dance clubs, and bars. Examples of club drugs include MDMA (Ecstasy), GHB, ketamine, Rohypnol, methamphetamine, and LSD.

When used in combination with alcohol, as they often are, these drugs carry considerably increased health risks, beyond their own individual toxicities. Since many club drugs are colorless, tasteless, and odorless, they can be slipped unobtrusively into drinks by individuals who want to intoxicate or sedate others. The potential danger of sexual assault is a major problem.

Objective: Problems associated with new drugs and new drug formulations.

Page number: 15

Level: Difficult

2. The terms instrumental and recreational use, licit and illicit, and drug misuse and drug abuse are all intermingled , but it is important to understand what they mean individually and how they relate to each other. Define these terms and explain how they can relate to each other. Provided a mini case example of each. Conclude with a discussion of how these terms or concepts can sometimes overlap or change with societies opinions.

Answer: Recreational use refers to the motivation of a drug user who takes a drug to get “high” or achieve some pleasurable effect. Instrumental use refers to the motivation of a drug user who takes a drug for a specific purpose other than getting “high”. Drug misuse is drug-taking behavior in which a prescription or nonprescription drug is used inappropriately. Drug abuse drug-taking behavior resulting in some form of physical, mental, or social impairment. Illicit drugs are drugs that the manufacture, sale, or possession is illegal. Licit drugs are drugs that the manufacturing, sale, and possession are legal.

Our society determines that a particular drug is licit, if that drug use is legitimate in serving a purpose, and at what point that drug becomes misused or abused. For example drinking alcohol is licit if you are over 21 years old. Alcohol has a recreational purpose and if used inappropriately it can be misused or abused. Cocaine was once licit, used recreationally and instrumentally, and later deemed illicit and considered to be misuse or abuse if consumed. Examples for each type of relationship should vary. Figure 1.2 might prove helpful.

Objective: Basic terminology concerning drugs and drug-taking behavior.

Page number: 4-7

Level: Intermediate