

## CHAPTER 2

### Understanding the Drug Problem in America

#### Chapter 2 Multiple Choice

Select the correct answer. (*Difficulty levels: Basic, Intermediate, Difficult*)

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 - acute toxicity

Objective: The nature of drug toxicity

Page number: 29

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 - anxiety and depression

Objective: Judging drug toxicity from drug-related deaths

Page number: 34

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 - opiates and cocaine

Objective: The DAWN statistics as measures of acute drug toxicity

Page number: 34

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 – alcohol

Objective: The DAWN statistics as measures of acute drug toxicity

Page number: 34

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. alcohol and tobacco

Objective: Patterns of drug use among adolescents, college students, and young adults

Page number: 36

Level: Intermediate

6. According to the University of Michigan study, in 2009, what percent of eighth graders found it “fairly easy” or “very easy” to obtain alcohol beverages?

- a. 38 percent
- b. 44 percent
- c. 62 percent
- d. 89 percent

Answer: c - 62 percent

Objective: Patterns of drug use among adolescents, college students, and young adults

Page number: 41

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 – nicotine

Objective: Patterns of drug use among adolescents, college students, and young adults

Page number: 41

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 - National Survey on Drug Use and Health Objective:

Objective: Patterns of drug use among diverse populations in the United States

Page number: 43

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 - heroin

Objective: Patterns of drug use among adolescents, college students, and young adults

Page number: 44

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 - Drug Abuse Warning Network (DAWN):

Objective: The DAWN statistics as measures of acute drug toxicity

Page number: 32

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.- multiple-drug (polydrug)

Objective: Judging drug toxicity from drug-related deaths

Page number: 34

Level: Basic

12. What Federal agency regulates pharmaceutical company's drugs within the United 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 - US Food and Drug Administration

Objective: The nature of drug toxicity

Page number: 31

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 - eight and tenth graders

Objective: Patterns of drug use among adolescents, college students, and young adults

Page number: 39

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 - cocaine

Objective: Judging drug toxicity from drug-related deaths

Page number: 34

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

Objective: Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold.

Page number: 44

Level: Difficult

16. According to the Monitoring the Future National survey results on drug use, in 2009, about how many young adults, aged 18 to 25 years, had used prescription pain relievers on a recreational basis in the past year?

- a. 200,000 young adults
- b. 2.8 million young adults
- c. four million young adults
- d. seven and a half million young adults.

Answer: c - four million young adults

Objective: Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold.

Page number: 45

Level: Intermediate

17. In 2009, approximately 6 percent of high school seniors reported taking OTC cough-and-cold medications, for the purpose of getting high. What is the slang term for this behavior?

- a. robo-tripping
- b. tripping
- c. misting

d. Pharming

Answer: a – robo – tripping

Objective: Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold

Page number: 47

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 - Therapeutic Index

Objective: The nature of drug toxicity

Page number: 30

Level: Intermediate

19. In 2006, how many young adults between 12 and 25 years of age were estimated to have misused OTC products containing dextromethorphan in the previous year?

- a. 300,000 individuals
- b. nearly 500,000 individuals
- c. 700,000 individuals
- d. nearly 1 million individuals

Answer: d - nearly 1 million individuals

Objective: Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold

Page number: 47

Level: Basic

20. What serious risk is associated with high doses of alcohol content in OTC products such as dextromethorphan found in cold medicines and Nyquil?

- a. brain damage and seizure
- b. incoherence
- c. mental retardation
- d. cardiac arrests

Answer: a – brain damage and seizure

Objective: The nature of drug toxicity

Page number: 47

Level: Intermediate

## Chapter 2 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: False – acute toxicity

Objective: The nature of drug toxicity

Page number: 29

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: True

Objective: The nature of drug toxicity

Page number: 34

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: False – tobacco and alcohol

Objective: The nature of drug toxicity

Page number: 36

Level: Intermediate

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

- a. True
- b. False

Answer: True

Objective: The nature of drug toxicity

Page number: 34

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: False – Drug abuse warning network – DAWN

Objective: The DAWN statistics as measures of acute drug toxicity

Page number: 32

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: True

Objective: Judging drug toxicity from drug-related deaths

Page number: 34

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: True

Objective Patterns of drug use among diverse populations in the United States

Page number: 31

Level: Basic

8. Approximately 6 percent of high school seniors reported in 2009 taking OTC cough-and-cold medications, such as Coricidin Cough and Cold Tablets, Robitussin products, and Nyquil, for the purpose of getting high. The commonly used slang term for this behavior is robo-tripping.

- a. True
- b. False

Answer: True

Objective: Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold

Page number: 47

Level: Intermediate

9. According to the Monitoring the Future: National survey results on drug use, in 2009, around ten (10) million young adults, aged 18 to 25 years, had used prescription pain relievers on a recreational basis in the past year.

- a. True
- b. False

Answer: False – 4 million

Objective: Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold

Page number: 45

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: False- therapeutic index

Objective: The nature of drug toxicity  
Page number: 30  
Level: Basic

11. In 2006, nearly 1 million individuals between 12 and 25 years of age were estimated to have misused Cough and Cold Tablets, products containing dextromethorphan products.
- True
  - False

Answer: True

Objective: Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold

Page number: 47  
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.
- True
  - False

Answer: True

Objective: Patterns of drug use among adolescents, college students

Page number: 47  
Level: Intermediate

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

Answer: False – nicotine

Objective: Patterns of drug use among adolescents, college students

Page number: 41  
Level: Basic

14. In 2008, of the approximately 993,000 illicit drug- related ED visits, the largest number of cases involved methamphetamines.

- True
- False

Answer: False – cocaine

Objective: Judging drug toxicity from drug-related deaths

Page number: 34  
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.

- True
- False

Answer: True

Objective: The DAWN statistics as measures of acute drug toxicity



Page number: 34

16. In 2008, of the approximately 993,000 illicit drug- related ED visits, the largest number of cases involved cocaine.

- a. True
- b. False

Answer: True

Objective: Judging drug toxicity from drug-related deaths

Page number: 34

Level: Basic

17. In 2008, 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: False – most are men

Objective: The DAWN statistics as measures of acute drug toxicity

Page number: 34

Level: Basic

18. In 2008, patients were about twice as likely to be male as female in ED visits involving illicit drugs, with the ratio increasing to about six to one in cases involving the drug GHB.

- a. True
- b. False

Answer: False - The drug is LSD

Objective: Judging drug toxicity from drug-related deaths

Page number: 34

Level: Basic

19. 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: True

Objective: Patterns of drug use among adolescents, college students, and young adults

Page number: 39

Level: Basic

20. The alcohol content in many cough-and-cold medications, such as Coricidin HBP Cough and Cold Tablets is up to 40 percent.

Answer: False – 10 %

Objective: Patterns of drug use among adolescents, college students, and young adults

Page number: 47

Level: Basic

## Chapter 2 Fill in the Blank

Fill in the appropriate answer.

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

Answer: opiates and cocaine

Objective: The DAWN statistics as measures of acute drug toxicity

Page number: 34

Level: Difficult

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: 29

Level: Intermediate

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

Answer: depression / anxiety

Objective: Judging drug toxicity from drug-related deaths

Page number: 34

Level: Difficult

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: 34

Level: Basic

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

Answer: Food and Drug Administration (FDA).

Objective: Patterns of drug use among adolescents, college students, and young adults

Page number: 31

Level: Basic

6. Approximately 6 percent of high school seniors reported in 2009 taking OTC cough-and-cold medications, such as Coricidin and Nyquil, for the purpose of getting high. The commonly used slang term for this behavior is \_\_\_\_\_.

Answer: robo-tripping Or skittling

Objective: Patterns of drug use among diverse populations in the United States

Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold

Page number: 47  
Level: Intermediate

7. The \_\_\_\_\_ 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 index  
Objective: The nature of drug toxicity  
Page number: 30  
Level: Basic

8. According to the Monitoring the Future: National survey results on drug use, in 2009, around \_\_\_\_\_ individuals, aged 18 to 25 years, had used prescription pain relievers on a recreational basis in the past year.

Answer: four (4) million  
Objective: Patterns of drug use among diverse populations in the United States  
Page number: 45  
Level: Basic

9. In 2008 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: 34  
Level: Intermediate

10. In 2008 patients were about \_\_\_\_ times as likely to be male as female in ED visits involving illicit drugs cases involving LSD.

Answer: six  
Objective: Judging drug toxicity from drug-related deaths  
Page number: 34  
Level: Intermediate

11. In 2008, of the approximately 993,000 illicit drug- related ED visits, the largest number of cases involved the drug \_\_\_\_\_.

Answer: cocaine  
Objective: Judging drug toxicity from drug-related deaths  
Page number: 34  
Level: Basic

12. The serious risk of \_\_\_\_\_ and \_\_\_\_\_ is associated with high doses of alcohol content in OTC products such as Dextromethorphan found in cold medicines and Nyquil.

Answer: brain damage and seizure  
Objective: The nature of drug toxicity  
Page number: 47  
Level: Intermediate

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

Answer: safety

Objective: Factors determining the physiological impact of drugs

Page number: 30

Level: Basic

## Chapter 2 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: 29

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 ED visits 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 visits involved 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: 32 - 34

Level: Difficult

3. 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.

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: Patterns of drug use among diverse populations in the United States

Club drugs as well as the nonmedical use of prescription pain relievers, prescription stimulant medications, and nonprescription cough-and cold

Page number: 44

Level: Basic

## Chapter 2 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..

Answers:

1. \*[c]

Objective: The nature of drug toxicity

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Level: Difficult

2. \*[d]

Objective: The nature of drug toxicity

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Level: Difficult

3. \*[a]

Objective: The nature of drug toxicity

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Level: Difficult

4. \*[b]

Objective: The nature of drug toxicity

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Level: Difficult

5. \*[e]

Objective: The nature of drug toxicity

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Level: Difficult