

CHAPTER 2: CLASSIFICATION OF DRUGS

Chapter Overview and Rationale

In contrast to most of the textbooks in this field, this is the only chapter on basic pharmacology. This amount of coverage is reflective of our target audience. Mental health professionals, who do not directly provide AOD treatment, do not require (nor would they be likely to recall) extensive and technical information on alcohol and other drugs of abuse. Our intent was to provide a manageable amount of information, that, when combined with classroom presentations, would provide a minimum knowledge base for the generalist in the mental health field. In doing so, we only included information that we felt would be helpful to this type of practitioner. In the introduction to the chapter, we point this out and suggest additional readings for a more comprehensive investigation of these topics.

After the case examples and introduction, there is some discussion of the Controlled Substances Act. A section titled "The Concept of Dangerousness" follows. Most readers will have some vague awareness of the federal schedule of drugs, and this section should provide an accurate understanding. However, we also wanted to begin to introduce the notions that legal drugs are dangerous, that public policy is often illogical with respect to alcohol and other drugs, and that any drug can be used in a problematic manner.

There is a section of definitions in this chapter. Since there is so much disparity in the way terms are used in this field, it seemed reasonable to discuss the definitions we use and to do so prior to discussing these terms in Chapter 2. We have included a section on the neurobiology of addiction with an illustration to enhance understanding.

In discussing the properties of tobacco, alcohol, and other drugs, we use a fairly common classification system. We are sure that you, like we, have seen others or have seen some drugs classified differently. As was discussed earlier, the headings in each drug classification were chosen by assessing the importance of the information for the mental health professional working in schools and other settings. While the drugs in this section do not share pharmacological similarities, the extensive publicity on Club Drugs convinced us that there was a need to discuss these drugs separately. We mention methamphetamine much more frequently in the section on CNS stimulants. Also, all prevalence data have been updated. We have included a section on anabolic steroids, and psychotropic medications, including those used in the treatment of Attention Deficit-Hyperactivity Disorder.

Classroom Activities

1. This is a good time to have a physician as guest speaker to talk about the physical effects of tobacco, alcohol and other drugs. If you are not a pharmacology expert, some of the more technical questions can be answered by physicians who specialize in addiction medicine. It often is also helpful to have someone speak (i.e., psychiatrist) who prescribes medications for mental disorders.
2. Videos about the effects of substances on the body can be useful in this section. The information can tend to be dry, and the visual effects of films can make this subject more interesting to students.

3. After reading the text, and listening to any speakers or watching films about this topic, students can be asked to (individually or in groups) develop their own "Schedule of Controlled Substances" (including tobacco and alcohol) with their rationale for their choices.

Multiple Choice Questions

1. The Comprehensive Drug Abuse Prevention and Control Act categorizes drugs:
 - a. according to the latest scientific evidence
 - b. according to abuse potential and approved medical uses of the drug
 - c. based on drug classifications
 - d. based on the recommendations of the Drug Enforcement Agency

2. The danger of a drug is a function of:
 - a. the legality of the drug
 - b. the schedule classification of the drug in the Comprehensive Drug Abuse Prevention and Control Act
 - c. the number of deaths per year caused by use of the drug
 - d. the acute and chronic effects of the drug and the route of administration

3. Psychological dependence on alcohol or another drug indicates that:
 - a. a person needs the substance to think, feel, and function normally
 - b. a person demonstrates tolerance and withdrawal
 - c. the tissues of the body require the drug
 - d. when alcohol or other drug use is discontinued, the person exhibits mental disorders

4. In defining terms used in the AOD field:
 - a. there is consistent agreement among professionals regarding terms such as "addiction" and "dependence"
 - b. "chemical dependency" means addiction to narcotics
 - c. addiction refers to psychological and/or physical dependence on alcohol or other drugs
 - d. tolerance and withdrawal are necessary and sufficient conditions for "addiction"

5. The neurobiology that explains how most drugs are highly reinforcing involves:
 - a. direct action in the hippocampus area of the brain
 - b. the neurotransmitter dopamine
 - c. a larger reward center in the brain of addicts
 - d. increased blood flow to the brain when drugs are taken

6. The CNS depressants include:
 - a. barbiturates, minor tranquilizers, and certain over-the-counter drugs
 - b. alcohol, cannabis, and minor tranquilizers
 - c. alcohol, heroin, and barbiturates
 - d. minor tranquilizers, Quaalude, and cannabis

7. Overdose on CNS depressants:
 - a. occurs rarely but is quite dangerous
 - b. is due to the synergistic effect of alcohol and barbiturates
 - c. frequently occurs in the case of alcohol use
 - d. is a leading method of suicide with Valium

8. Which of the following is true with regard to tolerance and withdrawal for CNS depressants?
- tolerance rapidly occurs and withdrawal can be medically dangerous
 - tolerance rapidly occurs and withdrawal is unpleasant but not dangerous
 - reverse tolerance occurs between alcohol and Xanax
 - tolerance occurs rapidly to alcohol but not to other CNS depressants
9. Compared to other drug classifications: CNS depressants
- cause fewer deaths than cocaine, methamphetamine, and heroin
 - are less harmful than other drugs because there is little harm from low level alcohol use
 - are extremely dangerous due to the overprescribing of minor tranquilizers such as Valium and Xanax
 - cause more acute and chronic harm than most other psychoactive drugs
10. The CNS stimulants include:
- methamphetamine, crack, and nicotine
 - Quaalude, cocaine, and caffeine
 - amphetamine, nicotine, and peyote
 - cocaine, methamphetamine, and Antabuse
11. The acute effects of CNS stimulants include:
- respiratory depression, rapid heart rate, and a feeling of confidence
 - increased psychomotor activity, alertness, and reduction of fatigue
 - euphoria, tachycardia, and enhanced sexual pleasure
 - paranoia, agitation, and increased CNS activity
12. Which is true with regard to tolerance and withdrawal for CNS stimulants?
- tolerance develops rapidly and withdrawal is medically dangerous
 - cross-tolerance develops and withdrawal must be medically supervised
 - tolerance rapidly develops and withdrawal is unpleasant
 - tolerance develops slowly and withdrawal requires psychotropic medications
13. The withdrawal from opioids:
- is medically dangerous
 - is analogous to a severe case of the flu
 - should be treated with benzodiazepines
 - has been over exaggerated by the media
14. Which of the following is not an acute or chronic effect of opioids?
- insomnia
 - euphoria
 - respiratory depression
 - death from overdose
15. Hallucinogens differ from many other classifications of psychoactive drugs in that:
- the duration of effect is considerably longer
 - the overuse of hallucinogens can cause suicidal ideation
 - these drugs are mainly abused by artistic individuals
 - no physical dependence has been demonstrated

16. Which of the following is not true with regard to marijuana?
a. use results in altered time sense and impaired immediate recall
b. most reports of overdose are panic reactions
c. neither tolerance nor withdrawal has been demonstrated
d. there are probably medical uses for marijuana

17. Chronic use of marijuana:
a. has an adverse effect on lung function, increases heart rate, suppresses the immune system, and decreases testosterone
b. results in lung dysfunction, a motivational syndrome, sterility, and impaired reaction time
c. can cause lung cancer in polydrug drug abusers
d. impairs short and long term memory, reduces ambition, increases appetite, and impedes sexual potency

18. The major danger of inhalant use by young people is:
a. it leads to use of more dangerous drugs
b. the acute and chronic effects of these substances
c. the synergistic effect with alcohol
d. impaired cognitive functioning

19. Which of the following is usually not considered a Club Drug?
a. Rohypnol
b. Suboxone
c. MDMA
d. Ketamine

20. Anabolic steroids
a. have no medically useful function
b. can cause death or serious medical problems in high doses
c. contrary to popular belief, do not increase body mass
d. can result in a withdrawal syndrome but no tolerance has been demonstrated

21. The "second generation" anti-depressants are being prescribed frequently because:
a. they have a more rapid onset of effect and fewer adverse side effects than other anti-depressants
b. Prozac may cause homicidal or suicidal behavior
c. MAO inhibitors can cause heart attacks
d. they are more effective than tricyclics in controlling depression

22. Major tranquilizers are used to control the symptoms of psychotic disorders. Which of the following is not true about these drugs:
a. they produce psychomotor slowing, emotional quieting, and an indifference to external stimuli
b. no tolerance or withdrawal occurs
c. disordered motor movements, slow motor movements, and under activity occurs
d. physical and psychological dependence occurs

Multiple Choice Answer Key:

1. ANSWER: b
2. ANSWER: d
3. ANSWER: a
4. ANSWER: c
5. ANSWER: b
6. ANSWER: a
7. ANSWER: c
8. ANSWER: a
9. ANSWER: d
10. ANSWER: a
11. ANSWER: b
12. ANSWER: c
13. ANSWER: b
14. ANSWER: a
15. ANSWER: d
16. ANSWER: c
17. ANSWER: a
18. ANSWER: b
19. ANSWER: b
20. ANSWER: d
21. ANSWER: a
22. ANSWER: d