Haveles: Applied Pharmacology for the Dental Hygienist, 6th Edition

Chapter 01: Information, Sources, Regulatory Agencies, Drug Legislation, and Prescription Writing

Test Bank

MULTIPLE CHOICE

1. Knowledge of pharmacology aids the dental professional in:

a. Obtaining a patient's health history
b. Administering drugs in the office
c. Handling emergency situations
d. Life-long learning
e. All of the above

ANS: e
Correct: Because many of our patients are being treated with drugs, knowledge of pharmacology helps in understanding and interpreting patients' responses to health history questions. Knowledge of the therapeutic and adverse effects of medications obviously helps in their proper administration in the office. Emergency situations may be caused by drugs or treated by drugs; thus knowledge of pharmacology is of great help, especially because a rapid response is sometimes required. A clear understanding of the concepts of drug action, drug handling by the body, and drug interactions will allow the dental practitioner to make proper judgments and grasp the concepts relevant to new drug therapies on the market.
Incorrect choices: All of the choices are true.

REF: pp. 3-4

2. Which of the following statements is true regarding planning appointments?

a. Whether or not patients are taking medication for systemic diseases is of little consequence in the dental office.
b. Asthmatic patients should have dental appointments in the morning.
c. Diabetic patients usually have fewer problems with a morning appointment compared with afternoon appointments.
d. Both b and c are correct.

ANS: c
Correct: Diabetic patients usually have relatively fewer problems with a morning appointment.
Incorrect choices: Asthmatic patients should have afternoon appointments. Patients taking medication for systemic diseases may require special handling in the dental office.

REF: p. 3

3. Nutritional or herbal supplements:

a. Carry the U.S. Food and Drug Administration (FDA) approval for disease states
b. Are not drugs
c. Can cause adverse effects
d. Will not interact with other drugs the patient may be taking

ANS: c
Correct: Nutritional or herbal supplements are quite capable of causing adverse effects.
Incorrect choices: The vast majority of nutritional or herbal supplements do not carry FDA approval for treating disease states. These supplements are drugs and can cause adverse effects and interact with different drugs.

REF: p. 3

4. A side effect is defined as:

a. An unpredictable response to drugs that acts on nontarget organs
b. An unpredictable response to drugs that acts on target organs
c. A predictable response to drugs that acts on nontarget organs
d. A predictable response to drugs that acts on target organs
e. An allergic response to a drug

ANS: c
Correct: Side effects refer to predictable responses to drugs that act on nontarget organs.
Incorrect choices: Allergy refers to an allergic response to a drug.

REF: p. 4

5. Which type of drug name usually begins with a lower case letter?

a. Brand name
b. Code name
c. Generic name
d. Trade name

ANS: c
Correct: Before any drug is marketed, it is given a generic name that becomes the “official” name of the drug. Each drug is assigned only one generic name selected by the U.S. Adopted Name Council, and the name is not capitalized.
Incorrect choices: The brand name is equivalent to the trade name and is capitalized. Although the brand name is technically the name of the company marketing the product, this term is often used interchangeably with the trade name. The code name is the initial term used within a pharmaceutical company to refer to a drug while it is undergoing investigation

and is often a combination of capital letters and numbers, the letters representing an abbreviation of the company name.

REF: p. 4

6. A drug's generic name is selected by the:

a. Pharmaceutical company manufacturing it
b. FDA
c. U.S. Adopted Name Council
d. Federal Patent Office

ANS: c
Correct: Each drug is assigned only one generic name (e.g., cola). It is selected by the U.S. Adopted Name Council.
Incorrect choices: The generic name is not selected by the FDA or the Federal Patent Office. The pharmaceutical company manufacturing the drug clearly has an influence on the generic name given their drug, but the final decision is not theirs.

REF: pp. 4, 6

7. The trade name of a drug will appear:

a. In parentheses before the generic name
b. In parentheses after the generic name
c. Before the generic name, which will appear in parentheses
d. After the generic name, which will appear in parentheses

ANS: b
Correct: The trade name of a drug will appear in parentheses after the generic name.
Incorrect choices: The pharmaceutical company discovering the drug gives the drug a trade name. Newer drugs are usually known by their trade name. Old and traditional drugs are often known by their generic name.

REF: p. 4

8. Which of the following choices is the most common reference book in the dental office?

a. United States Pharmacopeia-Drug Information (USP DI)
b. Physicians' Desk Reference (PDR)
c. Mosby's Dental Drug Reference
d. Lexi-Comp's Drug Information Handbook for Dentistry

ANS: b
Correct: The PDR is the most common reference book in the dental office because of its historically inexpensive price.

Incorrect choices: The USP DI provides the health professional with necessary information regarding basic pharmacology and pharmacokinetics, dosing, adverse reactions, and drug interactions. Mosby's Dental Drug Reference provides access to information on drugs commonly taken by patients. Lexi-Comp's Drug Information Handbook for Dentistry contains concise lists of drug attributes and sections relevant to dentistry for each drug.

REF: p. 5

9. How many years must pass after a drug patent expires before other drug companies can market the same compound as a generic drug?

a. 20 years
b. 17 years
c. 7 years
d. 0 years

ANS: d
Correct: Once a drug patent expires, competing companies may immediately market the same compound in generic form.
Incorrect choices: After 17 years, the patent of the original drug expires, and other companies can market the same compound under a generic name.

REF: p. 6

10. Two drug formulations that produce similar concentrations in the blood and tissues after drug administration are considered to be _____ equivalent.

a. Chemically
b. Biologically
c. Therapeutically

ANS: b
Correct: Biologic equivalence refers to identical pharmacokinetic parameters of two drug formulations (bioequivalence, for short).
Incorrect choices: Chemical equivalence indicates that two formulations of a drug meet the chemical and physical standards established by the regulatory agencies. Therapeutic equivalence means that two formulations produce the same therapeutic effects over the same duration.

REF: p. 6

11. The federal body that determines whether a drug is considered as a controlled substance and to which schedule it belongs is the:

a. FDA
b. Federal Trade Commission (FTC)

c. Drug Enforcement Administration (DEA)
d. United States Pharmacopeia (USP)

ANS: c
Correct: The DEA regulates the manufacture and distribution of substances with abuse potential. Hence prescriber DEA numbers must appear on prescriptions for controlled substances.
Incorrect choices: The FDA does not have any special powers in regard to drugs of abuse. The FTC regulates commerce and advertising claims of foods, over-the-counter (OTC) products, and cosmetics. The USP regulates the uniformity and purity of drugs.

REF: p. 7

12. Which federal regulatory body is part of the U.S. Department of Health and Human Services (USHHS)?

a. FDA
b. OTC
c. FTC
d. DEA

ANS: a
Correct: Of the legitimate agencies listed, only the FDA is part of USHHS.
Incorrect choices: OTC is a nonsense answer. The FTC is an independent agency that reports to the U.S. Congress on its actions. The DEA is a part of the Department of Justice.

REF: p. 7

13. Which federal regulatory body regulates the trade practices of drug companies and prohibits false advertising of foods, nonprescription drugs, and cosmetics?

a. FDA
b. FTC
c. DEA
d. OBRA

ANS: b
Correct: Consumers who refer to care labels on their clothes, product warranties, or stickers showing the energy costs of home appliances are using information required by the FTC. Businesses must be familiar with the laws requiring truthful advertising and prohibiting price fixing. These laws are also administered by the FTC. When the FTC was created in 1914, its purpose was to prevent unfair methods of competition in commerce. Over the years, the U.S. Congress has passed additional laws giving the agency greater authority to police anticompetitive practices.

Incorrect choices: The FDA grants approval so that drugs can be marketed in the United States. Before a drug can be approved by the FDA, it must be determined to be both safe and effective. The DEA regulates the manufacture and distribution of substances that have a potential for abuse. OBRA (Omnibus Budget Reconciliation Act) is not a regulatory body; it is an act that mandates that pharmacists must provide patient counseling.

REF: p. 7

14. An investigational new drug application (INDA) is submitted:

a. Before preclinical trials
b. Before phase I trials
c. After phase II trials
d. Before phase III trials

ANS: b
Correct: An INDA must be filed with the FDA before a drug company can commence phase I clinical trials.
Incorrect choices: Animal testing data must be accumulated from preclinical trials before filing an INDA. Phase I is the first trial using patients, and phases II and III follow phase I. An INDA must be filed before any testing in humans can commence.

REF: p. 7

15. Phase I clinical trials involve all of the following *except* one. Which of the following choices is the exception?

a. Safe dose range
b. Toxic effects of the drug
c. Metabolism
d. Therapeutic activity

ANS: d
Correct: In phase I clinical trials, small and then increasing doses are administered to a limited number of healthy human volunteers, primarily to determine safety. This phase determines the biologic effects, metabolism, safe dose range in humans, and toxic effects of the drug. Assessment of therapeutic activity is not a goal of phase I trials.
Incorrect choices: Biologic effects, metabolism, safe dose range in humans, and toxic effects of the drug are, in fact, goals of phase I clinical trials.

REF: p. 7

16. Which of the following choices is determined during a phase III clinical evaluation of a new drug?

a. Effectiveness

b. Safety and efficacy
c. Dosage
d. Both a and b
e. Both b and c

ANS: e
Correct: Both safety and efficacy must be demonstrated during phase III of the clinical evaluation of a new drug. Dosage is also determined during this phase. During phase III, clinical evaluation takes place involving a large number of patients who have the condition for which the drug is indicated.
Incorrect choices: The main purpose of phase II is to test a drug's effectiveness.

REF: p. 7

17. Which of the following choices is a schedule II controlled substance?

a. Marijuana
b. Propranolol
c. Amphetamine
d. Dextropropoxyphene (Darvon)

ANS: c
Correct: Amphetamine, oxycodone, morphine, and secobarbital are all schedule II controlled substances.
Incorrect choices: Marijuana is schedule I. Propranolol is a nonscheduled prescription drug. Dextropropoxyphene is schedule IV.

REF: p. 8

18. Controlled substances in schedule _____ require a written prescription with the provider's signature and do not permit refills.

a. II, III, and IV
b. II and III
c. III and IV
d. II only
e. III only

ANS: d
Correct: Controlled substances in schedule II require a written prescription with the provider's signature and do not permit refills. Any prescription for schedule II drugs must be written in pen or indelible ink or typed. A designee of the dentist, such as the dental hygienist, may write the prescription, but the prescriber must personally sign the prescription in ink and is responsible for what any designee has written.
Incorrect choices: Prescriptions for controlled substances in both schedule III and schedule IV may be telephoned, and no more than five prescriptions in 6 months are permitted.

REF: p. 8

19. Schedule III controlled substances may be telephoned to the pharmacist *and* may be refilled as many as five times in 6 months.

a. Both parts of the statement are true.
b. Both parts of the statement are false.
c. The first part of the statement is true; the second part is false.
d. The first part of the statement is false; the second part is true.

ANS: a
Correct: Both parts of the statement are true. Schedule III controlled substances may be telephoned to the pharmacist *and* may be refilled as many as five times in 6 months.
Incorrect choices: Both parts of the statement are true for schedule III and schedule IV controlled substances. Schedule I controlled substances have no accepted medical use. Schedule II controlled substances require a written prescription with the provider's signature, and no refills are permitted. Schedule V controlled substances can be bought OTC in some states.

REF: p. 8

20. Which system of measurement uses a base of 10?

a. Metric
b. Avoirdupois
c. Apothecary
d. Household measures

ANS: a
Correct: The metric system employs a base-10 measurement system whereby the various units of weight and measure are based on multiples of 10.
Incorrect choices: The other choices describe systems of measurement whereby the various units do not vary from each other by a factor of 10.

REF: p. 9

21. The word *stat* on a prescription means:

a. Before meals
b. At bedtime
c. Immediately
d. Every

ANS: c
Correct: The word *stat* on a prescription means immediately.

Incorrect choices: The abbreviation *ac* means before meals, *hs* means at bedtime, and *q* means every.

REF: p. 9

22. The abbreviation used on prescriptions for *four times a day* is:

a. bid
b. qid
c. qd
d. ud

ANS: b
Correct: *qid* is the abbreviation for quarter in die, or four times a day.
Incorrect choices: *bid* stands for twice a day. *qd* stands for every day. *ud* stands for as directed.

REF: p. 9

23. The heading of a prescription contains the following information *except* the:

a. Name and address of prescriber
b. Name and address of the patient
c. Telephone numbers of the patient and the prescriber
d. Date of birth of the prescriber
e. Date of the prescription

ANS: d
Correct: Having the date of birth of the patient on the prescription is important, both to determine the proper dose for age and so the patient is not confused with another family member (i.e., mother or daughter).
Incorrect choices: The heading of a prescription contains the name, address, and telephone number of the prescriber, as well as the name, address, age, and telephone number of the patient and the date of the prescription.

REF: p. 9

24. Which of the following choices is located in the body of the prescription?

a. The date of the prescription
b. The amount of the drug to be dispensed
c. Directions to the prescriber
d. Refill instructions

ANS: b

Correct: The *Rx* symbol, name and dose size or concentration of the drug, amount to be dispensed, and directions to the patient are all found in the body of the prescription.
Incorrect choices: The date of the prescription is found in the heading. The directions to the patient rather than prescriber are found in the body of the prescription. Refill instructions are found in the closing of the prescription.

REF: pp. 9-10

25. Some prescriptions require a prescriber DEA number. Where is this information commonly found on the prescription?

a. Superscription
b. Heading
c. Body
d. Closing

ANS: d
Correct: The signature area of the prescription is found in the closing. It should also include a space for the DEA number.
Incorrect choices: The superscription is a classical description for where the patient information and the symbol *Rx* are found. The heading contains prescriber and patient contact information, the patient's date of birth, and the date of prescription. The body contains the *Rx* symbol, dosage instructions, and directions to the patient.

REF: pp. 9-11

26. On a prescription, the directions to the patient are preceded by:

a. Rx
b. Sig.
c. #
d. Disp.

ANS: b
Correct: *Sig*. is the abbreviation for the Latin word *signa,* or write. This word precedes the instructions to the patient.
Incorrect choices: *Rx* means *take thou* and precedes the prescription instructions, # denotes the number of tablets, capsules, and so forth to be dispensed. *disp*. is short for *dispense* and precedes the amount to be dispensed, analogous to #.

REF: p. 10

TRUE/FALSE

27. The body of a prescription includes directions to the patient.

ANS: True
Correct: The body of the prescription contains the *Rx* symbol, name and dose size or concentration of the drug, amount to be dispensed, and directions to the patient.

REF: p. 9

28. Refill instructions are found in the body of a prescription.

ANS: False
Correct: Refill instructions are found in the closing, rather than body, of the prescription.

REF: p. 10