

### ASSIGNMENT SHEET

#### CHAPTER 18: ASSISTING WITH MEDICATIONS

#### Unit 1: Prescription and Nonprescription Medications

#### WORDS TO KNOW CHALLENGE

##### A. Word Puzzle: Use the clues below to spell out these terms.

1.                    \_ D \_
2.                    \_ R \_ \_ \_ \_
3.                    \_ U \_ \_
4.                    \_ G \_ \_ \_ \_ \_ \_ \_
5.                    \_ E \_ \_ \_
6.                    \_ N \_
7.                    \_ F \_ \_ \_ \_ \_ \_ \_
8.                    \_ O \_ \_ \_ \_
9.                    \_ R \_ \_ \_
10.                   \_ C \_ \_ \_ \_ \_
11.                   \_ E \_ \_ \_ \_ \_ \_ \_
12.                   \_ M \_ \_ \_ \_ \_
13.                   \_ E \_ \_ \_ \_ \_ \_ \_ \_
14.                   \_ N \_ \_
15.                   \_ T \_
16.                   \_ A \_ \_ \_ \_
17.                   \_ D \_ \_
18.                   \_ M \_ \_ \_ \_ \_ \_ \_
19.                   \_ I \_ \_
20.                   \_ N \_ \_
21.                   \_ I \_ \_ \_ \_
22.                   \_ S \_ \_ \_ \_ \_
23.                   \_ T \_ \_ \_ \_
24.                   \_ R \_ \_
25.                   \_ A \_ \_
26.                   \_ T \_
27.                   \_ I \_ \_ \_ \_
28.                   \_ O \_ \_
29.                   \_ N \_ \_ \_

1. Medication reference
2. Mastery
3. To plan
4. Rule
5. Distribute

6. Quantity
7. Categorize
8. Monitored
9. Precision; exactness
10. Study of medicines/drugs
11. Shortened words or phrases
12. One who fills prescriptions
13. Written order for medicine
14. A permit
15. Numerical calculations
16. Medicine
17. Command
18. Term pertaining to drugs/medicines
19. Highly controlled substances
20. Consultation
21. Enrollment
22. To write an order for medicine
23. Chemical
24. Means
25. Amount of medicine to take
26. Needs no prescription
27. To give
28. Call
29. Caution

**B. Spelling: Underline the correct spelling of each word.**

auxillary	auxziliary	auxiliary
license	liscense	lisence
perscription	prescription	perscrption
generic	gineric	generec
refrence	referance	reference
accuracy	acuracy	accurasy
resorce	reasource	resource
vial	viale	viel

**UNIT REVIEW**

**A. Matching: Match the term in column I with its description in column II.**

COLUMN I	COLUMN II
_____ 1. Schedule I	a. Low potential for addiction
_____ 2. Schedule II	b. Subject to state/local regulations
_____ 3. Schedule III	c. Special instructions on prescription
_____ 4. Schedule IV	d. Produces lack of feeling
_____ 5. Schedule V	e. High potential for addiction
_____ 6. Hypnotic	f. Increases excretion of urine
_____ 7. Warning labels	g. High psychological dependency

- |                      |                                      |
|----------------------|--------------------------------------|
| _____ 8. Antipyretic | h. Not refilled without prescription |
| _____ 9. Diuretic    | i. An agent that produces sleep      |
| _____ 10. Anesthetic | j. Relaxes skeletal muscles          |
|                      | k. Reduces fever                     |

**B. Fill in the Blank**

- The PDR \_\_\_\_\_ is a valuable resource that the medical assistant should keep handy in the medical office.
- The medical assistant should keep abreast of the newest \_\_\_\_\_ approved by the FDA.
- A(n) \_\_\_\_\_ is a legal document.
- To ensure accuracy when phoning in a prescription, you should ask the pharmacist to \_\_\_\_\_ the information to avoid dangerous misunderstandings.
- All physicians who prescribe, dispense, or administer medication in the United States must register annually with the United States Department of Justice, \_\_\_\_\_, under the Controlled Substance Act of 1970.
- Commonly used medications must be rotated according to their \_\_\_\_\_.
- One of the most sensitive and important duties the medical assistant performs is \_\_\_\_\_.
- You must check with your employer regarding the \_\_\_\_\_ in your state before administering medications.
- The OTC-PDR is a valuable reference to help you identify medicines that patients use for \_\_\_\_\_.
- When the physician moves the medical practice, it must be reported to the nearest \_\_\_\_\_.
- DEA registration must be renewed every \_\_\_\_\_ years.
- Physicians must be in compliance with the DEA requirements of the \_\_\_\_\_ to administer, dispense, or prescribe any controlled substance.
- \_\_\_\_\_ prescriptions are primarily prohibited since there is very limited medical use for them.
- For convenience in writing several medication orders at once, many physicians use the \_\_\_\_\_ medication prescription pads.
- If the physician does not want a generic substituted for a medication prescribed for a patient, this will be written on the prescription as \_\_\_\_\_.
- \_\_\_\_\_ are assigned by manufacturers to each batch of the products they produce so that any unusual side effects or problems of patients can be traced to the source.
- A(n) \_\_\_\_\_ routine check of the refrigerator and freezer temperatures is in compliance with the MSDS regulations.

**C. Math Review: Solve the following problems. Show all work.****Addition**

- $0.2 + 0.35 + 0.0037 =$
- $0.4 + 0.003 + 0.421 =$
- $0.222 + 0.0003 + 0.216 =$
- $3.15 + 0.237 =$
- $3.007 + 0.2 =$

**Subtraction**

- $0.2 - 0.03 =$
- $0.37 - 0.205 =$
- $2.5 - 1.8 =$
- $4.5 - 0.127 =$
- $5.5 - 5.017 =$

**Multiplication**

- 11.  $5 \times 0.4 =$
- 12.  $7 \times .137 =$
- 13.  $5 \times 3.5 =$
- 14.  $10 \times 0.07 =$
- 15.  $100 \times 0.0238 =$

**Division**

- 16.  $0.2 \div 100 =$
- 17.  $0.35 \div 25 =$
- 18.  $2.5 \div 3 =$
- 19.  $1.45 \div 15 =$
- 20.  $3.15 \div 10 =$

**Fractions**

- 21.  $\frac{2}{3} + \frac{1}{4} =$
- 22.  $2\frac{1}{2} - 1\frac{3}{4} =$
- 23.  $\frac{2}{3} \times \frac{1}{4} \times \frac{3}{8} =$
- 24.  $\frac{1}{4} \div \frac{2}{3} =$
- 25. Change to decimal:  $\frac{3}{4} =$

**Percentages**

- 26. 25% of 4.8 =
- 27. 30% of 17 =
- 28. 15% of 36 =
- 29. 75% of 74 =
- 30. 63% of 97 =

**Ratio/Proportion: Find x in the following**

- 31.  $5:200 :: x:40$        $x =$
- 32.  $\frac{1}{2}:2 :: \frac{1}{4}:x$        $x =$
- 33.  $x:30 :: 4:10$        $x =$
- 34.  $0.05:x :: 0.15:30$        $x =$
- 35.  $20:60 :: x:50$        $x =$

**D. Translation: Translate the following abbreviations into sentence form.**

- 1. Rx̄s̄ aq po pc qd PRN \_\_\_\_\_  
\_\_\_\_\_
- 2. Rx̄ ss tab po tid c̄ aq com ac \_\_\_\_\_  
\_\_\_\_\_
- 3. alt noc rep ad lib \_\_\_\_\_  
\_\_\_\_\_
- 4. pt DC Fe caps STAT \_\_\_\_\_  
\_\_\_\_\_
- 5. Give 2 T emul qid alt dieb \_\_\_\_\_  
\_\_\_\_\_

6. qns sol \_\_\_\_\_

7. G 1 tsp. H<sub>2</sub>O<sub>2</sub> hs. \_\_\_\_\_

8. dil pulv /c aq ferv et f sat sol \_\_\_\_\_

9. Div dos et adde aq bull, 1 m elix, m et sig. \_\_\_\_\_

10. pt NPO/am Ba po/GI studies \_\_\_\_\_

**E. Principles of IV Therapy Review**

1. Name at least five things that the medical assistant needs to be cognizant of regarding intravenous (IV) therapy. \_\_\_\_\_

2. Name at least four advantages of intravenous therapy/infusion. \_\_\_\_\_

3. Name at least five disadvantages of intravenous therapy/infusion. \_\_\_\_\_

4. Name the equipment and supplies required for intravenous administration. \_\_\_\_\_

5. Name all 17 steps required for preparation of an intravenous set-up.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

g. \_\_\_\_\_

h. \_\_\_\_\_

i. \_\_\_\_\_

j. \_\_\_\_\_

k. \_\_\_\_\_

l. \_\_\_\_\_

- m. \_\_\_\_\_
- n. \_\_\_\_\_
- o. \_\_\_\_\_
- p. \_\_\_\_\_
- q. \_\_\_\_\_

**CASE STUDIES**

**Scenario 1**

A patient stops in your office, without prior notification, to pick up a prescription for his allergies. He is in a hurry and doesn't want to have to wait very long. He also mentions that if the physician is going to give him the same thing he got last time, he might as well not take it.

**Critical Thinking Questions**

1. What would you tell the patient regarding prior notification to pick up a prescription? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. How would you handle the fact that the patient is in a hurry and does not want to wait? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. What should you tell the physician regarding the patient's request? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Scenario 2**

One of your elderly patients calls to tell you that all the prescriptions that she had filled at the pharmacy look different from what she usually takes. She mentions that they didn't cost as much and she doesn't want to take any of them because she thinks the physician made a mistake.

**Critical Thinking Questions**

1. What can you tell the patient about her concerns? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. What suggestions can you make to alleviate her fears? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. What reasons can you give the patient for the differences in appearance and cost? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**UNIT APPLICATION**

**A. Math Review: Solve the following word problems.**

1. Jessica, a medical assistant, earns \$7.50 per hour for the first 40 hours per week. When she exceeds 40 hours in any workweek, she is paid time and a half. One week during the winter flu season she worked 53 hours. When she received her paycheck, the gross amount was \$397.53.
- a. When Jessica works overtime, what is the hourly rate of pay?

\_\_\_\_\_

b. Based on the 53 hours, 13 of which were overtime, what should the gross amount be on her paycheck?

\_\_\_\_\_

c. Is the gross amount on the paycheck she received correct?

\_\_\_\_\_

2. The Medical Supply Company is offering a 15% discount on sterile gloves purchased during its anniversary month. The regular cost of the sterile gloves is \$37.50 per 100 gloves.
- a. What is the cost of 300 gloves without the discount?

\_\_\_\_\_

b. What is the cost of 300 gloves with the discount?

\_\_\_\_\_

c. How much is saved with the discount?

\_\_\_\_\_

3. A medical assistant can type 250 words in 3 minutes. At the same rate, how long would it take this medical assistant to type 5000 words?

\_\_\_\_\_

\_\_\_\_\_

4. Two of Mrs. Smith's children have been diagnosed with conjunctivitis. The physician wrote a prescription for an antibiotic ophthalmic solution. It reads: 2 gtt TID in each affected eye for 5 days.
- a. If each child needs drops instilled in each eye, how many drops would be needed?

\_\_\_\_\_

\_\_\_\_\_

b. How many household teaspoons would this be? \_\_\_\_\_

5. A medical assistant was asked by her physician-employer to check a small order from the medical supply house that had arrived while the staff was out to lunch. To expedite the task, the physician handed the medical assistant a copy of the original order.

**THE ORIGINAL ORDER**

ITEMS	PER UNIT	TOTAL
2 boxes disposable gloves; 100 ct.	\$3.75	\$7.50
3 boxes syringes; 50 ct.	25.00	75.00
10 thermometers	1.50	15.50
12 boxes tissues	0.25	3.00
5 cartons tongue dep.; 100 ct.	1.38	6.90
6 bottles hand soap	1.77	17.70
		\$125.10

THE FINAL BILL

ITEMS	PER UNIT	TOTAL
2 ctns., surg. gloves	\$5.75	\$11.50
3 boxes syringes	25.00	75.00
100 thermometers	1.50	150.00
10 boxes tissues	0.25	2.50
4 cartons tongue dep.	1.38	5.52
10 bottles, hand soap	1.77	17.70
		\$262.22

The first obvious problem is that the totals do not match on the order and on the bill. An item count further reveals some discrepancies between the quantities shown on the bill and the items actually received. Specifically, only 10 boxes of tissues and 4 cartons of tongue depressors were delivered.

- Double-check each item on the original order; if any mathematical errors are found, correct them.
- Double-check the final bill as shown. If any mathematical errors are found, correct them.

- Still working with the bill as shown, are there any further discrepancies beyond mathematical errors?
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_

- Now reconcile the count discrepancies with the corrected amounts shown on the bill.
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_

- What procedure should be followed in paying the supplier for items actually ordered and received? What should be done with overages? with shortages? with incorrect items?
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_
   
\_\_\_\_\_

- Mrs. Brown, a patient of Dr. Johnston, has been diagnosed as suffering from refractory rickets. Dr. Johnston has prescribed the following treatment:
 

Ergocalciferol USP, Vitamin D<sub>2</sub> Tab, 100,000 USP units q6h for 14 days.

Ergocalciferol USP, Vitamin D<sub>2</sub> is available in either 50,000 USP units tablets or 8,000 USP units/ml drops. Dr. Johnston has decided to start Mrs. Brown on tablets. After 14 days of treatment, Dr. Johnston will test to determine if Mrs. Brown's serum calcium levels have returned to within normal limits. If so, therapy may be continued at a lower dosage.

  - How many tablets should be given q6h?



- b. How many tablets should be given Qid? \_\_\_\_\_
- c. How many tablets should be ordered for the 14-day treatment? \_\_\_\_\_

7. After the 14-day treatment that Mrs. Brown took in problem 6, Dr. Johnston finds that her serum calcium levels are returning to normal limits. He decides to continue her on a treatment of Ergocalciferol USP, Vitamin D<sub>2</sub> at a reduced level for a period of one month. However, instead of tablets, the medication will be administered in liquid form. His new prescription is as follows:

Ergocalciferol USP, Vitamin D<sub>2</sub> gtt, 48,000 USP units, bid for 30 days.

As stated in problem 6, Ergocalciferol USP, Vitamin D<sub>2</sub>, is available in 8,000 USP units/ml drops; 60 ml bottle with dropper.

- a. How many drops will be required for each dosage?  
\_\_\_\_\_
- b. How many drops are required for Mrs. Brown's daily dosage? \_\_\_\_\_
- c. How many bottles of Ergocalciferol USP, Vitamin D<sub>2</sub>, will be needed to fill the entire prescription?  
\_\_\_\_\_

8. Bill, a young boy weighing 73 ¼ pounds, has a mild ulcerative colitis condition that has been bothering him for several weeks. The physician recommended a treatment of Azulfidine and wrote the following prescription:

Azulfidine 30 mg/kg, q6h for 7 days.

Azulfidine is available in 500 mg 100s tablets.

- a. How many mg of Azulfidine will Bill receive per day?
  - 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
- b. How many tablets will be needed per dosage? For the whole prescription?
  - 1. \_\_\_\_\_
  - 2. \_\_\_\_\_

9. Brad has a history of chronic asthma. As a treatment of first choice, Brad's doctor has prescribed theophylline anhydrous. Since this is a rather strong medication, the dosage is individualized for Brad based on his body weight and age. Brad is 15 years old and weighs 121 pounds. The recommended dosage for ages 12-16 years is 18mg/kg/day. The prescription is as follows:

18mg/kg/day p.o., not to exceed 900 mg/day.

Theophylline is available in 125 mg capsule form.

- a. How many mg of theophylline would Brad receive based on 18mg/kg/day p.o.?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**ASSIGNMENT SHEET****CHAPTER 18: ASSISTING WITH MEDICATIONS****Unit 2: Methods of Administering Medications****WORDS TO KNOW CHALLENGE****A. Matching: Match the term in column I with its description in column II.**

COLUMN I	COLUMN II
_____ 1. Parenteral	a. Pertaining to the mouth; oral cavity
_____ 2. Nomogram	b. Instillation; introduction of a substance into a vein
_____ 3. Sublingual	c. Representation by graphs, diagrams, or charts of the relationship between numerical variables
_____ 4. Buccal	d. Other than by mouth
_____ 5. Topical	e. An ointment
_____ 6. Ointment	f. A soft, fatty substance having antiseptic or healing properties
_____ 7. Infusion	g. Under the tongue
_____ 8. Transdermal	h. A medicated conical- or cylindrical-shaped material that is inserted into the rectum or vagina
_____ 9. Salve	i. Through the skin
_____ 10. Suppository	j. Pertaining to a specific area; local

**B. Word Scramble: Unscramble the following.**

1. _____	<u>L</u> <u>U</u> <u>C</u> <u>B</u> <u>A</u> <u>C</u>
2. _____	<u>T</u> <u>A</u> <u>N</u> <u>S</u> <u>R</u> <u>R</u> <u>M</u> <u>A</u> <u>L</u> <u>D</u> <u>E</u>
3. _____	<u>E</u> <u>D</u> <u>O</u> <u>C</u> <u>U</u> <u>H</u>
4. _____	<u>L</u> <u>O</u> <u>T</u> <u>P</u> <u>I</u> <u>A</u> <u>C</u>
5. _____	<u>A</u> <u>N</u> <u>T</u> <u>O</u> <u>C</u> <u>R</u> <u>E</u> <u>L</u> <u>E</u>
6. _____	<u>L</u> <u>L</u> <u>B</u> <u>N</u> <u>I</u> <u>G</u> <u>S</u> <u>U</u> <u>A</u> <u>U</u>
7. _____	<u>O</u> <u>O</u> <u>N</u> <u>M</u> <u>M</u> <u>R</u> <u>G</u> <u>A</u>
8. _____	<u>L</u> <u>R</u> <u>E</u> <u>E</u> <u>A</u> <u>P</u> <u>R</u> <u>T</u> <u>N</u> <u>A</u>
9. _____	<u>I</u> <u>C</u> <u>N</u> <u>N</u> <u>T</u> <u>R</u> <u>E</u> <u>A</u> <u>T</u> <u>I</u> <u>O</u>
10. _____	<u>Y</u> <u>P</u> <u>S</u> <u>O</u> <u>P</u> <u>S</u> <u>O</u> <u>U</u> <u>I</u> <u>T</u> <u>R</u>

**UNIT REVIEW****A. Fill in the Blank**

- Most oral medications are intended for absorption in the \_\_\_\_\_.
- The \_\_\_\_\_ method of administering medication involves placing the medication under the tongue.
- Sublingual and buccal methods of administration introduce medication immediately into the \_\_\_\_\_ through membranes.
- \_\_\_\_\_ medications are supplied as creams, suppositories, tablets, douches, foams, ointments, tampons, sprays, and salves.
- Medications that are applied in various forms to the skin are termed \_\_\_\_\_.
- \_\_\_\_\_ medications are breathed into the respiratory tract.
- \_\_\_\_\_ medications are given by means of injection.

8. The \_\_\_\_\_ is the most convenient method of medication.
9. The dosage of \_\_\_\_\_ drugs is determined by the body surface area of the patient.
10. Allergies and other vital information are noted on a patient's chart in \_\_\_\_\_ ink.

**B. Short Answer**

1. List the points of the standard format checklist for administering medications. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
2. How many times should you check a medication before you administer it and why? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
3. Why is it a good idea to always check the medication container after administering medication? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
4. What does "technique" mean regarding medications? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
5. Explain what time has to do in regard to medications. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
6. Why is it important to check the expiration date on medications? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
7. Do the same guidelines apply to sample packets of medicines as they do to prescriptions? Explain your answer. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**C. Matching: Match the term in column I with its description in column II.**

COLUMN I	COLUMN II
_____ 1. Oral	a. Applied to a surface
_____ 2. Sublingual	b. Placed in the mouth between the cheek and gum
_____ 3. Buccal	c. Under the tongue
_____ 4. Inhalation	d. Inserted
_____ 5. Topical	e. Placed on a fleshy body part
_____ 6. Vaginal	f. Injected
_____ 7. Transdermal	g. Breathed in
_____ 8. Parenteral	h. By mouth

**CASE STUDIES****Scenario 1**

Mr. and Mrs. Smith are both in for their regular checkups for high blood pressure. They are both on medication, but they do not take the same kind. Mr. Smith's blood pressure is elevated and the physician wants the medical assistant to administer some medication. The physician writes the order, and the medical assistant is in a hurry. She gives the medication to Mrs. Smith.

**Critical Thinking Questions**

1. What potential problems could develop? \_\_\_\_\_  
\_\_\_\_\_
2. What should the medical assistant do to resolve the error? \_\_\_\_\_  
\_\_\_\_\_
3. What could have been done to avoid this situation? \_\_\_\_\_  
\_\_\_\_\_

**Scenario 2**

Dr. Leonard has ordered that 100 mg of Atenolol be administered to the patient in exam room 2. Kelly, the medical assistant, obtains the medication from storage and realizes that the medication on hand only comes in 25 mg tablets.

**Critical Thinking Questions**

1. What is the first thing that Kelly must do? \_\_\_\_\_  
\_\_\_\_\_
2. What should Kelly do before administering the drug to the patient? \_\_\_\_\_  
\_\_\_\_\_
3. How can Kelly be sure that she hasn't made a mistake? \_\_\_\_\_  
\_\_\_\_\_

**UNIT APPLICATION**

**Performance Objective Practice**

Prepare an oral medication following the steps in Procedure 18-1 and administer it to a patient. Record the medication in the medication log and document the administration in the patient's chart.

**MEDICATION LOG**

Date	Time	Medication	Lot #	Expiration date	Dosage administered	Initials
xx-xx-xx	xx:xx a.m.	Wellbutrin	983875879	xx-xx-xx	100 mg	Imv

Documentation Example:

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**Performance Competency**

Following completion of performance objective practice, use the Performance Evaluation Checklist 18-1 at the back of the workbook to perform the procedure for evaluation.

**CERTIFICATION AND REGISTRATION PREPARATION**

- \_\_\_\_\_ 1. Before administering any medication, the label should be checked \_\_\_\_\_ times.
  - a. three
  - b. four
  - c. six
  - d. two
- \_\_\_\_\_ 2. A medication error can occur for all of the following reasons except:
  - a. drug given at the wrong time
  - b. drug given by the wrong route
  - c. drug given by the wrong person
  - d. incorrect dosage given
- \_\_\_\_\_ 3. All of the following are considerations for route of administration except:
  - a. age of the patient
  - b. gender
  - c. date of birth
  - d. physical condition
- \_\_\_\_\_ 4. Which of the following would be considered to be an inhalation medication?
  - a. Water
  - b. Spray
  - c. Oxygen
  - d. Mist
- \_\_\_\_\_ 5. Oxygen is prescribed in:
  - a. LPM
  - b. LPH
  - c. LPS
  - d. LPD

## ASSIGNMENT SHEET

### CHAPTER 18: ASSISTING WITH MEDICATIONS

#### Unit 3: Injections and Immunizations

#### WORDS TO KNOW CHALLENGE

##### A. Matching: Match the term in column I with its description in column II.

COLUMN I	COLUMN II
_____ 1. Haemophilus	a. A small glass container that can be sealed and its contents sterilized
_____ 2. Intradermal	b. A protein that defends the body against toxins
_____ 3. Attenuated	c. Diluted
_____ 4. Intravenous	d. Bacterial strains that grow best in hemoglobin
_____ 5. Vaccine	e. The process of rendering a patient immune
_____ 6. Immunization	f. Within the skin
_____ 7. Antitoxin	g. Within the vein
_____ 8. Ampule	h. Beneath the skin
_____ 9. Subcutaneous	i. Any substance for prevention of a disease
_____ 10. Z-tract	j. A method of injecting a medication intramuscularly

##### B. Word Scramble: Unscramble the following terms.

1. _____	<u>P</u> <u>U</u> <u>A</u> <u>L</u> <u>M</u> <u>E</u>
2. _____	<u>T</u> <u>E</u> <u>R</u> <u>I</u> <u>D</u> <u>P</u> <u>H</u> <u>H</u> <u>I</u> <u>A</u>
3. _____	<u>P</u> <u>N</u> <u>N</u> <u>E</u> <u>E</u> <u>I</u> <u>I</u> <u>E</u> <u>H</u> <u>P</u> <u>R</u>
4. _____	<u>U</u> <u>B</u> <u>A</u> <u>N</u> <u>N</u> <u>I</u> <u>O</u> <u>C</u> <u>T</u> <u>I</u>
5. _____	<u>N</u> <u>E</u> <u>F</u> <u>N</u> <u>L</u> <u>I</u> <u>Z</u> <u>A</u> <u>U</u>
6. _____	<u>S</u> <u>L</u> <u>I</u> <u>N</u> <u>U</u> <u>N</u> <u>I</u>
7. _____	<u>R</u> <u>S</u> <u>C</u> <u>A</u> <u>L</u> <u>R</u> <u>T</u> <u>A</u> <u>N</u> <u>M</u> <u>U</u> <u>I</u>
8. _____	<u>E</u> <u>N</u> <u>N</u> <u>I</u> <u>S</u> <u>M</u> <u>G</u> <u>I</u> <u>T</u> <u>I</u>
9. _____	<u>N</u> <u>V</u> <u>I</u> <u>S</u> <u>T</u> <u>I</u> <u>Y</u> <u>I</u> <u>E</u> <u>S</u>
10. _____	<u>C</u> <u>T</u> <u>E</u> <u>U</u> <u>B</u> <u>U</u> <u>S</u> <u>O</u> <u>A</u> <u>T</u> <u>N</u> <u>S</u> <u>U</u>
11. _____	<u>T</u> <u>T</u> <u>S</u> <u>E</u> <u>A</u> <u>U</u> <u>N</u>
12. _____	<u>N</u> <u>C</u> <u>E</u> <u>I</u> <u>C</u> <u>V</u> <u>A</u>
13. _____	<u>T</u> <u>R</u> <u>S</u> <u>E</u> <u>P</u> <u>S</u> <u>S</u> <u>I</u> <u>U</u>
14. _____	<u>D</u> <u>X</u> <u>O</u> <u>O</u> <u>I</u> <u>T</u>
15. _____	<u>N</u> <u>Z</u> <u>T</u> <u>O</u> <u>I</u> <u>I</u> <u>N</u> <u>M</u> <u>U</u> <u>A</u> <u>I</u> <u>M</u>

#### UNIT REVIEW

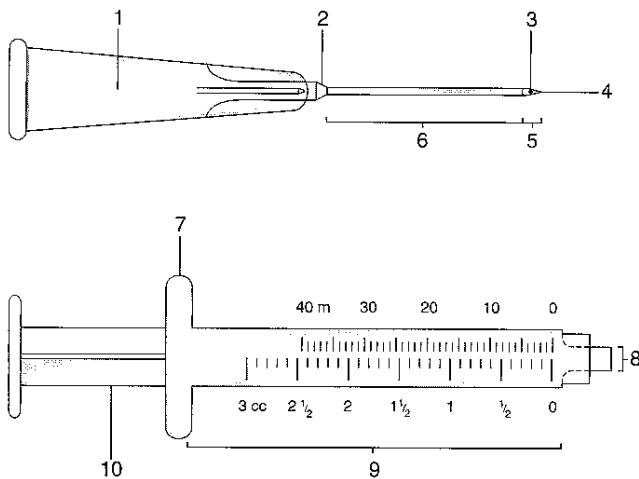
##### A. Fill in the Blank

- In order to mix insulin within the vial (bottle) you should gently \_\_\_\_\_ it between your fingers (hands).
- The amount of air injected into the vial should be \_\_\_\_\_ to the insulin dose.
- Too large an air bubble in the syringe will \_\_\_\_\_ the insulin dose.
- Insulin injections should be administered at a(n) \_\_\_\_\_ angle.
- It should take one less than \_\_\_\_\_ seconds to inject the insulin dose.
- There is always a possibility of \_\_\_\_\_ shock when administering any medication.

7. Medication should only be administered to patients when a physician is available nearby, should the patient exhibit any \_\_\_\_\_.
8. The term \_\_\_\_\_ simply means "under the skin."
9. \_\_\_\_\_ injections are used in allergy and tuberculin testing.
10. A small \_\_\_\_\_ will develop at the site of the intradermal injection, giving evidence that the medication is in the dermal layer of the skin.
11. Following the intradermal injection, the patient must be observed for at least \_\_\_\_\_ minutes.
12. Subcutaneous injections are administered at a \_\_\_\_\_ angle of insertion.
13. Medications injected into the muscle tissue are termed \_\_\_\_\_.
14. The purpose of the \_\_\_\_\_ method of injection is to inject irritating substances deep into the muscle layer of tissue and prevent leakage from following the path of the needle.
15. In the Z-track and subcutaneous methods of injection, the injection site should not be \_\_\_\_\_ after medication is administered.
16. The medical assistant is not qualified to administer \_\_\_\_\_ injections.

**B. Labeling**

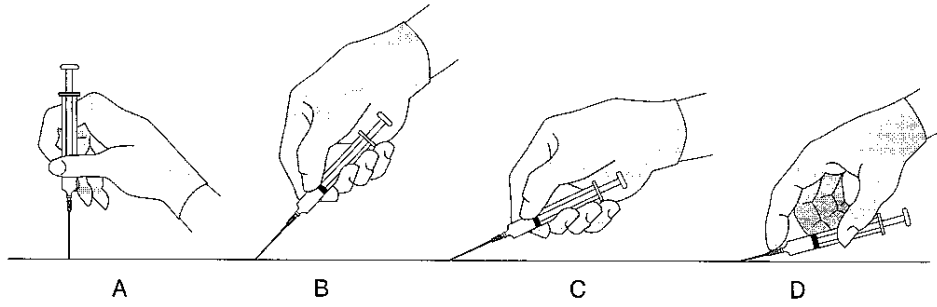
1. Label the parts of this syringe.



1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

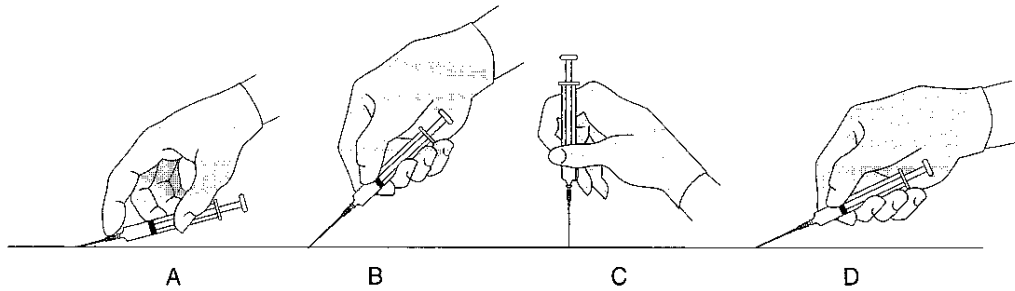


2. Labeling: Label the angles of injection in these pictures.



- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

3. Labeling: Identify the types of injections that these pictures indicate.



- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

**C. Short Answer**

- 1. Name the tissue layers and sites of injection for intradermal, intramuscular, and subcutaneous. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 2. Explain how to assure a patient in preparing for an injection. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 3. What is the proper way to dispose of used syringes and needles? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. If a needle must be recapped, how should it be done? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Why must patients be given written information and sign authorization forms before immunizations are administered? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Explain how to give insulin injections. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. List the various sites for insulin injections. \_\_\_\_\_  
\_\_\_\_\_
8. List symptoms of anaphylactic shock. \_\_\_\_\_  
\_\_\_\_\_
9. How long should a patient wait after receiving an injection? Why? \_\_\_\_\_  
\_\_\_\_\_
10. Explain why you should not rub medications into tissues following a Z-tract injection. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. What is immunity? List the different types. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
12. At what age is the immunization schedule routinely begun? \_\_\_\_\_
13. What are the first four immunizations (vaccines) given to infants? \_\_\_\_\_
14. How long is the ideal time period between immunizations in a series? \_\_\_\_\_
15. Assuming an infant has had a regular routine immunization schedule, at what age will the child be at the completed primary series of DTP, OPV, and Hib? \_\_\_\_\_  
\_\_\_\_\_

16. What immunizations does a child receive at age 18 months? \_\_\_\_\_  
\_\_\_\_\_
17. At ages 4 to 6 years, what booster immunization should a child receive? \_\_\_\_\_  
\_\_\_\_\_
18. Td is given to what age group of children? \_\_\_\_\_  
\_\_\_\_\_
19. How often should adult tetanus and diphtheria toxoids be repeated? \_\_\_\_\_  
\_\_\_\_\_
20. Besides oral polio vaccine, there is a higher-potency polio vaccine, IPV (inactivated polio vaccine), which is administered by \_\_\_\_\_.
21. Bacterial meningitis is a highly contagious disease that can cause serious and long-lasting effects on the \_\_\_\_\_ system.
22. Infectious hepatitis can be prevented with the hepatitis A vaccine, which consists of \_\_\_\_\_ injections \_\_\_\_\_ apart and is recommended for those who are traveling to other continents.
23. Discuss the drugs that are under federal regulation according to category, or Schedules I through V.

\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_

24. What is the Hib vaccine? Who should receive it? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CASE STUDIES**

**Scenario 1**

Mr. Johnson stops by the office for his annual flu shot. Maryn, the medical assistant, notices that he has lost a substantial amount of weight since his last visit, and decides to use a 5/8 inch needle to administer the injection. She bunches the skin and injects the medication at a 45 degree angle, does not aspirate, and does not massage the injection site.

**Critical Thinking Questions**

1. Why did Maryn use a smaller needle? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Which route of administration should be used? \_\_\_\_\_  
\_\_\_\_\_

3. Was the medication injected into the muscle? \_\_\_\_\_  
\_\_\_\_\_

### Scenario 2

Mrs. Leonard has brought her son, Carter, to your office for his six-month immunizations. Mrs. Leonard tells Jennifer, the medical assistant, that Carter has had a cough and runny nose for the past three days. Jennifer wants to go lunch, so she gets Carter ready for his examination by the doctor and quickly administers his injections and leaves for lunch.

### Critical Thinking Questions

1. Should Jennifer have given Carter the immunizations? \_\_\_\_\_  
\_\_\_\_\_

2. How should Jennifer have proceeded? \_\_\_\_\_  
\_\_\_\_\_

3. What could be the outcome of this situation? \_\_\_\_\_  
\_\_\_\_\_

### UNIT APPLICATION

#### Performance Objective Practice

- A. Practice withdrawing medication from an ampule and a vial while another student critiques your performance.
- B. Pair off with another student and take turns instructing on how to administer an insulin injection.
- C. Practice administering intradermal, intramuscular, and subcutaneous injections.
- D. Practice reconstituting a powdered medication.

#### Performance Competency

Following completion of performance objective practice, use the Performance Evaluation Checklists 18-2, 18-3, 18-4, 18-5, 18-6, 18-7, and 18-8 in the workbook to perform the procedures for evaluation.

### CERTIFICATION AND REGISTRATION PREPARATION

- \_\_\_\_\_ 1. Common flu is a disease that affects the:
- |                      |                  |
|----------------------|------------------|
| a. kidneys           | c. liver         |
| b. respiratory tract | d. spinal column |
- \_\_\_\_\_ 2. In addition to bed rest, fluids, analgesics, and antipyretics, pneumonia is sometimes treated with:
- |                     |              |
|---------------------|--------------|
| a. muscle relaxants | c. oxygen    |
| b. vitamins         | d. sedatives |
- \_\_\_\_\_ 3. Haemophilus influenzae type B affects:
- |                               |                |
|-------------------------------|----------------|
| a. infants/small children     | d. adults      |
| b. elementary school children | e. the elderly |
| c. adolescents                |                |

- \_\_\_\_\_ 4. Complications of measles can result in deafness, brain damage, and:  
a. paralysis  
b. pneumonia  
c. baldness  
d. myopia
- \_\_\_\_\_ 5. The incubation period for mumps is:  
a. 14–28 hours  
b. 14–28 days  
c. 14–28 weeks  
d. 14–28 months
- \_\_\_\_\_ 6. Rubella is a dangerous disease that can cause severe abnormalities to a(n):  
a. pregnant female  
b. teenager  
c. infant  
d. fetus
- \_\_\_\_\_ 7. A tracheostomy is sometimes necessary to perform in which of these diseases?  
a. Tetanus  
b. Mumps  
c. Diphtheria  
d. Pneumonia
- \_\_\_\_\_ 8. A trace cough may last for several months to two years following:  
a. pertussis  
b. influenza  
c. diphtheria  
d. tetanus
- \_\_\_\_\_ 9. A disease that is commonly transmitted in puncture wounds is:  
a. polio  
b. diphtheria  
c. haemophilus  
d. tetanus
- \_\_\_\_\_ 10. Alcohol and fats should especially be eliminated from the diet of one who has:  
a. mumps  
b. tetanus  
c. hepatitis  
d. influenza
- \_\_\_\_\_ 11. An acute infection and inflammation of the gray matter of the spinal cord is:  
a. polio  
b. hepatitis  
c. tetanus  
d. diphtheria

