VOCABULARY REVIEW

Match the following terms with their definitions.

1. Angled tip of a needle
2. Narrowing of the bronchiole tubes
3. Abnormal accumulation of fluid in the interstitial spaces of tissues
4. A coating added to an oral medication that resists the effects of stomach juices; designed so that medicine is absorbed in the small intestine
5. Sealed so that no air is allowed to enter
6. Low blood pressure
7. Administering repeated injections of diluted extracts of the substance that causes an allergy; also called desensitization
8. An abnormally hard, inflamed area
9. Administering a double dose for the first dose of the medication; usually done with antibiotic therapy to reach therapeutic blood levels quickly
10. Inflammation of a vein; may lead to thrombus formation
11. The curved formation of liquids in a container
12. Excretion of an unusually large amount of urine
13. Drug in pill form manufactured with an indentation for division through the center
14. Increase in the diameter of a blood vessel
15. The quality of being thick; property of resistance to flow in a fluid
16. Referring to an explosive substance’s capacity to vaporize at a low temperature
17. Localized area of edema or a raised lesion

Solid Oral Forms

Define the following terms.

1. scored
   - Slanted; usually used on scored tablet which is manufactured with an indentation for division

2. tablet
   - Small piece of a solidified substance such as a drug or chemical

3. buffered
   - To intervene with the dangerous interaction of two chemicals
4. capsule
   A gelatinous case enclosing a dose of medicine

5. caplet
   An oval-shaped tablet that is coated to facilitate swallowing

6. time released
   Dissolves over a period of time

Liquid Oral Forms
Define the following terms.

1. syrup
   A solution of sugar and water, usually containing flavoring and medicinal substances

2. aromatic waters
   Saturated solutions of volatile oils or other aromatic volatile substances in distilled water

3. liquors
   Alcoholic beverage made by distillation rather than fermentation

4. suspension
   Insoluble drug substances contained in a liquid

5. emulsion
   Mixture of oil and water that improves taste

6. gel or magma
   Consist of minerals suspended in water

7. tinctures
   An alcoholic preparation of a soluble drug or chemical substance

8. elixirs
   An aromatic alcoholic, flavored preparation

Mucous Membrane Forms
List the site of absorption indicated by the following terms.

1. buccal
   Cheeks

2. sublingual
   Under the tongue

3. inhalation
   Respiratory mucosa
Topical Forms
Describe or define the following.

1. lotion
   - Often used to control itching, inflammation, and pain in muscles and joints.

2. liniment (Emulsion)
   - Higher portion of oil than lotions and relative active ingredients may be added.
   - Often used to protect, treat, cracked, or fissured skin.

3. ointment
   - Semisolid medications containing bases such as petrolatum and lanolin.

4. transdermal
   - Constant time-released drug administration

Parenteral Forms
Define or describe the following.

1. vial
   - Small bottle with a rubber stopper through which a single needle is inserted

2. ampule
   - Small, hermetically sealed glass flask that contains a single dose of medication

3. multiuse
   - More than one dose

4. prefilled
   - Ready to use

5. cartridge system
   - Convenient, easy-to-use method of injection that is already prefilled with medication

SKILLS AND CONCEPTS

1. List and explain the seven rights of drug administration.
   a. Right Patient. Check to see if it is correct patient by asking name and date of birth and checking it to medical records
   b. Right Drug. Clarify with physician. Check label 3 times to confirm drug.
   c. Right Dose. When dose does not match what is on hand, you must perform new procedures to calculate accurate dose. If any doubt, double check.
   d. Right Route. Check which route physician orders; oral, mucous membrane, IV, topical, etc.
Right Time. Most medications are ordered for
  medication to be taken at certain times: bedtime, morning, after
f. Right Technique. Medical Assistant must be familiar with all ways
  of drug administration. If not doubt, always ask for help.
g. Right Documentation. Immediately after administration document Time, Date,
  drug, strength and route of administration everywhere. Also any reaction. Everything
  must be written in patient file.

2. When should the medical assistant check the drug label?
   The medical assistant should check the drug label as he/she
   goes to get it, so he/she is getting the right dose and right before
   they administer the drug.

3. List four things the medical assistant can do to ensure safety of medication administration.
   a. Check label multiple times
   b. Check the amount and dose
   c. Check to make sure it is correct patient
   d. Check to make sure it is proper route to administer

4. Label the following statements as either “ampule” or “vial.”
   4. Has a rubber stopper ___________ Vial
   5. Has sharp edges after it is opened ___________ Ampule
   6. Is always single use ___________ Ampule
   7. Air must be injected into it before medicine can be removed ___________ Vial
   8. Can be multiuse ___________ Vial
   9. A filtered needle is required to avoid getting glass in the syringe ___________ Ampule
   10. Has a vacuum after it is opened ___________ Vial
   11. Extra care is required to prevent contamination ___________ Vial
   12. Always discarded in a sharps container ___________ Ampule
   13. Gauze or an unopened alcohol prep should be used to prevent injury as the neck breaks away ___________ Ampule

14. List four routes of parenteral administration; include approved abbreviations and how to locate the sites
    anatomically.
    a. **Intradermal Injection (ID) - Best site is posterior forearm**
    b. **Subcutaneous Injection (SC) - Typical site: posterior upper arm**
    c. **Intramuscular Injection (IM) - Deltoid, Ventrointermus (Thigh), Gastrocnemius**
    d. **Z-Track Intramuscular (Z-Track) - Only inject into dorsogluteal (buttock) area**

**Parenteral Medication Equipment**

**Indicate which statements about needles are true (T) and which are false (F).**

1. T____ Needles may be purchased separately or as part of a needle-syringe unit.
2. T____ The diameter or lumen size of a needle is called its gauge.
3. T____ The larger the gauge number, the smaller the diameter of the needle.
4. __________ Gauges 25 and 26 are commonly used for subcutaneous injections.
5. __________ Gauges 20 to 23 usually are necessary for intramuscular injections when the medication is thick (e.g., penicillin).
6. __________ Needles that are ½- or ⅛-inch long are used for intramuscular injections.
7. __________ Needles that are ½- or ⅛-inch long are used for subcutaneous injections.
8. __________ A contaminated needle should be recapped before disposal in a sharps container.
9. __________ The parts of the needle are the barrel, calibrated scale(s), plunger, and tip.
10. __________ Longer needles are necessary for depositing drugs intradermally.

11. Label the syringes in the figure below.

- **A** 100-unit insulin syringe
- **B** 1 mL tuberculin syringe
- **C** 3 cc Luer-Lok syringe
- **D** 10 cc slip-tip syringe

a. On the insulin syringe, draw a line at 62 units.
b. On the tuberculin syringe, draw a line at 0.3 mL.
c. On the 3 cc Luer-Lok syringe, draw a line at ½ cc.
d. On the 10 cc slip-tip syringe, draw a line at 4.8 cc.
e. Insulin syringes can be purchased in 30 U, 50 U, and 100 U sizes. Which is the one pictured? /100 U
f. The angle of an insulin injection is __________, and the angle of injection for an ID administration is __________.

- __________
- __________
g. What gauge and length of needle would be used for a TB skin test? /⅜ inches, ¾ inch
   For an insulin injection? /½ inch, ¾ inch
   For an IM injection? /3 inches, ⅜ inch

h. The 1 mL TB syringe is calibrated at __________ mL per line. The 3 mL syringe is calibrated at __________ mL per line.
Injection Sites

1. Label the intramuscular, intradermal, and subcutaneous injection sites correctly on the following figure.

   a. Deltoid
   b. Ventrogluteal
   c. Adult vastus lateralis
   d. Gluteal (dorsogluteal)
   e. TB skin test
   f. Insulin injection site
Pediatric Sites

1. On the following figure, label and name the appropriate IM injection site for a small child who is too young to walk.

2. Explain why infant IM injections are limited to the vastus lateralis site.

Because the vastus lateralis is developed at birth, infants don't have well-developed deltoids. The nerve located near this selected site is larger in infants. Gluteus medius is not well developed until the child is of walking age.

WORKPLACE APPLICATIONS

1. Dorothy, the medical assistant, has been asked by Dr. Thau to update the medication abbreviation list to be included as part of the policy and procedures manual. Use the list below to spell out each.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Spell Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. q 4 hr</td>
<td>Every 4 hours</td>
</tr>
<tr>
<td>b. tid</td>
<td>Three a day</td>
</tr>
<tr>
<td>c. qid</td>
<td>Four a day</td>
</tr>
<tr>
<td>d. bid</td>
<td>Twice a day</td>
</tr>
<tr>
<td>e. q 3 hr</td>
<td>Every 3 hours</td>
</tr>
<tr>
<td>f. HS</td>
<td>Bedtime</td>
</tr>
<tr>
<td>g. AC</td>
<td>Before meal</td>
</tr>
<tr>
<td>h. PC</td>
<td>After meal</td>
</tr>
<tr>
<td>i. PRN</td>
<td>As needed</td>
</tr>
<tr>
<td>j. PO</td>
<td>By mouth / oral</td>
</tr>
<tr>
<td>k. NPO</td>
<td>Nothing by mouth</td>
</tr>
<tr>
<td>l. PR</td>
<td>Rectally</td>
</tr>
<tr>
<td>m. IV</td>
<td>Intravenous</td>
</tr>
<tr>
<td>n. SC (SQ)</td>
<td>Sub-cutaneous</td>
</tr>
<tr>
<td>o. IM</td>
<td>Intramuscular</td>
</tr>
<tr>
<td>p. SL</td>
<td>Sub-lingual</td>
</tr>
</tbody>
</table>
2. Dorothy is in charge of organizing a newly constructed examination room. The room will be used for medication administration, and Dorothy wants to make sure it is fully equipped. What supplies must Dorothy order to fulfill OSHA guidelines? What are some other items she may want to make sure are in the room to make patients as comfortable as possible?

3. Dorothy has been asked to perform a two-step tuberculin skin test on a new employee. Why is this being done? Explain the procedure to the new co-worker.

4. Dorothy is responsible for reading and documenting the outcome of a Mantoux test that was administered 2 days ago. Explain the criteria for a positive test result, including the reasons a result may be considered positive even if the induration is less than 15 mm.

**MEDICAL RECORD ACTIVITIES**

1. Dorothy is administering DTaP 0.5 mL intramuscularly to a 5-year-old patient. What site should she use? Document the procedure. 

2. You have just administered allergy injections to a patient. As you are informing the patient that he must wait in the office for 20 minutes for monitoring for any reactions, the patient informs you that he is unable to remain in the office. What should you do? Document your answer.

3. You are providing instruction on the use of an Epipen to a patient who is allergic to bee venom. Provide step-by-step instructions for the patient. Using your knowledge of patient education, what are some points to remember with demonstration? What types of materials should you give the patient to take home? Document your session with the patient in the medical record.

4. You are getting ready to administer IM penicillin to a patient as ordered. Just as you are about to inject the medication, the patient tells you she is allergic to penicillin. What should you do? Provide the appropriate documentation in the patient record.

5. You are gathering a new patient history for Dr. Thau. What types of questions should you ask the patient about his or her use of medications? Role-play with a partner, interviewing each other about medication use. Document your findings.