

**STUDY GUIDE**  
**for**  
**Pharmacology 3**

1. All of the following statements regarding aminophylline are true except
  - A. besides asthma, it is also useful in treating pesticide poisoning and emphysema
  - B. concomitant use with beta blockers or erythromycin can cause theophylline toxicity
  - C. it works by relaxing smooth muscles of the bronchioles without affecting adrenergic receptors.
  - D. it should not be used in patients with PVC's, tachycardia, or hypotension
  
2. A 38-year-old primipara female who is in the 36th week of gestation is complaining of marked weakness and swelling of her extremities. Secondary examination reveals she has an elevated blood pressure. On the way to the hospital the patient begins to seize. What is your drug of choice?
  - A. magnesium sulfate
  - B. Valium
  - C. morphine sulfate
  - D. oxytocin
  
3. Which of the following statements regarding epinephrine 1:1000 is false?
  - A. Epinephrine 1:1000 will increase myocardial effort and oxygen demand, potentially causing angina or MI.
  - B. Pulmonary edema or emboli may produce asthma like wheezing, but use of epinephrine 1:1000 is contraindicated.
  - C. In an emergency, epinephrine 1:1000 may be diluted with 100 cc of 5% dextrose in water, and used as epinephrine 1:10,000 (IV or ET).
  - D. Epinephrine 1:1000 may be administered IV as a "high dose" during cardiac arrest
  - E. Frequent side effects of epinephrine 1:1000 are anxiety, complaints of "palpitations," headache, tremors, and tachycardia.
  
4. Epinephrine 1:1000 is indicated for the treatment of
  - A. severe, localized allergic reactions.
  - B. anaphylactic shock
  - C. asthma (in patients less than 40 years old only).
  - D. both answers a and b
  - E. both answers b and c

5. Epinephrine 1:1000 is administered to adults in doses of
- A. 0.1 to 0.3 mg
  - B. 0.3 to 0.5 mg
  - C. 0.5 to 1.0 mg
  - D. 1.0 to 2.0 mg
  - E. both answers b and c
6. Which of the following statements regarding aminophylline is false?
- A. Patients already taking medications containing theophylline must receive a reduced dose of aminophylline.
  - B. Aminophylline may cause ventricular ectopy, tachycardias, and hypotension.
  - C. Aminophylline continues to be preferred over nebulized beta agonists.
  - D. all of the above is false
  - E. none of the above is false
7. Aminophylline may be indicated in all of the following situations, except
- A. congestive heart failure with pulmonary edema
  - B. asthma
  - C. chronic bronchitis with bronchospasm
  - D. Emphysema with bronchospasm
  - E. Hives
8. Aminophylline is administered by “piggybacked” IV infusion, prepared by adding
- A. 250-500 mg to 80 or 90 ml of 5% dextrose in water, to be infused over 20 to 30 minutes.
  - B. 250-500 mg to 20 ml of 5% dextrose in water, to be infused over 20 to 30 minutes.
  - C. 250-500 mg to 500 ml of 5% dextrose in water, to be infused over 20 to 30 minutes.
  - D. answers a or b only.
  - E. answers a, b, or c.
9. All of the following statements regarding racemic epinephrine are true, except
- A. Racemic epinephrine is administered by nebulized inhalation or diluted IV infusion.
  - B. Racemic epinephrine is used to treat croup.
  - C. Racemic epinephrine may be contraindicated for epiglottitis.

- D. Racemic epinephrine may cause tachycardia or dysrhythmias.
  - E. The standard racemic epinephrine dose is 0.25 to 0.75 ml diluted with 2 ml of normal (or respiratory) saline.
10. Which of the following statements regarding albuterol (Proventil, Ventolin) is false?
- A. Albuterol is a sympatholytic medication.
  - B. Albuterol produces bronchodilation without the frequency of tachycardia seen with epi or aminophylline.
  - C. Albuterol is used to treat asthma and bronchospasm.
  - D. The standard adult albuterol dose is 2.5 mg (0.5 ml of a 0.5% solution diluted with 2.5 ml of saline).
  - E. In the prehospital setting, albuterol is administered by inhalation only.
11. Indications for administration of 50% dextrose in water (D50W) include
- A. altered level of consciousness, suspected to be from acute alcohol abuse.
  - B. altered level of consciousness, suspected to be from acute drug overdose.
  - C. altered level of consciousness, despite suspicion of hyperglycemia, when reagent strip confirmation is unavailable.
  - D. answers a and b only
  - E. answers a, b, and c
12. When hypoglycemia is confirmed by a reagent strip, D 50 W is contraindicated in cases of
- A. altered level of consciousness, suspected to be secondary to a seizure disorder.
  - B. altered level of consciousness, suspected to be secondary to a CVA
  - C. altered level of consciousness, suspected to be secondary to hyperglycemia.
  - D. all of the above
  - E. none of the above
13. D50W is administered in a dosage of
- A. 25 grams (25 ml of a 50 percent solution).
  - B. 2500 grams (50 ml of a 50 percent solution).
  - C. 25 mg (50 ml of a 50 percent solution).
  - D. 250 mg (25 m of a 50 percent solution).
  - E. 25 grams ( 50 ml of a 50 percent solution).

14. Administration routes for D50W include
- A. IV only
  - B. ET only
  - C. IM only
  - D. IV or IM
  - E. IV, IM, or IO
15. Thiamine deficiency may
- A. alter the cell's ability to metabolize glucose.
  - B. be responsible for neurologic deficits observed in alcoholics who have been on a "binge".
  - C. contribute to altered levels of consciousness.
  - D. all of the above
  - E. none of the above
16. Administration of thiamine is indicated in situations involving
- A. altered level of consciousness with a history of brittle diabetes.
  - B. altered level of consciousness with a history of alcoholism.
  - C. delirium tremens.
  - D. answers a and b only
  - E. answers b and c only
17. Potential indicators for the administration of steroid preparations include all of the following, except
- A. asthma
  - B. anaphylaxis
  - C. acute pulmonary edema or congestive heart failure
  - D. spinal cord injury
  - E. neurogenic shock
18. Which of the following statements regarding methylprednisolone (Solu-Medrol) is true?
- A. Solu-Medrol is a synthetic steroid with potent anti-inflammatory properties.
  - B. For acute histamine reactions, 80 to 125 mg of Solu-Medrol are administered to an adult, IV.
  - C. For adult spinal cord injury, 30 mg/kg of Solu-Medrol is infused IV, over 15 minutes (followed 45 minutes later by a 5.4 mg/kg/hr maintenance infusion).
  - D. both answers a and c are true.
  - E. answers a, b and c are true.

19. For management of seizures, the standard adult diazepam dosage is
- A. 1 to 3 mg.
  - B. 2 to 5 mg.
  - C. 5 to 10 mg.
  - D. 5 to 15 mg.
  - E. 15 to 20 mg.
20. For treatment of acute anxiety reactions, the standard adult diazepam dosage is
- A. 1 to 3 mg.
  - B. 2 to 5 mg.
  - C. 5 to 10 mg.
  - D. 5 to 15 mg.
  - E. 15 to 20 mg.
21. For sedation prior to cardioversion, the standard adult diazepam dosage is
- A. 1 to 3 mg.
  - B. 2 to 5 mg.
  - C. 5 to 10 mg.
  - D. 5 to 15 mg.
  - E. 15 to 20 mg.
22. Administration routes for diazepam include
- A. IV and IM
  - B. ET and IO
  - C. rectally
  - D. both answers a and b
  - E. both answers a and c
23. In the prehospital setting, oxytocin is administered
- A. to induce labor during a long transport.
  - B. to enhance delivery of a second fetus in a multiple birth situation with prolonged labor.
  - C. to assist in control of severe postpartum hemorrhage.
  - D. to delay labor during a long transport.
  - E. none of the above.

24. Which of the following statements regarding magnesium sulfate is false?
- A. Magnesium sulfate is a CNS stimulant and may cause tachycardia, tachypnea, and hypertension.
  - B. Magnesium sulfate is indicated for the treatment of seizures secondary to toxemia of pregnancy (eclampsia).
  - C. Calcium chloride antagonizes magnesium sulfate effects.
  - D. all of the above are false.
  - E. none of the above are false.
25. Administration of 1 to 2 grams of magnesium sulfate, diluted in 100 ml 5% dextrose in water, over 1 to 2 minutes, is recommended for
- A. ventricular tachycardia.
  - B. ventricular fibrillation.
  - C. Torsade de pointes.
  - D. both answers a and b
  - E. both answers a and c
26. The most familiar trade name for diphenhydramine is
- A. Valium.
  - B. Benadryl.
  - C. Dermerol.
  - D. Vistaril.
  - E. Haldol.
27. Which of the following statements regarding diphenhydramine is false?
- A. Diphenhydramine is indicated for the treatment of allergic reactions or anaphylactic shock, but only after initial administration of epinephrine.
  - B. Diphenhydramine is indicated for the treatment for asthma, but only after the initial administration of epinephrine.
  - C. Administration routes for diphenhydramine include IV and IM only.
  - D. Diphenhydramine acts as a sedative.
  - E. None of the above is false.
28. The normal adult dosage of diphenhydramine is
- A. 1 mg/kg every 2-3 minutes.
  - B. 10-20 mg diluted in 50 ml D5W and infused over 15 minutes.
  - C. a 25-50 mg bolus.
  - D. both answers a and c
  - E. both answers b and c

29. Which of the following statements regarding syrup of ipecac is true?
- A. Ipecac is a particularly effective emetic when used for treatment of thorazine overdose.
  - B. If the overdose patient is obtunded, ipecac may be administered sublingually to effect gastric evacuation without aspiration.
  - C. After the administration of 15 to 30 ml of oral (or sublingual) ipecac, the patient should remain NPO until arrival at the emergency room.
  - D. All of the above are true.
  - E. None of the above is true.
30. Which of the following statements regarding activated charcoal is true?
- A. Oral administration of activated charcoal is contraindicated in the patient with the depressed level of consciousness.
  - B. If ipecac has been administered, activated charcoal is contraindicated until after emesis.
  - C. Activated charcoal is indicated for treatment of ingestions that contraindicate administration of ipecac.
  - D. All of the above are true.
  - E. None of the above is true.
31. Which of the following statements regarding naloxone (Narcan) is false?
- A. Naloxone antagonizes the effects of narcotics.
  - B. Administration of naloxone may precipitate withdrawal signs and symptoms in the addicted patient.
  - C. Naloxone is not effective in the treatment of synthetic narcotic overdose.
  - D. Naloxone is not effective in the treatment of barbiturate overdose, but may still be administered to rule out narcotic ingestion.
  - E. Naloxone is indicated for treatment of unconsciousness of unknown etiology, especially when alcohol ingestion is suspected.
32. Naloxone is administered in doses of
- A. 1-2 mg, repeated every 5 minutes as needed.
  - B. 2-5 mg if Darvon overdose is suspected.
  - C. 2-5 mg if alcohol overdose is suspected.
  - D. answers a and c only.
  - E. answers a, b, and c
33. Administration routes for naloxone include
- A. IV only
  - B. IV and ET only
  - C. IM or SQ only
  - D. IV, ET, IM, or SQ
  - E. IV, ET, IM, SQ, or IO

34. Terbutaline:
- A. is classified as a natural catecholamine.
  - B. causes relaxation of bronchial smooth muscle.
  - C. is selective for alpha-1 adrenergic receptors.
  - D. is the drug of choice in the management of coma of unknown origin.
35. Aminophylline has which of the following therapeutic effects?
- A. CNS stimulation, myocardial depression.
  - B. bronchoconstriction, mild diuretic action.
  - C. Respiratory stimulant, bronchodilation.
  - D. CNS depressant, diaphragm stimulant.
36. Which of the following is used to treat acute dystonic reactions?
- A. atropine
  - B. diazepam
  - C. naloxone
  - D. diphenhydramine
37. Albuterol's trade names are:
- A. Bronkosol, Brethine
  - B. Brethine, Proventil
  - C. Bronkosol, Ventolin
  - D. Proventil, Ventolin
38. Albuterol is classified is classified as a(n):
- A. diuretic
  - B. pancreatic hormone
  - C. cholinergic
  - D. sympathomimetic
39. Which of the following is likely to occur if Aminophylline is administered too rapidly?
- A. hypotension
  - B. urine retention
  - C. visual disturbances
  - D. gastrointestinal bleeding



40. The typical adult dose of isoetharine is:
- A. 0.5 to 1.0 mg IV push.
  - B. 5 mg/kg slow IV push.
  - C. 0.5 mL administered subcutaneously.
  - D. 0.5 mL in 3 mL normal saline via small volume nebulizer.
41. You have been instructed to administer aminophylline to a 64-year old female in respiratory distress. When administering this medication, you must monitor the patient for:
- A. hypertension
  - B. cardiac dysrhythmias
  - C. hyperglycemia
  - D. respiratory depression
42. Diphenhydramine:
- A. inhibits the action of acetylcholine at postganglionic receptors sites.
  - B. blocks the action of histamine at histamine receptor sites.
  - C. inhibits the movement of calcium ions across cell membranes.
  - D. inhibits reabsorption of sodium and chloride in the proximal tubule and loop of Henle.
43. Diphenhydramine is classified as a(n):
- A. bronchodilator
  - B. anticonvulsant
  - C. anticholinergic agent
  - D. histamine receptor blocker
44. Epinephrine is used in some patients experiencing respiratory distress primarily to :
- A. increase blood pressure.
  - B. decrease bronchial secretions.
  - C. relax bronchial smooth muscle.
  - D. decrease myocardial contractility.
45. A 65-year-old man is complaining of shortness of breath and chills. He states he has had a fever for 2 days and cough productive of yellow sputum.. Blood pressure 148/88, pulse 110, respiratory rate 28. Management of this patient should include:
- A. O2, IV, supportive care, transport.
  - B. O2, IV, 50% epinephrine, and diphenhydramine.
  - C. O2, IV, 50% dextrose, naloxone, and thiamine.
  - D. O2, IV, SL nitroglycerin, morphine, and furosemide.

46. Aminophylline is contraindicated in patients with:
- A. anaphylaxis
  - B. hypertension
  - C. congestive heart failure
  - D. hypersensitivity to xanthine compounds
47. Diphenhydramine is the generic name for
- A. Benadryl
  - B. Solu-Medrol
  - C. Nitrostat
  - D. Proventil
48. Terbutaline is the generic name for:
- A. Alupent
  - B. Brethine
  - C. Bronkosol
  - D. Ventolin
49. Diphenhydramine is indicated for:
- A. Anaphylaxis (before epinephrine).
  - B. Bee sting without signs of systemic allergic reaction
  - C. Phenothiazine induced extrapyramidal reactions.
  - D. Bronchospasm due to acute asthma.
50. Methylprednisolone:
- A. is indicated in the management of moderate to severe pain.
  - B. should be used with caution in the hypotensive patient.
  - C. is a potent steroid that suppresses acute and chronic inflammation.
  - D. is contraindicated in bronchospasm associated with anaphylaxis
51. Side effects of albuterol include:
- A. bradycardia, dry mouth.
  - B. dizziness, restlessness.
  - C. sodium and water retention, hypertension.
  - D. peripheral vasoconstriction, abdominal cramps.

52. In patients who have not been taking theophylline preparations, the usual loading dose of aminophylline is:
- A. 0.5-1.0 mg/kg in 250-500 mL of solution.
  - B. 250-500 mg in 100 mL of IV solution.
  - C. 5-15 mg/kg in 100-250 mL of solution.
  - D. 10-20 mg/kg in 50-100 mL of solution.
53. Methylprednisolone:
- A. is the generic name for Decadron.
  - B. may be beneficial in respiratory distress associated with bronchospasm.
  - C. is the drug of choice in the treatment of anaphylaxis.
  - D. is a vitamin essential for the normal metabolism of glucose.
54. Your patient is a child suffering from bronchial asthma. Medical control orders subcutaneous administration of Terbutaline, which comes in vials containing 1 mg in 1 ml of solvent. The patient weighs 44 pounds. You inject:
- A. 1 mg.
  - B. 0.8 mg.
  - C. 0.4 ml.
  - D. 0.2 ml.
55. Magnesium sulfate can cause respiratory depression. Respiratory depression, if it occurs, may be alleviated by IV administration of calcium chloride. In this circumstance, calcium chloride is an example of a(n):
- A. cumulative action.
  - B. stimulant.
  - C. untoward effect.
  - D. antidote.
56. Glucagon is commonly indicated for:
- A. hypoglycemia.
  - B. bronchoconstriction.
  - C. ventricular arrhythmias.
  - D. anginal pain.
57. Select the appropriate medication and adult dose for a patient with an acute psychotic episode.
- A. Haldol 5 mg IM.
  - B. Valium 30 mg IV.
  - C. pralidoxime 20 mg IV.
  - D. labetalol mg IM.

58. A common trade name for albuterol is:
- A. Proventil.
  - B. Sectral.
  - C. Zepine.
  - D. Restoril.
59. A common trade name for ipratropium is:
- A. Esidrix.
  - B. Fortrol.
  - C. Doriden.
  - D. Atrovent.
60. A common trade name for aminophylline is:
- A. Austophyllin.
  - B. Havenophyllin.
  - C. Retrophyllin.
  - D. Somophyllin.