NR 566 / NR566 Advanced Pharmacology Care of the Family Midterm Review Quiz bank | LATEST, 2020/2021 |Q & A| Chamberlain College

1. Hypoglycemia can result from the action of either insulin or an oral hypoglycemic. Signs and symptoms of hypoglycemia include:

A. "Fruity" breath odor and rapid respiration
B. Diarrhea, abdominal pain, weight loss, and hypertension
C. Dizziness, confusion, diaphoresis, and tachycardia
D. Easy bruising, palpitations, cardiac dysrhythmias, and coma

2. Nonselective beta blockers and alcohol create serious drug interactions with insulin because they:

A. Increase blood glucose levels
B. Produce unexplained diaphoresis
C. Interfere with the ability of the body to metabolize glucose
D. Mask the signs and symptoms of altered glucose levels

3. Lispro is an insulin analogue produced by recombinant DNA technology. Which of the following statements about this form of insulin is NOT true?

A. Optimal time of preprandial injection is 15 minutes.
B. Duration of action is increased when the dose is increased.
C. It is compatible with neutral protamine Hagedorn insulin.
D. It has no pronounced peak.

4. The decision may be made to switch from twice daily neutral protamine Hagedorn (NPH) insulin to insulin glargine to improve glycemia control throughout the day. If this is done:

A. The initial dose of glargine is reduced by 20% to avoid hypoglycemia.
B. The initial dose of glargine is 2 to 10 units per day.
C. Patients who have been on high doses of NPH will need tests for insulin antibodies.
D. Obese patients may require more than 100 units per day.

5. When blood glucose levels are difficult to control in type 2 diabetes some form of insulin may be added to the treatment regimen to control blood glucose and limit complication risks. Which of the following statements is accurate based on research?

A. Premixed insulin analogues are better at lowering HbA1C and have less risk for hypoglycemia.
B. Premixed insulin analogues and the newer premixed insulins are associated with more weight gain than the oral antidiabetic agents.
C. Newer premixed insulins are better at lowering HbA1C and postprandial glucose levels than long-acting insulins.
D. Patients who are not controlled on oral agents and have postprandial hyperglycemia can have neutral protamine Hagedorn insulin added at bedtime.

6. Metformin is a primary choice of drug to treat hyperglycemia in type 2 diabetes because it:
A. Substitutes for insulin usually secreted by the pancreas
B. Decreases glycogenolysis by the liver
C. Increases the release of insulin from beta cells
D. Decreases peripheral glucose utilization

7. Prior to prescribing metformin, the provider should:
A. Draw a serum creatinine to assess renal function
B. Try the patient on insulin
C. Tell the patient to increase iodine intake
D. Have the patient stop taking any sulfonylurea to avoid dangerous drug interactions

8. The action of "gliptins" is different from other antidiabetic agents because they:
A. Have a low risk for hypoglycemia
B. Are not associated with weight gain
C. Close ATP-dependent potassium channels in the beta cell
D. Act on the incretin system to indirectly increase insulin production

9. Sitagliptin has been approved for:
A. Monotherapy in once-daily doses
B. Combination therapy with metformin
C. Both 1 and 2
D. Neither 1 nor 2

10. GLP-1 agonists:
A. Directly bind to a receptor in the pancreatic beta cell
B. Have been approved for monotherapy
C. Speed gastric emptying to decrease appetite
D. Can be given orally once daily

11. Avoid concurrent administration of exenatide with which of the following drugs?
A. Digoxin
B. Warfarin

C. Lovastatin
D. All of the above

12. Administration of exenatide is by subcutaneous injection:
A. 30 minutes prior to the morning meal
B. 60 minutes prior to the morning and evening meal
C. 15 minutes after the evening meal
D. 60 minutes before each meal daily

13. Potentially fatal granulocytopenia has been associated with treatment of hyperthyroidism with propylthiouracil. Patients should be taught to report:
A. Tinnitus and decreased salivation
B. Fever and sore throat
C. Hypocalcemia and osteoporosis
D. Laryngeal edema and difficulty swallowing

14. Elderly patients who are started on levothyroxine for thyroid replacement should be monitored for:
A. Excessive sedation
B. Tachycardia and angina
C. Weight gain
D. Cold intolerance

15. Which of the following is not an indication that growth hormone supplements should be discontinued?
A. Imaging indication of epiphyseal closure
B. Growth curve increases have plateaued
C. Complaints of mild bone pain
D. Achievement of anticipated height goals

16. Besides osteoporosis, IV bisphosphonates are also indicated for:
A. Paget's Disease
B. Early osteopenia
C. Renal cancer
D. Early closure of cranial sutures

17. What is the role of calcium supplements when patients take bisphosphonates?
A. They must be restricted to allow the medication to work.
B. They must be taken in sufficient amounts to provide foundational elements for bone growth.
C. They must be taken at the same time as the bisphosphonates.
D. They only work with bisphosphonates if daily intake is restricted.

18. Which of the following statements about pancreatic enzymes is true?
A. Dosing may be titrated according to the decrease of steatorrhea.
B. The amount of carbohydrates in the meal drives the amount of enzyme used.
C. The amount of medication used is increased with a cystic fibrosis pulmonary flare.
D. The FDA and Internet-available formulations are bioequivalent.

19. Both men and women experience bone loss with aging. The bones most likely to demonstrate significant loss are:
A. Cortical bones
B. Femoral neck bones
C. Cervical vertebrae
D. Pelvic bones

20. Bisphosphonates treat or prevent osteoporosis by:
A. Inhibiting osteoclastic activity
B. Fostering bone resorption
C. Enhancing calcium uptake in the bone
D. Strengthening the osteoclastic proton pump

21. Prophylactic use of bisphosphonates is recommended for patients with early osteopenia related to long-term use of which of the following drugs?
A. Selective estrogen receptor modulators
B. Aspirin
C. Glucocorticoids
D. Calcium supplements

22. Patients with cystic fibrosis are often prescribed enzyme replacement for pancreatic secretions. Each replacement drug has lipase, protease, and amylase components, but the drug is prescribed in units of:
A. Lipase
B. Protease
C. Amylase
D. Pancreatin

23. Brands of pancreatic enzyme replacement drugs are:
A. Bioequivalent
B. About the same in cost per unit of lipase across brands
C. Able to be interchanged between generic and brand-name products to reduce cost
D. None of the above

24. When given subcutaneously, how long until neutral protamine Hagedorn insulin begins to take effect (onset of action) after administration?
A. 15 to 30 minutes

B. 60 to 90 minutes
C. 3 to 4 hours
D. 6 to 8 hours

25. Besides cystic fibrosis, which other medical state may trigger the need for pancreatic enzymes?
A. Paget's disease
B. Pulmonary cancers
C. Gallbladder surgery
D. Some bariatric surgeries

Chapter 33. Diabetes Mellitus

1. Type 1 diabetes results from autoimmune destruction of the beta cells. Eighty-five to 90% of type 1 diabetics have:
A. Autoantibodies to two tyrosine phosphatases
B. Mutation of the hepatic transcription factor on chromosome 12
C. A defective glucokinase molecule due to a defective gene on chromosome 7p
D. Mutation of the insulin promoter factor

2. Type 2 diabetes is a complex disorder involving:
A. Absence of insulin production by the beta cells
B. A suboptimal response of insulin-sensitive tissues in the liver
C. Increased levels of glucagon-like peptide in the postprandial period
D. Too much fat uptake in the intestine

3. Diagnostic criteria for diabetes include:
A. Fasting blood glucose greater than 140 mg/dl on two occasions
B. Postprandial blood glucose greater than 140 mg/dl
C. Fasting blood glucose 100 to 125 mg/dl on two occasions
D. Symptoms of diabetes plus a casual blood glucose greater than 200 mg/dl

4. Routine screening of asymptomatic adults for diabetes is appropriate for:
A. Individuals who are older than 45 and have a BMI of less than 25 kg/m2
B. Native Americans, African Americans, and Hispanics
C. Persons with HDL cholesterol greater than 100 mg/dl
D. Persons with prediabetes confirmed on at least two occasions

5. Screening for children who meet the following criteria should begin at age 10 and occur every 3 years thereafter:
A. BMI above the 85th percentile for age and sex

B. Family history of diabetes in first- or second-degree relative
C. Hypertension based on criteria for children
D. Any of the above

6. Insulin is used to treat both types of diabetes. It acts by:
A. Increasing beta cell response to low blood-glucose levels
B. Stimulating hepatic glucose production
C. Increasing peripheral glucose uptake by skeletal muscle and fat
D. Improving the circulation of free fatty acids

7. Adam has type 1 diabetes and plays tennis for his university. He exhibits a knowledge deficit about his insulin and his diagnosis. He should be taught that:
A. He should increase his carbohydrate intake during times of exercise.
B. Each brand of insulin is equal in bioavailability, so buy the least expensive.
C. Alcohol produces hypoglycemia and can help control his diabetes when taken in small amounts.
D. If he does not want to learn to give himself injections, he may substitute an oral hypoglycemic to control his diabetes.

8. Insulin preparations are divided into categories based on onset, duration, and intensity of action following subcutaneous injection. Which of the following insulin preparations has the shortest onset and duration of action?
A. Lispro
B. Glulisine
C. Glargine
D. Detemir

9. The drug of choice for type 2 diabetics is metformin. Metformin:
A. Decreases glycogenolysis by the liver
B. Increases the release of insulin from beta cells
C. Increases intestinal uptake of glucose
D. Prevents weight gain associated with hyperglycemia

10. Before prescribing metformin, the provider should:
A. Draw a serum creatinine level to assess renal function.
B. Try the patient on insulin.
C. Prescribe a thyroid preparation if the patient needs to lose weight.
D. All of the above

11. Sulfonylureas may be added to a treatment regimen for type 2 diabetics when lifestyle modifications and metformin are insufficient to achieve target glucose levels. Sulfonylureas have been moved to Step 2 therapy because they:
A. Increase endogenous insulin secretion
B. Have a significant risk for hypoglycemia

C. Address the insulin resistance found in type 2 diabetics
D. Improve insulin binding to receptors

12. Dipeptidyl peptidase-4 inhibitors (gliptins) act on the incretin system to improve glycemic control. Advantages of these drugs include:

A. Better reduction in glucose levels than other classes
B. Less weight gain than sulfonylureas
C. Low risk for hypoglycemia
D. Can be given twice daily

13. Control targets for patients with diabetes include:

A. HbA1C between 7 and 8
B. Fasting blood glucose levels between 100 and 120 mg/dl
C. Blood pressure less than 130/80 mm Hg
D. LDL lipids less than 130 mg/dl

14. Establishing glycemic targets is the first step in treatment of both types of diabetes. For type 1 diabetes:

A. Tight control/intensive therapy can be given to adults who are willing to test their blood glucose at least twice daily.
B. Tight control is acceptable for older adults if they are without complications.
C. Plasma glucose levels are the same for children as adults.
D. Conventional therapy has a fasting plasma glucose target between 120 and 150 mg/dl.

15. Treatment with insulin for type 1 diabetics:

A. Starts with a total daily dose of 0.2 to 0.4 units per kg of body weight
B. Divides the total doses into three injections based on meal size
C. Uses a total daily dose of insulin glargine given once daily with no other insulin required
D. Is based on the level of blood glucose

16. When the total daily insulin dose is split and given twice daily, which of the following rules may be followed?

A. Give two-thirds of the total dose in the morning and one-third in the evening.
B. Give 0.3 units per kg of premixed 70/30 insulin with one-third in the morning and two-thirds in the evening.
C. Give 50% of an insulin glargine dose in the morning and 50% in the evening.
D. Give long-acting insulin in the morning and short-acting insulin at bedtime.

17. Studies have shown that control targets that reduce the HbA1C to less than 7% are associated with fewer long-term complications of diabetes. Patients who should have such a target include:

A. Those with long-standing diabetes

B. Older adults
C. Those with no significant cardiovascular disease
D. Young children who are early in their disease

18. Prevention of conversion from prediabetes to diabetes in young children must take highest priority and should focus on:

A. Aggressive dietary manipulation to prevent obesity
B. Fostering LDL levels less than 100 mg/dl and total cholesterol less than 170 mg/dl to prevent cardiovascular disease
C. Maintaining a blood pressure that is less than 80% based on weight and height to prevent hypertension
D. All of the above

19. The drugs recommended by the American Academy of Pediatrics for use in children with diabetes (depending upon type of diabetes) are:

A. Metformin and insulin
B. Sulfonylureas and insulin glargine
C. Split-mixed dose insulin and GPL-1 agonists
D. Biguanides and insulin lispro

20. Unlike most type 2 diabetics where obesity is a major issue, older adults with low body weight have higher risks for morbidity and mortality. The most reliable indicator of poor nutritional status in older adults is:

A. Weight loss in previously overweight persons
B. Involuntary loss of 10% of body weight in less than 6 months
C. Decline in lean body mass over a 12-month period
D. Increase in central versus peripheral body adiposity

21. The drugs recommended for older adults with type 2 diabetes include:

A. Second-generation sulfonylureas
B. Metformin
C. Pioglitazone
D. Third-generation sulfonylureas

22. Ethnic groups differ in their risk for and presentation of diabetes. Hispanics:

A. Have a high incidence of obesity, elevated triglycerides, and hypertension
B. Do best with drugs that foster weight loss, such as metformin
C. Both 1 and 2
D. Neither 1 nor 2

23. The American Heart Association states that people with diabetes have a 2- to 4-fold increase in the risk of dying from cardiovascular disease. Treatments and targets that do not appear to decrease risk for micro- and macro-vascular complications include:

A. Glycemic targets between 7% and 7.5%
B. Use of insulin in type 2 diabetics
C. Control of hypertension and hyperlipidemia
D. Stopping smoking

24. All diabetic patients with known cardiovascular disease should be treated with:
A. Beta blockers to prevent MIs
B. Angiotensin-converting enzyme inhibitors and aspirin to reduce risk of cardiovascular events
C. Sulfonylureas to decrease cardiovascular mortality
D. Pioglitazone to decrease atherosclerotic plaque buildup

25. All diabetic patients with hyperlipidemia should be treated with:
A. HMG-CoA reductase inhibitors
B. Fibric acid derivatives
C. Nicotinic acid
D. Colestipol

26. Both angiotensin converting enzyme inhibitors and some angiotensin II receptor blockers have been approved in treating:
A. Hypertension in diabetic patients
B. Diabetic nephropathy
C. Both 1 and 2
D. Neither 1 nor 2

27. Protein restriction helps slow the progression of albuminuria, glomerular filtration rate, decline, and end stage renal disease in some patients with diabetes. It is useful for patients who:
A. Cannot tolerate angiotensin converting enzyme inhibitors or angiotensin receptor blockers
B. Have uncontrolled hypertension
C. Have HbA1C levels above 7%
D. Show progression of diabetic nephropathy despite optimal glucose and blood pressure control

28. Diabetic autonomic neuropathy (DAN) is the earliest and most common complication of diabetes. Symptoms associated with DAN include:
A. Resting tachycardia, exercise intolerance, and orthostatic hypotension
B. Gastroparesis, cold intolerance, and moist skin
C. Hyperglycemia, erectile dysfunction, and deficiency of free fatty acids
D. Pain, loss of sensation, and muscle weakness

29. Drugs used to treat diabetic peripheral neuropathy include:

A. Metoclopramide
B. Cholinergic agonists
C. Cardioselective beta blockers
D. Gabapentin

30. The American Diabetic Association has recommended which of the following tests for ongoing management of diabetes?
A. Fasting blood glucose
B. HbA1C
C. Thyroid function tests
D. Electrocardiograms

31. Allison is an 18-year-old college student with type 1 diabetes. She is on NPH twice daily and Novolog before meals. She usually walks for 40 minutes each evening as part of her exercise regimen. She is beginning a 30-minute swimming class three times a week at 1 p.m. What is important for her to do with this change in routine?
A. Delay eating the midday meal until after the swimming class.
B. Increase the morning dose of NPH insulin on days of the swimming class.
C. Adjust the morning insulin injection so that the peak occurs while swimming.
D. Check glucose level before, during, and after swimming.

32. Allison is an 18-year-old college student with type 1 diabetes. Allison's pre-meal BG at 11:30 a.m. is 130. She eats an apple and has a sugar-free soft drink. At 1 p.m. before swimming her BG is 80. What should she do?
A. Proceed with the swimming class.
B. Recheck her BG immediately.
C. Eat a granola bar or other snack with CHO.
D. Take an additional dose of insulin.

33. Bart is a patient is a 67-year-old male with T2 DM. He is on glipizide and metformin. He presents to the clinic with confusion, sluggishness, and extreme thirst. His wife tells you Bart does not follow his meal plan or exercise regularly, and hasn't checked his BG for 1 week. A random glucose is drawn and it is 500. What is a likely diagnosis based on preliminary assessment?
A. Diabetic keto acidosis (DKA)
B. Hyperglycemic hyperosmolar syndrome (HHS)
C. Infection
D. Hypoglycemia

34. What would one expected assessment finding be for hyperglycemic hyperosmolar syndrome?
A. Low hemoglobin
B. Ketones in the urine

C. Deep, labored breathing
D. pH of 7.35

35. A patient on metformin and glipizide arrives at her 11:30 a.m. clinic appointment diaphoretic and dizzy. She reports taking her medication this morning and ate a bagel and coffee for breakfast. BP is 110/70 and random finger-stick glucose is 64. How should this patient be treated?

A. 12 oz apple juice with 1 tsp sugar
B. 10 oz diet soda
C. 8 oz milk or 4 oz orange juice
D. 4 cookies and 8 oz chocolate milk

Chapter 41. Hyperthyroidism and Hypothyroidism

1. When methimazole is started for hyperthyroidism it may take _____ to see a total reversal of hyperthyroid symptoms.

A. 2 to 4 weeks
B. 1 to 2 months
C. 3 to 4 months
D. 6 to 12 months

2. In addition to methimazole, a symptomatic patient with hyperthyroidism may need a prescription for:

A. A calcium channel blocker
B. A beta blocker
C. Liothyronine
D. An alpha blocker

3. After starting a patient with Grave's disease on an antithyroid agent such as methimazole, patient monitoring includes TSH and free T4 every:

A. 1 to 2 weeks
B. 3 to 4 weeks
C. 2 to 3 months
D. 6 to 9 months

4. A woman who is pregnant and has hyperthyroidism is best managed by a specialty team who will most likely treat her with:

A. Methimazole
B. Propylthiouracil (PTU)
C. Radioactive iodine
D. Nothing, treatment is best delayed until after her pregnancy ends

5. Goals when treating hypothyroidism with thyroid replacement include:

A. Normal TSH and free T4 levels
B. Resolution of fatigue
C. Weight loss to baseline
D. All of the above

6. When starting a patient on levothyroxine for hypothyroidism the patient will need follow-up measurement of thyroid function in:

A. 2 weeks
B. 4 weeks
C. 2 months
D. 6 months

7. Once a patient who is being treated for hypothyroidism returns to euthyroid with normal TSH levels, he or she should be monitored with TSH and free T4 levels every:

A. 2 weeks
B. 4 weeks
C. 2 months
D. 6 months

8. Treatment of a patient with hypothyroidism and cardiovascular disease consists of:

A. Levothyroxine
B. Liothyronine
C. Liotrix
D. Methimazole

9. Infants with congenital hypothyroidism are treated with:

A. Levothyroxine
B. Liothyronine
C. Liotrix
D. Methimazole

10. When starting a patient with hypothyroidism on thyroid replacement hormones patient education would include:

A. They should feel symptomatic improvement in 1 to 2 weeks.
B. Drug adverse effects such as lethargy and dry skin may occur.
C. It may take 4 to 8 weeks to get to euthyroid symptomatically and by laboratory testing.
D. Because of its short half-life, levothyroxine doses should not be missed.

11. In hyperthyroid states, what organ system other than CV must be evaluated to establish potential adverse issues?

A. The liver
B. The nails and skin

C. The eye
D. The ear

12. Why are “natural” thyroid products not readily prescribed for most patients?
A. There is no reliability for the amount of hormone per dose.
B. There is higher incidence of allergic reactions.
C. There is a more reliable dose of T3 to T4 per batch.
D. All of the above

13. What is the desired mixed of T3 to T4 drug levels in newly diagnosed endocrine patients?
A. 99% of T3 and the rest is T4 to get rapid resolution.
B. Most needs to be T4 to mimic natural ratios of hormone.
C. The ratio is unimportant.
D. The mix needs to be 50-50 at first.

14. Laboratory values are actually different for TSH when screening for thyroid issues and when used for medication management. Which of the follow holds true?
A. Screening TSH has a wider range of normal values 0.02-5.0; therapeutic levels need to remain above 5.0.
B. Screening values are much narrower than the acceptable range used to keep a person stable on hormone replacement.
C. Therapeutic values are kept between 0.05 and 3.0 ideally. Screening values are considered acceptable up to 10.
D. Screening values are between 5 and 10, and therapeutic values are greater than 10.

15. What happens to the typical hormone replacement dose when a woman becomes pregnant?
A. Most women need less medication.
B. Most women do not require a dose change.
C. The average woman needs more medication during pregnancy.
D. The average woman needs more medication only if carrying multiples.

Chapter 25. Drugs Used in Treating Inflammatory Processes

____ 1. All nonsteroidal anti-inflammatory drugs (NSAIDS) have an FDA Black Box Warning regarding:

1.	**Potential for causing life-threatening GI bleeds**

2.	Increased risk of developing systemic arthritis with prolonged use
3.	Risk of life-threatening rashes, including Stevens-Johnson
4.	Potential for transient changes in serum glucose

____ 2. Jamie has fractured his ankle and has received a prescription for acetaminophen and hydrocodone (Vicodin). Education when prescribing Vicodin includes:

1.	It is okay to double the dose of Vicodin if the pain is severe.
2.	Vicodin is not habit-forming.
3.	**He should not take any other acetaminophen-containing medications.**
4.	Vicodin may cause diarrhea; increase his fluid intake.

____ 3. When prescribing NSAIDS, a complete drug history should be conducted as NSAIDs interact with these drugs:

1.	Omeprazole, a proton pump inhibitor
2.	Combined oral contraceptives
3.	Diphenhydramine, an antihistamine
4.	**Warfarin, an anticoagulant**

____ 4. Josefina is a 2-year-old child with acute otitis media and an upper respiratory infection. Along with an antibiotic she receives a recommendation to

treat the ear pain with ibuprofen. What education would her parent need regarding ibuprofen?

1.	They can cut an adult ibuprofen tablet in half to give Josefina.
2.	The ibuprofen dose can be doubled for severe pain.
3.	**Josefina needs to be well-hydrated while taking ibuprofen.**
4.	Ibuprofen is completely safe in children with no known adverse effects.

____ 5. Henry is 82 years old and takes two aspirin every morning to treat the arthritis pain in his back. He states the aspirin helps him to "get going" each day. Lately he has had some heartburn from the aspirin. After ruling out an acute GI bleed, what would be an appropriate course of treatment for Henry?

1.	**Add an H_2 blocker such as ranitidine to his therapy.**

____ 6. Patients whose total dose of prednisone will exceed 1 gram will most likely need a second prescription for:

1.	Metformin, a biguanide to prevent diabetes
2.	**Omeprazole, a proton pump inhibitor to prevent peptic ulcer disease**
3.	Naproxen, an NSAID to treat joint pain
4.	Furosemide, a diuretic to treat fluid retention

____ 7. Daniel has been on 60 mg of prednisone for 10 days to treat a severe asthma exacerbation. It is time to discontinue the prednisone. How is prednisone discontinued?

1.	Patients with asthma are transitioned directly off the prednisone onto inhaled corticosteroids.
2.	Prednisone can be abruptly discontinued with no adverse effects.
3.	**Develop a tapering schedule to slowly wean Daniel off the prednisone.**
4.	Substitute the prednisone with another anti-inflammatory such as ibuprofen.

____ 8. Patients with rheumatoid arthritis who are on chronic low-dose prednisone will need co-treatment with which medications to prevent further adverse effects?

1.	A bisphosphonate
2.	Calcium supplementation
3.	Vitamin D
4.	**All of the above**

____ 9. Patients who are on or who will be starting chronic corticosteroid therapy need monitoring of:

1.	**Serum glucose**
2.	Stool culture
3.	Folate levels
4.	Vitamin B_{12}

____ 10. Patients who are on chronic long-term corticosteroid therapy need education regarding:

1.	Receiving all vaccinations, especially the live flu vaccine
2.	**Reporting black tarry stools or abdominal pain**
3.	Eating a high carbohydrate diet with plenty of fluids
4.	Small amounts of alcohol are generally tolerated.

2.	Discontinue the aspirin and switch him to Vicodin for the pain.
3.	Decrease the aspirin dose to one tablet daily.
4.	Have Henry take an antacid 15 minutes before taking the aspirin each day.

____ 11. Henry presents to clinic with a significantly swollen, painful great toe and is diagnosed with gout. Of the following, which would be the best treatment for Henry?

1.	High-dose colchicine
2.	**Low-dose colchicine**
3.	High-dose aspirin
4.	Acetaminophen with codeine

____ 12. Patient education when prescribing colchicine includes:

1.	Colchicine may be constipating.

2.	**Colchicine always causes some degree of diarrhea.**
3.	Mild muscle weakness is normal.
4.	Moderate amounts of alcohol are safe with colchicine.

____ 13. Larry is taking allopurinol to prevent gout. Monitoring of a patient who is taking allopurinol includes:

1.	Complete blood count
2.	Blood glucose
3.	C-reactive protein
4.	**BUN, creatinine, and creatinine clearance**

____ 14. Phil is starting treatment with febuxostat (Uloric). Education of patients starting febuxostat includes:

1.	**Gout may worsen with therapy.**
2.	Febuxostat may cause severe diarrhea.
3.	He should consume a high-calcium diet.
4.	He will need frequent CBC monitoring.

____ 15. Sallie has been taking 10 mg per day of prednisone for the past 6 months. She should be assessed for:

1.	Gout
2.	Iron deficiency anemia

3.	**Osteoporosis**
4.	Renal dysfunction

____ 16. The trial period to determine effective anti-inflammatory activity aspirin for rheumatoid arthritis is:

1.	48 hours
2.	**4 to 6 days**
3.	4 weeks
4.	2 months

____ 17. Patients prescribed aspirin therapy require education regarding the signs of aspirin toxicity. An early sign of aspirin toxicity is:

1.	Black tarry stools
2.	Vomiting
3.	Tremors
4.	**Tinnitus**

____ 18. Monitoring a patient on a high-dose aspirin level includes:

1.	Salicylate level
2.	Complete blood count
3.	Urine pH

4.	**All of the above**

____ 19. Patients who are on long-term aspirin therapy should have _____ annually.

1.	**Complete blood count**
2.	Salicylate level
3.	Amylase
4.	Urine analysis

Chapter 16. Drugs Affecting the Cardiovascular and Renal Systems

____ 1. Vera, age 70, has isolated systolic hypertension. Calcium channel blocker dosages for her should be:

1.	**Started at about half the usual dosage**
2.	Not increased over the usual dosage for an adult
3.	Given once daily because of memory issues in the older adult
4.	Withheld if she experiences gastroesophageal reflux

____ 2. Larry has heart failure, which is being treated with digoxin because it exhibits:

1.	Negative inotropism
2.	Positive chronotropism
3.	Both 1 and 2
4.	**Neither 1 nor 2**

____ 3. Furosemide is added to a treatment regimen for heart failure that includes digoxin. Monitoring for this combination includes:

1.	Hemoglobin
2.	**Serum potassium**
3.	Blood urea nitrogen
4.	Serum glucose

____ 4. Which of the following create a higher risk for digoxin toxicity? Both the cause and the reason for it must be correct.

1.	**Older adults because of reduced renal function**
2.	Administration of aldosterone antagonist diuretics because of decreased potassium levels
3.	Taking an antacid for gastroesophageal reflux disease because it increases the absorption of digoxin
4.	Doses between 0.25 and 0.5 mg/day

____ 5. Serum digoxin levels are monitored for potential toxicity. Monitoring should occur:

1.	Within 6 hours of the last dose
2.	**Because a reference point is needed in adjusting a dose**
3.	After three half-lives from the starting of the drug
4.	When a patient has stable renal function

____ 6. Rodrigo has been prescribed procainamide after a myocardial infarction. He is monitored for dyspnea, jugular venous distention, and peripheral edema because they may indicate:

1.	Widening of the area of infarction
2.	**Onset of congestive heart failure**
3.	An electrolyte imbalance involving potassium
4.	Renal dysfunction

____ 7. Which of the following is true about procainamide and its dosing schedule?

1.	It produces bradycardia and should be used cautiously in patients with cardiac conditions that a slower heart rate might worsen.
2.	Gastrointestinal adverse effects are common so the drug should be taken with food.
3.	Adherence can be improved by using a sustained release formulation that can be given once daily.
4.	**Doses of this drug should be taken evenly spaced around the clock to keep an even blood level.**

____ 8. Amiodarone has been prescribed in a patient with a supraventricular dysrhythmia. Patient teaching should include all of the following EXCEPT:

1.	Notify your health-care provider immediately if you have visual change.
2.	Monitor your own blood pressure and pulse daily.
3.	**Take a hot shower or bath if you feel dizzy.**
4.	Use a sunscreen on exposed body surfaces.

____ 9. The NP orders a thyroid panel for a patient on amiodarone. The patient tells the NP that he does not have thyroid disease and wants to know why the test is ordered. Which is a correct response?

1.	**Amiodarone inhibits an enzyme that is important in making thyroid hormone and can cause hypothyroidism.**
2.	Amiodarone damages the thyroid gland and can result in inflammation of that gland, causing hyperthyroidism.
3.	Amiodarone is a broad spectrum drug with many adverse effects. Many different tests need to be done before it is given.

4.	Amiodarone can cause corneal deposits in up to 25% of patients.

____ 10. Isosorbide dinitrate is prescribed for a patient with chronic stable angina. This drug is administered twice daily, but the schedule is 7 a.m. and 2 p.m. because:

1.	It is a long-acting drug with potential for toxicity.
2.	**Nitrate tolerance can develop.**
3.	Orthostatic hypotension is a common adverse effect.
4.	It must be taken with milk or food.

11. Ray has been diagnosed with hypertension and an angiotensin-converting enzyme inhibitor is determined to be needed. Prior to prescribing this drug, the NP should assess for:

1.	Hypokalemia
2.	Impotence
3.	**Decreased renal function**
4.	Inability to concentrate

____ 12. Angiotensin-converting enzyme inhibitors are the drug of choice in treating hypertension in diabetic patients because they:

1.	Improve insulin sensitivity
2.	Improve renal hemodynamics
3.	Reduce the production of angiotensin II
4.	**All of the above**

____ 13. A potentially life-threatening adverse response to angiotensin-converting enzyme inhibitors is angioedema. Which of the following statements is true about this adverse response?

1.	**Swelling of the tongue or hoarseness are the most common symptoms.**
2.	It appears to be related to the decrease in aldosterone production.
3.	Presence of a dry, hacky cough indicates a high risk for this adverse response.
4.	Because it takes time to build up a blood level, it occurs after being on the drug for about 1 week.

____ 14. Angiotensin-converting enzyme inhibitors are useful in a variety of disorders. Which of the following statements are true about both its usefulness in the disorder and the reason for its use?

1.	Stable angina because it decreases the thickening of vascular walls due to decreased modified release.
2.	Heart failure because it reduces remodeling of injured myocardial tissues.
3.	**Both 1 and 2 are true and the reasons are correct.**
4.	Both 1 and 2 are true but the reasons are wrong.
5.	Neither 1 nor 2 are true.

____ 15. Despite good blood pressure control, an NP might change a patient's drug from an angiotensin-converting enzyme (ACE) inhibitor to an angiotensin II receptor blocker (ARB) because the ARB:

1.	Is stronger than the ACE inhibitor
2.	**Does not produce a dry, hacky cough**
3.	Has no effect on the renal system
4.	Reduces sodium and water retention

____ 16. While taking an angiotensin II receptor blocker (ARB), patients need to avoid certain over-the-counter drugs without first consulting the provider because:

1.	Cimetidine is metabolized by the CYP 3A4 isoenzymes
2.	Nonsteroidal anti-inflammatory drugs reduce prostaglandin levels
3.	**Both 1 and 2**
4.	Neither 1 nor 2

____ 17. Laboratory monitoring for patients on angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers should include:

1.	White blood cell counts with the drug dosage increased for elevations above 10,000 feet
2.	Liver function tests with the drug dosage stopped for alanine aminotransferase values twice that of normal
3.	**Serum creatinine levels with the drug dosage reduced for values greater than 2.5 mg/dL**
4.	Serum glucose levels with the drug dosage increased for levels greater than 120 mg/dL

____ 18. Jacob has hypertension, for which a calcium channel blocker has been prescribed. This drug helps control blood pressure because it:

1.	**Decreases the amount of calcium inside the cell**
2.	Reduces stroke volume
3.	Increases the activity of the Na+/K+/ATPase pump indirectly
4.	Decreases heart rate

____ 19. Which of the following adverse effects may occur due to a dihydropyridine-type calcium channel blocker?

1.	Bradycardia
2.	Hepatic impairment
3.	Increased contractility
4.	**Edema of the hands and feet**

____ 20. Patient teaching related to amlodipine includes:

1.	Increase calcium intake to prevent osteoporosis from a calcium blockade.
2.	Do not crush the tablet; it must be given in liquid form if the patient has trouble swallowing it.
3.	**Avoid grapefruit juice as it affects the metabolism of this drug.**
4.	Rise slowly from a supine position to reduce orthostatic hypotension.

____ 21. Art is a 55-year-old smoker who has been diagnosed with angina and placed on nitrates. He complains of headaches after using his nitrate. An appropriate reply might be:

1.	This is a parasympathetic response to the vasodilating effects of the drug.
2.	**Headaches are common side effects with these drugs. How severe are they?**
3.	This is associated with your smoking. Let's work on having you stop smoking.
4.	This is not related to your medication. Are you under a lot of stress?

____ 22. In teaching about the use of sublingual nitroglycerine, the patient should be instructed:

1.	To swallow the tablet with a full glass of water
2.	**To place one tablet under the tongue if chest pain occurs and allow it to dissolve**
3.	To take one tablet every 5 minutes until the chest pain goes away
4.	That it should “burn” when placed under the tongue or it is no longer effective

____ 23. Donald has been diagnosed with hyperlipidemia. Based on his lipid profile, atorvastatin is prescribed. Rhabdomyolysis is a rare but serious adverse response to this drug. Donald should be told to:

1.	Become a vegetarian because this disorder is associated with eating red meat.
2.	Stop taking the drug if abdominal cramps and diarrhea develop.
3.	**Report muscle weakness or tenderness and dark urine to his provider immediately.**
4.	Expect “hot flash” sensations during the first 2 weeks of therapy.

____ 24. Which of the following diagnostic studies would NOT indicate a problem related to a reductase inhibitor?

1.	Elevated serum transaminase
2.	Increased serum creatinine
3.	Elevated creatinine kinase
4.	**Increased white blood cell counts**

____ 25. Because of the pattern of cholesterol synthesis, reductase inhibitors are given:

1.	**In the evening in a single daily dose**
2.	Twice daily in the morning and the evening
3.	With each meal and at bedtime
4.	In the morning before eating

____ 26. Janice has elevated LDL, VLDL, and triglyceride levels. Niaspan, an extended-release form of niacin, is chosen to treat her hyperlipidemia. Due to its metabolism and excretion, which of the following laboratory results should be monitored?

1.	Serum alanine aminotransferase
2.	Serum amylase
3.	**Serum creatinine**
4.	Phenylketonuria

____ 27. Niaspan is less likely to cause which side effect that is common to niacin?

1.	Gastrointestinal irritation
2.	**Cutaneous flushing**
3.	Dehydration
4.	Headaches

____ 28. Dulcea has type 2 diabetes and a high triglyceride level. She has gemfibrozil prescribed to treat her hypertriglyceridemia. A history of which of the following might contraindicate the use of this drug?

1.	Reactive airway disease/asthma
2.	Inflammatory bowel disease
3.	Allergy to aspirin
4.	**Gallbladder disease**

____ 29. Many patients with hyperlipidemia are treated with more than one drug. Combining a fibric acid derivative such as gemfibrozil with which of the following is not recommended? The drug and the reason must both be correct for the answer to be correct.

1.	**Reductase inhibitors, due to an increased risk for rhabdomyolysis**

2.	Bile-acid sequestering resins, due to interference with folic acid absorption
3.	Grapefruit juice, due to interference with metabolism
4.	Niacin, due to decreased gemfibrozil activity

____ 30. Felicity has been prescribed colestipol to treat her hyperlipidemia. Unlike other anti-lipidemics, this drug:

1.	Blocks synthesis of cholesterol in the liver
2.	**Exchanges chloride ions for negatively charged acids in the bowel**
3.	Increases HDL levels the most among the classes
4.	Blocks the lipoprotein lipase pathway

____ 31. Because of their site of action, bile acid sequestering resins:

1.	**Should be administered separately from other drugs by at least 4 hours**
2.	May increase the risk for bleeding
3.	Both 1 and 2
4.	Neither 1 nor 2

____ 32. Colestipol comes in a powdered form. The patient is taught to:

1.	Take the powder dry and follow it with at least 8 ounces of water
2.	Take it with a meal to enhance its action on fatty food
3.	**Mix the powder with 4 to 6 ounces of milk or fruit juice**
4.	Take after the evening meal to coincide with cholesterol synthesis

____ 33. The choice of diuretic to use in treating hypertension is based on:

1.	Presence of diabetes with loop diuretics being used for these patients
2.	**Level of kidney function with a thiazide diuretic being used for an estimated glomerular filtration rate higher than the mid-40mL/min range**
3.	Ethnicity with aldosterone antagonists best for African Americans and older adults
4.	Presence of hyperlipidemia with higher doses needed for patients with LDL above 130 mg/dL

____ 34. Direct renin inhibitors have the following properties. They:

1.	Are primarily generic drugs
2.	Are a renin-angiotensin-aldosterone system (RAAS) medication that is safe during pregnancy
3.	Can be used with an angiotensin-converting enzyme and angiotensin II receptor blocker medications for stronger impact
4.	**"Shut down" the entire RAAS cycle**

____ 35. When comparing angiotensin-converting enzyme (ACE) and angiotensin II receptor blocker (ARB) medications, which of the following holds true?

1.	Both have major issues with a dry, irritating cough
2.	**Both contribute to some retention of potassium**
3.	ARBs have a stronger impact on hypertension control than ACE medications
4.	ARBs have stronger diabetes mellitus renal protection properties than ACE medications

____ 36. What does the provider understand about the issue of "Diabetic Renal Protection" with angiotensin-converting enzyme (ACE) medications? Diabetes mellitus patients:

1.	**Have a reduced rate of renal progression, but still need to be discontinued when advanced renal issues present**
2.	Who start these medications never progress to renal nephropathy
3.	With early renal dysfunction will see it reverse when on ACE medications
4.	Without renal issues are the only ones who benefit from ACE protection

____ 37. What dermatological issue is linked to Amiodarone use?

1.	Increased risk of basal cell carcinoma
2.	Flare up of any prior psoriasis problems
3.	Development of plantar warts
4.	**Progressive change of skin tone toward a blue spectrum**

____ 38. Commercials on TV for erectile dysfunction (ED) medications warn about mixing them with nitrates. Why?

1.	Increased risk of priapism
2.	**Profound hypotension**
3.	Development of blue discoloration to the visual field
4.	Inactivation of the ED medication effect

Chapter 28. Chronic Stable Angina and Low-Risk Unstable Angina

____ 1. Angina is produced by an imbalance between myocardial oxygen supply (MOS) and demand (MOD) in the myocardium. Which of the following drugs help to correct this imbalance by increasing MOS?

1.	Calcium channel blockers

2.	Beta blockers
3.	**Angiotensin-converting-enzyme (ACE) inhibitors**
4.	Aspirin

____ 2. Not all chest pain is caused by myocardial ischemia. Noncardiac causes of chest pain include:

1.	Pulmonary embolism
2.	Pneumonia
3.	Gastroesophageal reflux
4.	**All of the above**

____ 3. The New York Heart Association and the Canadian Cardiovascular Society have described grading criteria for levels of angina. Angina that occurs with unusually strenuous activity or on walking or climbing stair after meals is class:

1.	I
2.	**II**
3.	III
4.	IV

____ 4. Patients at high risk for developing significant coronary heart disease are those with:

1.	LDL values between 100 and 130
2.	Systolic blood pressure between 120 and 130
3.	**Class III angina**
4.	Obesity

____ 5. To reduce mortality, all patients with angina, regardless of class, should be on:

1.	**Aspirin 81 to 325 mg/d**
2.	Nitroglycerin sublingually for chest pain
3.	ACE inhibitors or angiotensin receptor blockers
4.	Digoxin

____ 6. Patients who have angina, regardless of class, who are also diabetic, should be on:

1.	Nitrates
2.	Beta blockers
3.	**ACE inhibitors**
4.	Calcium channel blockers

____ 7. Management of all types and grades of angina includes the use of lifestyle modification to reduce risk factors. Which of these modifications are appropriate for which reason? Both the modification and the reason for it must be true for the answer to be correct.

1.	Lose at least 10 pounds of body weight. Excessive weight increases cardiac workload.
2.	**Reduce sodium intake to no more than 2,400 mg of sodium. Sodium increases blood volume and cardiac workload.**
3.	Increase potassium intake to at least 100 mEq/d. The heart needs higher levels of potassium to improve contractility and oxygen supply.
4.	Intake a moderate amount of alcohol. Moderate intake has been shown by research to improve cardiac function.

____ 8. Nitrates are especially helpful for patients with angina who also have:

1.	Heart failure
2.	Hypertension
3.	**Both 1 and 2**

4.	Neither 1 nor 2

____ 9. Beta blockers are especially helpful for patients with exertional angina who also have:

1.	**Arrhythmias**
2.	Hypothyroidism
3.	Hyperlipidemia
4.	Atherosclerosis

____ 10. Rapid-acting nitrates are important for all angina patients. Which of the following are true statements about their use?

1.	These drugs are useful for immediate symptom relief when the patient is certain it is angina.
2.	The dose is one sublingual tablet or spray every 5 minutes until the chest pain goes away.
3.	**Take one nitroglycerine tablet or spray at the first sign of angina; repeat every 5 minutes for no more than two doses. If chest pain is still not relieved, call 911.**
4.	All of the above

____ 11. Isosorbide dinitrate is a long-acting nitrate given twice daily. The schedule for administration is 7 a.m. and 2 p.m. because:

1.	Long-acting forms have a higher risk for toxicity.
2.	Orthostatic hypotension is a common adverse effect.
3.	It must be taken with milk or food.
4.	**Nitrate tolerance can develop.**

____ 12. Combinations of a long-acting nitrate and a beta blocker are especially effective in treating angina because:

1.	Nitrates increase MOS and beta blockers increase MOD.
2.	**Their additive effects permit lower doses of both drugs and their adverse reactions cancel each other out.**
3.	They address the pathology of patients with exertional angina who have fixed atherosclerotic coronary heart disease.
4.	All of the above

____ 13. Drug choices to treat angina in older adults differ from those of younger adults only in:

1.	**Consideration of risk factors for diseases associated with and increased in aging**
2.	The placement of drug therapy as a treatment choice before lifestyle changes are tried
3.	The need for at least three drugs in the treatment regimen because of the complexity of angina in the older adult
4.	Those with higher risk for silent myocardial infarction

____ 14. Which of the following drugs has been associated with increased risk for myocardial infarction in women?

1.	Aspirin
2.	Beta blockers
3.	**Estrogen replacement**
4.	Lipid-lowering agents

____ 15. Cost of antianginal drug therapy should be considered in drug selection because of all of the following EXCEPT:

1.	Patients often require multiple drugs
2.	A large number of angina patients are older adults on fixed incomes

3.	**Generic formulations may be cheaper but are rarely bioequivalent**
4.	Lack of drug selectivity may result in increased adverse reactions

____ 16. Situations that suggest referral to a specialist is appropriate include:

1.	When chronic stable angina becomes unpredictable in its characteristics and precipitating factors
2.	When a post-myocardial infarction patient develops new-onset angina
3.	When standard therapy is not successful in improving exercise tolerance or reducing the incidence of angina
4.	**All of the above**

____ 17. The rationale for prescribing calcium blockers for angina can be based on the need for:

1.	Increased inotropic effect in the heart
2.	Increasing peripheral perfusion
3.	Keeping heart rates high enough to ensure perfusion of coronary arteries
4.	**Help with rate control**

____ 18. Medications are typically started for angina patients when:

1.	The first permanent EKG changes occur
2.	**The start of class I or II symptoms**
3.	The events trigger a trip to the emergency department
4.	When troponin levels become altered

____ 19. The most common cause of angina is:

1.	Vasospasm of the coronary arteries
2.	**Atherosclerosis**
3.	Platelet aggregation
4.	Low systemic oxygen

____ 20. Ranolazine is used in angina patients to:

1.	Dilate plaque-filled arteries
2.	Inhibit platelet aggregation
3.	**Restrict late sodium flow in the myocytes**
4.	Induce vasoconstriction in the periphery to open coronary vessels

____ 21. When is aspirin (ASA) used in angina patients?

1.	**All angina patients should be taking ASA unless it is contraindicated for allergy or other medical reasons.**
2.	ASA should only be used in men.
3.	ASA has no role in angina, but is useful in MI prevention.
4.	The impact of ASA is best at the time of an angina attack.

Chapter 36. Heart Failure

____ 1. Angiotensin-converting-enzyme (ACE) inhibitors are a central part of the treatment of heart failure because they have more than one action to address the pathological changes in this disorder. Which of the following pathological changes in heart failure is NOT addressed by ACE inhibitors?

1.	Changes in the structure of the left ventricle so that it dilates, hypertrophies, and uses energy less efficiently.
2.	Reduced formation of cross-bridges so that contractile force decreases.

3.	**Activation of the sympathetic nervous system that increases heart rate and preload.**
4.	Decreased renal blood flow that decreases oxygen supply to the kidneys.

____ 2. One of the three types of heart failure involves systolic dysfunction. Potential causes of this most common form of heart failure include:

1.	**Myocardial ischemia and injury secondary to myocardial infarction**
2.	Inadequate relaxation and loss of muscle fiber secondary to valvular dysfunction
3.	Increased demands of the heart beyond its ability to adapt secondary to anemia
4.	Slower filling rate and elevated systolic pressures secondary to uncontrolled hypertension

____ 3. The American Heart Association and the American College of Cardiology have devised a classification system for heart failure that can be used to direct treatment. Patients with symptoms and underlying disease are classified as stage:

1.	A
2.	B
3.	**C**
4.	D

____ 4. Diagnosis of heart failure cannot be made by symptoms alone because many disorders share the same symptoms. The most specific and sensitive diagnostic test for heart failure is:

1.	Chest x-rays that show cephalization and measure heart size
2.	**Two-dimensional echocardiograms that identify structural anomalies and cardiac dysfunction**

3.	Complete blood count, blood urea nitrogen, and serum electrolytes that facilitate staging for end-organ damage
4.	Measurement of brain natriuretic peptide to distinguish between systolic and diastolic dysfunction

____ 5. Treatments for heart failure, including drug therapy, are based on the stages developed by the ACC/AHA. Stage A patients are treated with:

1.	**Drugs for hypertension and hyperlipidemia, if they exist**
2.	Lifestyle management including diet, exercise, and smoking cessation only
3.	Angiotensin-converting enzyme (ACE) inhibitors to directly affect the heart failure only
4.	No drugs are used in this early stage

____ 6. Class I recommendations for stage A heart failure include:

1.	Aerobic exercise within tolerance levels to prevent the development of heart failure
2.	Reduction of sodium intake to less than 2,000 mg/day to prevent fluid retention
3.	Beta blockers for all patients regardless of cardiac history
4.	**Treatment of thyroid disorders, especially if they are associated with tachyarrhythmias**

____ 7. Stage B patients should have beta blockers added to their heart failure treatment regimen when:

1.	They have an ejection fraction less than 40%
2.	They have had a recent MI
3.	**Both 1 and 2**
4.	Neither 1 nor 2

____ 8. Increased life expectancy for patients with heart failure has been associated with the use of:

1.	**ACE inhibitors, especially when started early in the disease process**
2.	All beta blockers regardless of selectivity
3.	Thiazide and loop diuretics
4.	Cardiac glycosides

____ 9. Stage C patients usually require a combination of three to four drugs to manage their heart failure. In addition to ACE inhibitors and beta blockers, diuretics may be added. Which of the following statements about diuretics is NOT true?

1.	Diuretics reduce preload associated with fluid retention.
2.	Diuretics can be used earlier than stage C when the goal is control of hypertension.
3.	Diuretics may produce problems with electrolyte imbalances and abnormal glucose and lipid metabolism.
4.	**Diuretics from the potassium-sparing class should be used when using an angiotensin receptor blocker (ARB).**

____ 10. Digoxin has a very limited role in treatment of heart failure. It is used mainly for patients with:

1.	Ejection fractions above 40%
2.	**An audible S3**
3.	Mitral stenosis as a primary cause for heart failure
4.	Renal insufficiency

____ 11. Which of the following classes of drugs is contraindicated in heart failure?

1.	Nitrates
2.	Long-acting dihydropyridines

3.	**Calcium channel blockers**
4.	Alpha-beta blockers

____ 12. Heart failure is a leading cause of death and hospitalization in older adults (greater than 65 years old). The drug of choice for this population is:

1.	Aldosterone antagonists
2.	Eplerenone
3.	**ACE inhibitors**
4.	ARBs

____ 13. ACE inhibitors are contraindicated in pregnancy. While treatment of heart failure during pregnancy is best done by a specialist, which of the following drug classes is considered to be safe, at least in the later parts of pregnancy?

1.	Diuretics
2.	ARBs
3.	**Beta blockers**
4.	Nitrates

____ 14. Heart failure is a chronic condition that can be adequately managed in primary care. However, consultation with or referral to a cardiologist is appropriate when:

1.	Symptoms markedly worsen or the patient becomes hypotensive and has syncope
2.	There is evidence of progressive renal insufficiency or failure
3.	The patient remains symptomatic on optimal doses of an ACE inhibitor, a beta blocker, and a diuretic
4.	**Any of the above**

____ 15. ACE inhibitors are a foundational medication in HF. Which group of patients cannot take them safely?

1.	Elderly patients with reduced renal clearance
2.	Pregnant women
3.	Women under age 30
4.	**1 and 2**

____ 16. What assessment that can be done at home is the most reliable for making decisions to change HF medications?

1.	**Weight**
2.	BP
3.	Heart rate
4.	Serum Glucose

____ 17. Evidence is strong that the timing of HF interventions are best initiated when:

1.	The person enters stage C
2.	The person has functional disabilities
3.	**At the earliest indication**
4.	When stage IV is determined

____ 18. HF patients frequently take more than one drug. When are anticoagulants typically used?

1.	When the patient enters stage III
2.	Only in cases of diastolic failure
3.	**When there is concurrent A Fib**
4.	In all cases

____ 19. What can chest x-rays contribute to the diagnosis and management of HF?

1.	They have no role.
2.	They can give very precise pictures of pulmonary fluid status.
3.	**They provide an idea of general cardiac size and pulmonary great vessel distribution.**
4.	They can confirm the diagnosis.

Chapter 39. Hyperlipidemia

____ 1. The overall goal of treating hyperlipidemia is:

1.	Maintain an LDL level of less than 160 mg/dL
2.	**To reduce atherogenesis**
3.	Lowering apo B, one of the apoliproteins
4.	All of the above

____ 2. When considering which cholesterol-lowering drug to prescribe, which factor determines the type and intensity of treatment?

1.	Total LDL
2.	Fasting HDL
3.	Coronary artery disease risk level
4.	**Fasting total cholesterol**

____ 3. First-line therapy for hyperlipidemia is:

1.	Statins
2.	Niacin

3.	**Lifestyle changes**
4.	Bile acid-binding resins

____ 4. James is a 45-year-old patient with an LDL level of 120 and normal triglycerides. Appropriate first-line therapy for James may include diet counseling, increased physical activity, and:

1.	A statin
2.	Niacin
3.	**Sterols**
4.	A fibric acid derivative

____ 5. Joanne is a 60-year-old patient with an LDL of 132 and a family history of coronary artery disease. She has already tried diet changes (increased fiber and plant sterols) to lower her LDL and after 6 months her LDL is slightly higher. The next step in her treatment would be:

1.	**A statin**
2.	Niacin
3.	Sterols
4.	A fibric acid derivative

____ 6. Sharlene is a 65-year-old patient who has been on a lipid-lowering diet and using plant sterol margarine daily for the past 3 months. Her LDL is 135 mg/dL. An appropriate treatment for her would be:

1.	A statin
2.	Niacin
3.	A fibric acid derivative
4.	**Determined by her risk factors**

____ 7. Phil is a 54-year-old male with multiple risk factors who has been on a high-dose statin for 3 months to treat his high LDL level. His LDL is 135 mg/dL and his triglycerides are elevated. A reasonable change in therapy would be to:

1.	Discontinue the statin and change to a fibric acid derivative.
2.	Discontinue the statin and change to ezetimibe.
3.	**Continue the statin and add in ezetimibe.**
4.	Refer him to a specialist in managing patients with recalcitrant hyperlipidemia.

____ 8. Jamie is a 34-year-old pregnant woman with familial hyperlipidemia and elevated LDL levels. What is the appropriate treatment for a pregnant woman?

1.	A statin
2.	Niacin
3.	Fibric acid derivative
4.	**Bile acid-binding resins**

____ 9. Han is a 48-year-old diabetic with hyperlipidemia and high triglycerides. His LDL is 112 mg/dL and he has not tolerated statins. He warrants a trial of a:

1.	Sterol
2.	Niacin
3.	**Fibric acid derivative**
4.	Bile acid-binding resin

____ 10. Jose is a 12-year-old overweight child with a total cholesterol of 180 mg/dL and LDL of 125 mg/dL. Along with diet education and recommending increased physical activity, a treatment plan for Jose would include _____ with a reevaluation in 6 months.

1.	Statins
2.	Niacin

3.	**Sterols**
4.	Bile acid-binding resins

____ 11. Monitoring of a patient who is on a lipid-lowering drug includes:

1.	Fasting total cholesterol every 6 months
2.	**Lipid profile with attention to serum LDL 6 to 8 weeks after starting therapy, then again in 6 weeks**
3.	Complete blood count, C-reactive protein, and erythrocyte sedimentation rate after 6 weeks of therapy
4.	All of the above

____ 12. Before starting therapy with a statin, the following baseline laboratory values should be evaluated:

1.	Complete blood count
2.	**Liver function (ALT/AST) and creatine kinase**
3.	C-reactive protein
4.	All of the above

____ 13. When starting a patient on a statin, education would include:

1.	If they stop the medication their lipid levels will return to pretreatment levels.
2.	Medication is a supplement to diet therapy and exercise.
3.	If they have any muscle aches or pain, they should contact their provider.
4.	**All of the above**

____ 14. Omega 3 fatty acids are best used to help treat:

1.	High HDL
2.	Low LDL
3.	**High triglycerides**
4.	Any high lipid value

____ 15. When are statins traditionally ordered to be taken?

1.	At bedtime
2.	At noon
3.	At breakfast
4.	**With the evening meal**

____ 16. Which the following persons should not have a statin medication ordered?

1.	**Someone with 3 first- or second-degree family members with history of muscle issues when started on statins**
2.	Someone with high lipids, but low BMI
3.	Premenopausal woman with recent history of hysterectomy
4.	Prediabetic male with known metabolic syndrome

____ 17. Fiber supplements are great options for elderly patients who have the concurrent problem of:

1.	End-stage renal failure on fluid restriction
2.	Recurrent episodes of diarrhea several times a day
3.	**Long-term issues of constipation**
4.	Needing to take multiple medications around the clock every 2 hours

____ 18. What is considered the order of statin strength from lowest effect to highest?

1.	**Lovastatin, Simvastatin, Rosuvastatin**
2.	Rosuvastatin, Lovastatin, Atorvastatin
3.	Atorvastatin, Rosuvastatin, Simvastatin
4.	Simvastatin, Atorvastatin, Lovastatin

Chapter 40. Hypertension

____ 1. Because primary hypertension has no identifiable cause, treatment is based on interfering with the physiological mechanisms that regulate blood pressure. Thiazide diuretics treat hypertension because they:

1.	Increase renin secretion
2.	Decrease the production of aldosterone
3.	**Deplete body sodium and reduce fluid volume**
4.	Decrease blood viscosity

____ 2. Because of its action on various body systems, the patient taking a thiazide or loop diuretic may also need to receive the following supplement:

1.	**Potassium**
2.	Calcium
3.	Magnesium
4.	Phosphates

____ 3. All patients with hypertension benefit from diuretic therapy, but those who benefit the most are:

1.	Those with orthostatic hypertension

2.	**African Americans**
3.	Those with stable angina
4.	Diabetics

____ 4. Beta blockers treat hypertension because they:

1.	**Reduce peripheral resistance**
2.	Vasoconstrict coronary arteries
3.	Reduce norepinephrine
4.	Reduce angiotensin II production

____ 5. Which of the following disease processes could be made worse by taking a nonselective beta blocker?

1.	Asthma
2.	Diabetes
3.	**Both might worsen**
4.	Beta blockade does not affect these disorders

____ 6. Disease states in addition to hypertension in which beta blockade is a compelling indication for the use of beta blockers include:

1.	Heart failure
2.	Angina
3.	**Myocardial infarction**
4.	Dyslipidemia

____ 7. Angiotensin-converting enzyme (ACE) inhibitors treat hypertension because they:

1.	Reduce sodium and water retention
2.	Decrease vasoconstriction
3.	Increase vasodilation
4.	**All of the above**

____ 8. Compelling indications for an ACE inhibitor as treatment for hypertension based on clinical trials includes:

1.	Pregnancy
2.	**Renal parenchymal disease**
3.	Stable angina
4.	Dyslipidemia

____ 9. An ACE inhibitor and what other class of drug may reduce proteinuria in patients with diabetes better than either drug alone?

1.	Beta blockers
2.	Diuretics
3.	**Nondihydropyridine calcium channel blockers**
4.	Angiotensin II receptor blockers

____ 10. If not chosen as the first drug in hypertension treatment, which drug class should be added as a second step because it will enhance the effects of most other agents?

1.	ACE inhibitors
2.	Beta blockers
3.	Calcium channel blockers
4.	**Diuretics**

____ 11. Treatment costs are important for patients with hypertension. Which of the following statements about cost is NOT true?

1.	Hypertension is a chronic disease where patients may be taking drugs for a long time.
2.	Most patients will require more than one drug to treat the hypertension.
3.	The cost includes the price of any routine or special laboratory tests that a specific drug may require.
4.	**Few antihypertensive drugs come in generic formulations.**

____ 12. Caffeine, exercise, and smoking should be avoided for at least how many minutes before blood pressure measurement?

1.	15
2.	**30**
3.	60
4.	90

____ 13. Blood pressure checks in children:

1.	Should occur with their annual physical examinations after 6 years of age
2.	Require a blood pressure cuff that is one-third the diameter of the child’s arm
3.	**Should be done during every health-care visit after 3 years of age**
4.	Require additional laboratory tests such as serum creatinine

____ 14. Lack of adherence to blood pressure management is very common. Reasons for this lack of adherence include:

1.	Lifestyle changes are difficult to achieve and maintain.

2.	Adverse drug reactions are common and often fall into the categories more associated with nonadherence.
3.	Costs of drugs and monitoring with laboratory tests can be expensive.
4.	**All of the above**

____ 15. Lifestyle modifications for patients with prehypertension or hypertension include:

1.	Diet and increase exercise to achieve a BMI greater than 25.
2.	Drink 4 ounces of red wine at least once per week.
3.	**Adopt the dietary approaches to stop hypertension (DASH) diet.**
4.	Increase potassium intake.

____ 16. Which diuretic agents typically do not need potassium supplementation?

1.	The loop diuretics
2.	The thiazide diuretics
3.	**The aldosterone inhibitors**
4.	They all need supplementation

____ 17. Aldactone family medications are frequently used when the hypertensive patient also has:

1.	Hyperkalemia
2.	**Advancing liver dysfunction**
3.	The need for birth control
4.	Rheumatoid arthritis

____ 18. Hypertensive African Americans are typically listed as not being as responsive to which drug groups?

1.	**ACE inhibitors**
2.	Calcium channel blockers
3.	Diuretics
4.	Bidil (hydralazine family of medications)

____ 19. What educational points concerning fluid intake must be covered with diuretic prescriptions?

1.	Fluid should be restricted when on them.
2.	Fluids should contain at least one salty item daily.
3.	**Fluid intake should remain near normal for optimal performance.**
4.	Avoidance of potassium-rich fluids is encouraged.

____ 20. What is a common side effect concern with hypertensive medications and all individuals, but especially the elderly?

1.	**Risk of falls**
2.	Triggering of a hypertensive crisis
3.	Erectile priapism
4.	Risk for bladder cancer development

Chapter 17. Drugs Affecting the Respiratory System

1. Montelukast (Singulair) may be prescribed for:

1.	A 6-year-old child with exercise-induced asthma
2.	**A 2-year-old child with moderate persistent asthma**
3.	An 18-month-old child with seasonal allergic rhinitis
4.	None of the above; montelukast is not approved for use in children

____ 2. The known drug interactions with the inhaled corticosteroid beclomethasone (QVAR) include:

1.	Albuterol
2.	MMR vaccine
3.	Insulin
4.	**None of the above**

____ 3. When educating patients who are starting on inhaled corticosteroids, the provider should tell them that:

1.	They need to get any live vaccines before starting the medication.
2.	Inhaled corticosteroids need to be used daily during asthma exacerbations to be effective.
3.	**Patients should rinse their mouths out after using the inhaled corticosteroid to prevent thrush.**
4.	They can triple the dose number of inhalations of medication during colds to prevent needing systemic steroids.

____ 4. Patients with allergic rhinitis may benefit from a prescription of:

1.	Fluticasone (Flonase)
2.	Cetirizine (Zyrtec)
3.	OTC cromolyn nasal spray (Nasalcrom)
4.	**Any of the above**

____ 5. Howard is a 72-year-old male who occasionally takes diphenhydramine for his seasonal allergies. Monitoring for this patient taking diphenhydramine would include assessing for:

1.	**Urinary retention**
2.	Cardiac output
3.	Peripheral edema
4.	Skin rash

____ 6. First-generation antihistamines such as loratadine (Claritin) are prescribed for seasonal allergies because they are:

1.	More effective than first-generation antihistamines
2.	**Less sedating than the first-generation antihistamines**
3.	Prescription products, therefore are covered by insurance
4.	Able to be taken with central nervous system (CNS) sedatives, such as alcohol

____ 7. When recommending dimenhydrinate (Dramamine) to treat motion sickness, patients should be instructed to:

1.	Take the dimenhydrinate after they get nauseated
2.	Drink lots of water while taking the dimenhydrinate
3.	**Take the dimenhydrinate 15 minutes before it is needed**
4.	Double the dose if one tablet is not effective

____ 8. Decongestants such as pseudoephedrine (Sudafed):

1.	Are Schedule III drugs in all states
2.	**Should not be prescribed or recommended for children under 4 years of age**
3.	Are effective in treating the congestion children experience with the common cold

4.	May cause drowsiness in patients of all ages

____ 9. Cough and cold medications that contain a sympathomimetic decongestant such as phenylephrine should be used cautiously in what population:

1.	Older adults
2.	Hypertensive patients
3.	Infants
4.	**All of the above**

____ 10. Martin is a 60-year-old patient with hypertension. The first-line decongestant to prescribe would be:

1.	Oral pseudoephedrine
2.	Oral phenylephrine
3.	**Nasal oxymetazoline**
4.	Nasal azelastine

____ 11. Digoxin levels need to be monitored closely when the following medication is started:

1.	Loratadine
2.	Diphenhydramine
3.	Ipratropium
4.	**Albuterol**

____ 12. Patients with pheochromocytoma should avoid which of the following classes of drugs because of the possibility of developing hypertensive crisis?

1.	Expectorants
2.	**Beta-2-agonists**
3.	Antitussives
4.	Antihistamines

____ 13. Harold, a 42-year-old African American, has moderate persistent asthma. Which of the following asthma medications should be used cautiously, if at all?

1.	Betamethasone, an inhaled corticosteroid
2.	**Salmeterol, an inhaled long-acting beta-agonist**
3.	Albuterol, a short-acting beta-agonist
4.	Montelukast, a leukotriene modifier

____ 14. Long-acting beta-agonists (LTBAs) received a Black Box Warning from the U.S. Food and Drug Administration due to the:

1.	Risk of life-threatening dermatological reactions
2.	Increased incidence of cardiac events when LTBAs are used
3.	**Increased risk of asthma-related deaths when LTBAs are used**
4.	Risk for life-threatening alterations in electrolytes

____ 15. The bronchodilator of choice for patients taking propranolol is:

1.	Albuterol
2.	Pirbuterol
3.	Formoterol

4.	**Ipratropium**

____ 16. James is a 52-year-old overweight smoker taking theophylline for his persistent asthma. He tells his provider he is going to start the Atkin's diet for weight loss. The appropriate response would be:

1.	Congratulate him on making a positive change in his life.
2.	**Recommend he try stopping smoking instead of the Atkin's diet.**
3.	Schedule him for regular testing of serum theophylline levels during his diet due to increased excretion of theophylline.
4.	Decrease his theophylline dose because a high-protein diet may lead to elevated theophylline levels.

____ 17. Li takes theophylline for his persistent asthma and calls the office with a complaint of nausea, vomiting, and headache. The best advice for him would be to:

1.	Reassure him this is probably a viral infection and should be better soon
2.	Have him seen the same day for an assessment and theophylline level
3.	**Schedule him for an appointment in 2 to 3 days, which he can cancel if he is better**
4.	Order a theophylline level at the laboratory for him

____ 18. Tiotropium bromide (Spiriva) is an inhaled anticholinergic:

1.	**Used for the treatment of chronic obstructive pulmonary disease (COPD)**
2.	Used in the treatment of asthma
3.	Combined with albuterol for treatment of asthma exacerbations

4.	Combined with fluticasone for the treatment of persistent asthma

____ 19. Christy has exercise-induced and mild persistent asthma and is prescribed two puffs of albuterol 15 minutes before exercise and as needed for wheezing. One puff per day of beclomethasone (QVAR) is also prescribed. Teaching regarding her inhalers includes:

1.	Use one to two puffs of albuterol per day to prevent an attack with no more than eight puffs per day
2.	**Beclomethasone needs to be used every day to treat her asthma**
3.	Report any systemic side effects she is experiencing, such as weight gain
4.	Use the albuterol metered-dose inhaler (MDI) immediately after her corticosteroid MDI to facilitate bronchodilation

____ 20. When prescribing montelukast (Singulair) for asthma, patients or parents of patients should be instructed:

1.	Montelukast twice a day is started when there is an asthma exacerbation.
2.	Patients may experience weight gain on montelukast.
3.	**Aggression, anxiety, depression, and/or suicidal thoughts may occur when taking montelukast.**
4.	Lethargy and hypersomnia may occur when taking montelukast.

____ 21. The first-line treatment for cough related to an upper respiratory tract infection (URI) in a 5-year-old child is:

1.	**Fluids and symptomatic care**
2.	Dextromethorphan and guaifenesin syrup (Robitussin DM for Kids)
3.	Guaifenesin and codeine syrup (Tussin AC)

4.	Chlorpheniramine and dextromethorphan syrup (Nyquil for Kids)

Chapter 42. Pneumonia

____ 1. The most common bacterial pathogen in community-acquired pneumonia is:

1.	*Haemophilus influenzae*
2.	*Staphylococcus aureus*
3.	*Mycoplasma pneumoniae*
4.	***Streptococcus pneumoniae***

____ 2. The first-line drug choice for a previously healthy adult patient diagnosed with community-acquired pneumonia would be:

1.	Ciprofloxacin
2.	**Azithromycin**
3.	Amoxicillin
4.	Doxycycline

____ 3. The first-line antibiotic choice for a patient with comorbidities or who is immunosuppressed who has pneumonia and can be treated as an outpatient would be:

1.	**Levofloxacin**
2.	Amoxicillin
3.	Ciprofloxacin
4.	Cephalexin

____ 4. If an adult patient with comorbidities cannot reliably take oral antibiotics to treat pneumonia, an appropriate initial treatment option would be:

1.	IV or IM gentamicin
2.	**IV or IM ceftriaxone**
3.	IV amoxicillin
4.	IV ciprofloxacin

____ 5. Samantha is 34 weeks pregnant and has been diagnosed with pneumonia. She is stable enough to be treated as an outpatient. What would be an appropriate antibiotic to prescribe?

1.	Levofloxacin
2.	**Azithromycin**
3.	Amoxicillin
4.	Doxycycline

____ 6. Adults with pneumonia who are responding to antimicrobial therapy should show improvement in their clinical status in:

1.	12 to 24 hours
2.	24 to 36 hours
3.	**48 to 72 hours**
4.	4 or 5 days

____ 7. Along with prescribing antibiotics, adults with pneumonia should be instructed on lifestyle modifications to improve outcomes, including:

1.	**Adequate fluid intake**

2.	Increased fiber intake
3.	Bedrest for the first 24 hours
4.	All of the above

____ 8. John is a 4-week-old infant who has been diagnosed with chlamydial pneumonia. An appropriate treatment for his pneumonia would be:

1.	Levofloxacin
2.	Amoxicillin
3.	**Erythromycin**
4.	Cephalexin

____ 9. Wing-Sing is a 4-year-old patient who has suspected bacterial pneumonia. He has a temperature of 102°F, oxygen saturation level of 95%, and is taking fluids adequately. What would be appropriate initial treatment for his pneumonia?

1.	**Ceftriaxone**
2.	Azithromycin
3.	Cephalexin
4.	Levofloxacin

____ 10. Giselle is a 14-year-old patient who presents to the clinic with symptoms consistent with mycoplasma pneumonia. What is the treatment for suspected mycoplasma pneumonia in an adolescent?

1.	Ceftriaxone
2.	**Azithromycin**
3.	Ciprofloxacin
4.	Levofloxacin

Chapter 43. Smoking Cessation

____ 1. Nicotine withdrawal symptoms include:

1.	Nervousness
2.	Increased appetite
3.	Difficulty concentrating
4.	**All of the above**

____ 2. If a patient wants to quit smoking, nicotine replacement therapy is recommended if the patient:

1.	Smokes more than 10 cigarettes a day
2.	**Smokes within 30 minutes of awakening in the morning**
3.	Smokes when drinking alcohol
4.	All of the above

____ 3. Instructions for a patient who is starting nicotine replacement therapy include:

1.	Smoke less than 10 cigarettes a day when starting nicotine replacement.
2.	**Nicotine replacement will help with the withdrawal cravings associated with quitting tobacco.**
3.	Nicotine replacement can be used indefinitely.
4.	Nicotine replacement therapy is generally safe for all patients.

____ 4. Nicotine replacement therapy should not be used in which patients?

1.	Pregnant women
2.	Patients with worsening angina pectoris
3.	Patients who have just suffered an acute myocardial infarction
4.	**All of the above**

____ 5. Instructions for the use of nicotine gum include:

1.	Chew the gum quickly to get a peak effect.
2.	**The gum should be "parked" in the buccal space between chewing.**
3.	Acidic drinks such as coffee help with the absorption of the nicotine.
4.	The highest abstinence rates occur if the patient chews the gum when he or she is having cravings.

____ 6. Patients who choose the nicotine lozenge to assist in quitting tobacco should be instructed:

1.	Chew the lozenge well.
2.	Drink at least 8 ounces of water after the lozenge dissolves.
3.	**Use one lozenge every 1 to 2 hours (at least nine per day with a maximum of 20 per day).**
4.	A tingling sensation in the mouth should be reported to the provider.

____ 7. Transdermal nicotine replacement (the patch) is an effective choice in tobacco cessation because:

1.	**The patch provides a steady level of nicotine without reinforcing oral aspects of smoking.**
2.	There is the ability to “fine tune” the amount of nicotine that is delivered to the patient at any one time.
3.	There is less of a problem with nicotine toxicity than other forms of nicotine replacement.
4.	Transdermal nicotine is safer in pregnancy.

____ 8. The most common adverse effect of the transdermal nicotine replacement patch is:

1.	Nicotine toxicity
2.	Tingling at the site of patch application
3.	**Skin irritation under the patch site**
4.	Life-threatening dysrhythmias

____ 9. If a patient is exhibiting signs of nicotine toxicity when using transdermal nicotine, they should remove the patch and:

1.	Wash the area thoroughly with soap and water.
2.	**Flush the area with clear water.**
3.	Reapply a new patch in 8 hours.
4.	Take acetaminophen for the headache associated with toxicity.

____ 10. When a patient is prescribed nicotine nasal spray for tobacco cessation, instructions include:

1.	Inhale deeply with each dose to ensure deposition in the lungs.
2.	**The dose is one to two sprays in each nostril per hour, not to exceed 40 sprays per day.**
3.	If they have a sensation of "head rush" this indicates the medication is working well.
4.	Nicotine spray may be used for up to 12 continuous months.

____ 11. If prescribing bupropion (Zyban) for tobacco cessation, the instructions to the patient include:

1.	**Bupropion (Zyban) is started 1 to 2 weeks before the quit date.**
2.	Nicotine replacement products should not be used with bupropion.
3.	If they smoke when taking bupropion they may have increased anxiety and insomnia.
4.	Because they are not using bupropion as an antidepressant, they do not need to worry about increased suicide ideation when starting therapy.

____ 12. Varenicline (Chantix) may be prescribed for tobacco cessation. Instructions to the patient who is starting varenicline include:

1.	The maximum time varenicline can be used is 12 weeks.
2.	Nausea is a sign of varenicline toxicity and should be reported to the provider.
3.	The starting regimen for varenicline is start taking 1 mg twice a day a week before the quit date.
4.	**Neuropsychiatric symptoms may occur.**

____ 13. The most appropriate smoking cessation prescription for pregnant women is:

1.	A nicotine replacement patch at the lowest dose available
2.	Bupropion (Zyban)
3.	Varenicline (Chantix)
4.	**Nonpharmacologic measures**

Chapter 45. Tuberculosis

____ 1. Drug resistant tuberculosis (TB) is defined as TB that is resistant to:

1.	Fluoroquinolones
2.	**Rifampin and isoniazid**
3.	Amoxicillin
4.	Ceftriaxone

____ 2. Goals when treating tuberculosis include:

1.	**Completion of recommended therapy**
2.	Negative purified protein derivative at the end of therapy
3.	Completely normal chest x-ray
4.	All of the above

____ 3. The principles of drug therapy for the treatment of tuberculosis include:

1.	Patients are treated with a drug to which *M. tuberculosis* is sensitive.

2.	**Drugs need to be taken on a regular basis for a sufficient amount of time.**
3.	Treatment continues until the patient's purified protein derivative is negative.
4.	All of the above

____ 4. Isabella has confirmed tuberculosis and is placed on a 6-month treatment regimen. The 6-month regimen consists of:

1.	**Two months of four-drug therapy (INH, rifampin, pyrazinamide, and ethambutol) followed by Four months of INH and rifampin**
2.	Six months of INH with daily pyridoxine throughout therapy
3.	Six months of INH, rifampin, pyrazinamide, and ethambutol
4.	Any of the above

____ 5. Kaleb has extensively resistant tuberculosis (TB). Treatment for extensively resistant TB would include:

1.	INH, rifampin, pyrazinamide, and ethambutol for at least 12 months
2.	INH, ethambutol, kanamycin, and rifampin
3.	**Treatment with at least two drugs to which the TB is susceptible**
4.	Levofloxacin

____ 6. Lila is 24 weeks pregnant and has been diagnosed with tuberculosis (TB). Treatment regimens for a pregnant patient with TB would include:

1.	Streptomycin

2.	Levofloxacin
3.	Kanamycin
4.	**Pyridoxine**

____ 7. Bilal is a 5-year-old patient who has been diagnosed with tuberculosis. His treatment would include:

1.	**Pyridoxine**
2.	Ethambutol
3.	Levofloxacin
4.	Rifabutin

____ 8. Ezekiel is a 9-year-old patient who lives in a household with a family member newly diagnosed with tuberculosis (TB). To prevent Ezekiel from developing TB he should be treated with:

1.	6 months of Isoniazid (INH) and rifampin
2.	2 months of INH, rifampin, pyrazinamide, and ethambutol, followed by 4 months of INH
3.	**9 months of INH**
4.	12 months of INH

____ 9. Leonard is completing a 6-month regimen to treat tuberculosis (TB). Monitoring of a patient on TB therapy includes:

1.	**Monthly sputum cultures**
2.	Monthly chest x-ray
3.	Bronchoscopy every 3 months
4.	All of the above

____ 10. Compliance with directly observed therapy can be increased by:

1.	Convenient clinic times
2.	Incentives such as food, clothing, and transportation costs
3.	Offering gifts for compliance
4.	**All of the above**