

ANS Drugs

1. Which of the following antimuscarinic drugs is often effective in preventing or reversing vestibular disturbances, especially motion sickness?

- a) Atropine
- b) Ipratropium
- c) Scopolamine
- d) Pilocarpine

ans: c

2. Atropine causes:

- a) Miosis, a reduction in intraocular pressure and cyclospasm
- b) Mydriasis, a rise in intraocular pressure and cycloplegia
- c) Miosis, a rise in intraocular pressure and cycloplegia
- d) Mydriasis, a rise in intraocular pressure and cyclospasm

ans: b

3. Patients complain of dry or "sandy" eyes when receiving large doses of:

- a) Atropine
- b) scopolamine
- c) Pilocarpine
- d) Carbachol

ans: a

4. Which of the following drugs is useful in the treatment of Parkinson's disease?

- a) Benztropine
- b) Edrophonium
- c) Ipratropium
- d) Trihexyphenidyl

ans: d

5. Which of the following agents is used as an inhalation drug in the acute management of asthma?

- a) Atropine
- b) Ipratropium
- c) Pilocarpine
- d) Darifenacin

ans: b

6. A female was brought to the emergency room complaining of eye pain. Upon examination, it was determined that the intraocular pressure in the eye is increased due to narrow-angle glaucoma, which of the following agents can be used to lower the intraocular pressure in the eyes?

- a- Atropine.
- b-Ipratropium.
- c-Nicotine.
- d-Pilocarpine

ans: d

7. A 82-year-old female who presents with memory loss characterized by forgetting the name of her husband; forgetting recent activities and decreased interest in activities. It was determined after series of tests that she has Alzheimer's disease. Which of the following medications provides modest benefits in treating Alzheimer's disease?

- a-Neostigmine.
- b-Bethanechol.
- c-Donepezil
- d-Scopolamine.

Ans: c

9- A 50-year-old male farm worker is brought to the emergency room. He was found confused in the farm then has lost consciousness. His heart rate is 45, and his BP is 80/40 mm Hg. He is sweating and salivating profusely. Which of the following treatments is indicated?

- a-Edrophonium.
- b- Physostigmine
- c-Atropine.
- d-Norepinephrine

Ans:c

10- one of the following drugs can be used for COPD:

- a-Tiotropium.
- b-Cyclopentolate.
- c-Oxybutynin.
- d-Scopolamine.

Ans: a

11- which of the following may precipitate an attack of open-angle glaucoma if instilled into the eye?

- a-Pilocarpine.
- b-Atropine.
- c- Physostigmine.
- d-Echothiophate.
- e-Tropicamide.

Ans:b

12- Pyridostigmine is used in:

- a-Alzheimer's disease.
- b-COPD.
- c-Chronic management of myasthenia gravis.
- d-Parkinson disease

Ans: c

13-one of the following is NOT true regarding Edrophonium:

- a-Has a short duration of action (10-20 minutes).
- b-It is an irreversible indirect-acting cholinergic agonist.
- c-It is used in the diagnosis of myasthenia gravis.
- d-It is an anticholinesterase agent.

Ans: b

14- one of the following is not an adverse effect of Neostigmine?

- a-Salivation.
- B-Flushing.
- c-Increased BP.
- d-diarrhea.
- e-Bronchospasm.

Ans: c

15- which of the following drugs are used in the treatment of Atropine toxicity?

- a- Physostigmine.
- b- Edrophonium
- c-Tacrine.
- d-Pyridostigmine.

Ans: a

16- which of the following drugs can cause mydriasis and cycloplegia for a short time (6 hours)?

- a-Atropine.
- b-Edrophonium
- c-Tropicamide.
- d-Benztropine.

Ans: c

17- A patient with an acute attack of glaucoma is treated with pilocarpine. The primary reason for its effectiveness in this condition is its:

- a-Selectivity for nicotinic receptors.
- b-Inability to enter the brain.
- c-Ability to lower intraocular pressure.
- d-Ability to inhibit secretions.

Ans: c

18- A 32-year-old female delivered healthy twins 2 days ago. Since giving birth, she is experiencing postpartum atonic bladder. Which of the following medications can be given to overcome this condition?

- a-Atropine.
- b-Scopolamine.
- c-Bethanecol.
- d-Acetylcholine.

Ans: c

19- one of the following is not an action of acetylcholine:

- a-Decrease heart rate.
- b-Decrease BP.
- c-Decrease salivary secretions.
- d-causes urination.

Ans: c

20- what type of drug is Amphetamine?

- a- Indirect-acting cholinergic antagonist
- b- Indirect-acting adrenergic agonist
- c- direct-acting cholinergic agonist
- d- direct-acting adrenergic antagonist

ans: b

21-one of the following is not a characteristic of Ephedrine:

- a-Absorbed orally.
- b-Eliminated unchanged in urine.
- c-Can't penetrate to the CNS.
- d-Undergoes incomplete hepatic metabolism.

Ans: c

22-Which one of the following drugs is used to treat pheochromocytoma?

- a-Prazosin.
- b-yohimbine.
- c-Alfuzosin.
- d-Phenoxybenzamine.

Ans: d

23-A 60-year-old asthmatic man comes in for a checkup and complains that he's having some difficulty in starting to urinate. Physical examination indicates that the man has a BP of 160/100 mmHg and a slightly enlarged prostate. Which of the following medications would be useful in treating both of these conditions?

- a-Propranolol.
- b-Isoproterenol.
- c-Doxazosin.
- d-Labetalol.
- e-Phentolamine.

Ans: c.

24-A 65-year-old male has a BP of 165/105 mmHg. He was placed on a hydrochlorothiazide (a diuretic) to lower his BP. After 6 weeks of therapy it was determined that his BP wasn't within the normal range. Which of the following agents would be an effective add on drug to further lower his BP?

- A-Dobutamine.
- b-Terbutaline.
- c-Prazosin.
- d-Phentolamine.

Ans:c.

25- A patient present with heart palpitations, a throbbing headache, sweating, pain in the abdomen, nausea and vomiting. A urinalysis revealed the presence of catecholamines and their metabolites and a CT scan confirmed the presence of a tumor in the adrenal medulla. Which of the following agents can be given to counter the effects of these elevated endogenous catecholamines?

- a-Phentolamine.
- b-Isoproterenol.
- c-Yohimbine.
- d-Tamsulosin.

Ans: a

26-JT has essential hypertension, characterized by high circulating catecholamine levels. Treatment goal is to block both alpha- and beta-adrenergic receptors using just one drug. Which of the following agents can be used to accomplish this effect?

- a-Labetalol.
- b-Nadolol.
- c-Pindolol.
- d-Metoprolol.

Ans: a

27-PR is a 34-year-old white male that suffers from essential hypertension and chronic migraine headaches. He is unwilling to taking multiple medications for his conditions. Which of the following agent could you prescribe to treat both hypertension and chronic migraine?

- a-Metoprolol.
- b-Clonidine.
- c-Prazosin.
- d-Propranolol.

Ans: d

28-A 38-year-old male has recently started monotherapy for mild hypertension. At his most recent office visit, he complains of tiredness and not being able to complete 3 sets of tennis. Which of the following drugs is he most likely to be taking for hypertension?

- a-Phentolamine.
- b-Prazosin.
- c-Atenolol.
- d-Albuterol.

Ans: c

29-Which one of the following is not an adverse effect of Propranolol?

- a-Arrhythmia.
- b-Bronchodilation.
- c-Sexual impairment.
- d-Hallucinations.

Ans: b

30-Which one of the following medications is used in the chronic management of glaucoma?

a-Pilocarpine.

b-Timolol.

c-Scopolamine.

d-Atropine.

Ans: b

31-Which one of the following medications is the drug of choice in the acute attacks of glaucoma?

a-Pilocarpine.

b-Atropine.

c-Timolol.

d-Nadolol.

Ans: a

Autacoids

1- Which of the following is used off-label to induce labour?

- a. alprostadil
- b. lubiprostone
- c. misoprostol
- d. Bimatoprost
- e. epoprostenol

>C

2- Which one of the following anti-histamines is non-sedating and recommended in people working jobs where wakefulness is critical?

- a. doxylamine
- b. hydroxyzine
- c. diphenhydramine
- d. fexofenadine
- e. cyclizine

>A

3- Upon the delivery of a neonate, he was found to have a congenital heart anomaly that obstructs the outflow of right ventricular blood. Which drug can be given to keep the ductus arteriosus open until surgical correction of this anomaly is possible?

- a. lubiprostone
- b. alprostadil
- c. misoprostol
- d. epoprostenol
- e. iloprost

>B

4- Which of the following statements is INCORRECT:

- a. meclizine is one the most effective agents for prevention of the symptoms of motion sickness
- b. diphenhydramine is used in the treatment of insomnia
- c. sumatriptan is a useful effective anxiolytic agent
- d. Bimatoprost is approved for the treatment of eyelash hypotrichosis

>C

5- Which of the following statements is

CORRECT:

- a. the second-generation antihistamines penetrate the blood–brain barrier
- b. The average plasma half-life of H1-blockers is 12 to 24 hours, except for that of *meclizine* and the second-generation agents, which is 4 to 6 hours
- c. inhaled iloprost has a long half-life
- d. bepotastine is available in ophthalmic formulations
- e. haloperidol is a specific 5-HT₃ receptor antagonist

>D

1- What side effect is the reason for the removal of celecoxib from the market?

- a. Increased risk of cardiomyopathy
- b. Increased risk of GI bleeding
- c. Increased risk of pulmonary fibrosis
- d. Increased risk of thrombosis
- e. Increased risk of tuberculosis

>D

2- Patients with normal platelet counts and normal bleeding time may still bleed severely as a result of aspirin ingestion prior to a dental or surgical procedure. The aspirin interference with normal platelet function may last as long as:

- 1. 4 hours
- 2. 12 hours
- 3. 2 days
- 4. 5 days
- 5. 7 days

>5

3- A 15-year old patient presents to the emergency room with fulminant hepatitis and cerebral oedema. His parents reported he was sick with influenza and when asked for medication history an NSAID was mentioned. What was most likely the NSAID he took?

- A- Naproxen
- B- Ibuprofen
- C- Aspirin
- D- Nabumetone
- C- Sulindac

>C

4- What analgesic would you prescribe to a pregnant woman?

- A. Aspirin
- B. Naproxen
- C. Ibuprofen
- D. Acetamenophin
- E. Celecoxib

>D

5- Which of the following statements is

CORRECT:

- a. Methyl salicylate is used topically to treat acne, corns, calluses, and warts
- b. Normally, production of PGE2 inhibits gastric acid secretion, and PGI2 and PGF2 α stimulate synthesis of protective mucus in both the stomach and small intestine.
- c. For patients with cardiovascular disease in whom NSAID treatment cannot be avoided, celecoxib appears to be the least likely to be harmful
- d. most NSAIDs are pregnancy risk category C in the first 2 trimesters

>D

CW Inhibitors

1- <principles of antimicrobial therapy>

A 73-year-old man with overwhelming sepsis requiring intravenous fluid support, pressors, and antibiotics is now beginning to improve clinically. The rationale against the use of a bacteriostatic antibiotic in this patient includes which of the following?

- a. Arrest growth of bacteria
- b. Cause cell death of pathogens
- c. Removal of viable organisms
- d. Requirement for lower doses of medication

>A

2- **Cephalosporins show their antimicrobial action by:**

- a. binding to cytoplasmic receptors
- b. Inhibition of beta-lactamases
- c. inhibition of transpeptidation reactions
- d. interference with the synthesis of ergosterol
- e. Inhibition of the synthesis of precursors of peptidoglycans

Key: c

3- **A 21-year-old man presents to the ambulatory care clinic with an erythematous, swollen, painful left elbow. History is significant for untreated impetigo on his left forearm. A joint aspirate reveals gram-positive cocci in clusters. The physician begins empiric treatment with vancomycin while the organism is cultured. It is found to be methicillin susceptible. Methicillin is not widely used, but which of the following is an equivalent drug that could be used to treat this man's infection?**

- a. Amoxicillin
- b. Ampicillin
- c. Oxacillin
- d. Penicillin G
- e. Penicillin V

>C

4- **A 23-year-old woman who underwent a laparoscopic appendectomy is later found to have a wound infection. A culture grows methicillin-resistant Staphylococcus aureus (MRSA). What is the principle mechanism this strain uses to avoid the bactericidal properties of methicillin and methicillin-related drugs?**

- a. Changes a D-alanine peptidoglycan residue to a D-glycine so methicillin cannot bind
- b. Has altered PBPs that methicillin cannot bind
- c. Prevents methicillin from entering the cell
- d. Pumps methicillin out of the cell
- e. Uses a b-lactamase break down methicillin

>B

5- **A 25-year-old man presents to the emergency department with severe abdominal pain, rigors, and a temperature of 39°C. For the past 2 days, he has suffered from right lower quadrant pain and only came to the hospital when it suddenly worsened. The physician suspects ruptured appendicitis and administers imipenem with cilastatin. Cilastatin blocks which of the following enzymes to increase imipenem's efficacy?**

- a. Bacterial efflux pump
- b. CYP3A4
- c. Dehydropeptidase
- d. Organic anion transporter
- e. Penicillinase

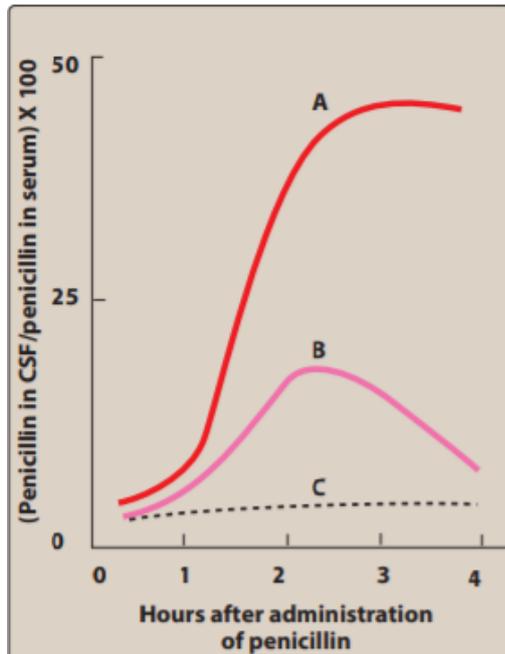
>C

6- **A 58-year-old man has begun on a course of intravenous daptomycin. Which of the following laboratory studies needs to be carefully monitored in this patient?**

- a. Creatinine
- b. Hemoglobin
- c. Hematocrit
- d. Hepatic transaminases
- e. Sodium

>D

- 7- A 12-year-old boy with meningitis is hospitalized on the pediatrics floor to receive intravenous antibiotics. He is currently on his 10th day of treatment. Which of the following curves represents the concentration of penicillin in the cerebrospinal fluid at this time?



- a. Letter A
 b. Letter B
 c. Letter C
 d. Cannot be determined
 >C
- 8- A 43-year-old woman who is obese undergoes laparoscopic cholecystectomy following repeated episodes of right upper quadrant pain caused by cholelithiasis. Over the next 48 h, she is found to have an MRSA wound infection. Her physician administers daptomycin. Which of the following laboratory values should she follow most closely as a result of daptomycin administration?
- a. Amylase
 b. Blood urea nitrogen
 c. Creatine kinase
 d. Lipase
 e. Troponin I
 >C

- 9- A 71-year-old woman is hospitalized with a methicillin-resistant bacterial infection. She has previously demonstrated resistance to multiple antibiotics and has now begun on a course of intravenous telavancin. Which of the following adverse events can occur in this patient?
- a. Diarrhea
 b. Foamy urine
 c. Headache
 d. QT interval shortening
 e. Sleepiness
 >B

- 10- A 78-year-old alcoholic male with mild Alzheimer's disease and poor dental hygiene is to have his remaining teeth extracted. Because of his Alzheimer's disease, he is not a candidate for dentures. He also has a history of mitral valve stenosis with mild cardiac insufficiency. His current medications include captopril, digoxin, and furosemide. Which of the following medications would be the most appropriate for prophylaxis prior to his dental procedure?
- a. Amoxicillin
 b. Co-trimoxazole
 c. Imipenem
 d. Tetracycline
 e. Vancomycin
 >A

- 11- Which of the following is used in individuals with prosthetic heart valves?
- a. amoxicillin
 b. oral vancomycin
 c. IV vancomycin
 d. oral fosfomycin
 e. IV fosfomycin
 >B

12- Which of the following statements is incorrect?

- a. The penicillins interfere with the last step of bacterial cell wall synthesis (transpeptidation or cross-linkage), resulting in exposure of the osmotically less stable membrane
- b. β -lactamase inhibitors bind to and inactivate β -lactamases
- c. Daptomycin blocks cell wall synthesis by inhibiting the enzyme which catalyzes the first step in peptidoglycan synthesis
- d. polymyxins have a detergent-like effect that disrupts cell membrane integrity, leading to leakage of cellular components and ultimately cell death

>C

13- All of the following cannot be used in the treatment of *C. difficile colitis* EXCEPT:

- a. oral vancomycin
- b. cefotetan
- c. piperacillin
- d. Levofloxacin

>A

14- Which of the following is the agent of choice for the treatment of meningitis?

- a. fosfomycin
- b. ticarcillin
- c. cefoxitin
- d. ceftriaxone

>D

15- All of the following are active against *P. Aeruginosa* EXCEPT:

- a. cefepime
- b. imipenem
- c. ertapenem
- d. aztreonam

>C

16- Which of the following combinations is incorrect?

- a. amoxicillin + sulbactam
- b. ticarcillin + clavulanic acid
- c. Piperacillin + tazobactam
- d. imipenem + cilastatin

>A

17- One of the following statements is incorrect about the structures of antibiotics:

- a. penicillins differ from one another in the R substituent attached to the 6-aminopenicillanic acid residue
- b. cephalosporins are produced semisynthetically by the chemical attachment of side chains to 7-aminocephalosporanic acid
- c. Carbapenems differ in structure from the penicillins in that the carbon atom of the thiazolidine ring has been externalized and replaced by a sulfur atom
- d. monobactams are unique because the β -lactam ring is not fused to another ring

>C

Protein Synthesis Inhibitors

1- Doxycycline is:

- a. Bactericidal.
- b. Not excreted in the feces.
- c. Having a short elimination half-life.
- d. Not effective in Lyme disease.
- e. commonly used in the treatment of chlamydia & acne.

Key: e

2- Neomycin, an aminoglycoside is:

- a. Least nephrotoxic.
- b. Metabolized by hepatic enzyme.
- c. Given for bowel preparation prior to colorectal surgery.
- d. A drug of choice in Rocky Mountain Spotted fever.
- e. An adjunct in treatment of tuberculosis.

Key: c

3- A 25-year-old pregnant woman presents to the emergency department with shaking chills, chest pain, and productive cough. A chest X-ray reveals an area of opacity in the right lower lobe. The physician's choice of antibiotics is limited because some may harm this patient's fetus. Which of the following antibiotics may cause hearing loss in her fetus?

- a. Amoxicillin
- b. Ciprofloxacin
- c. Erythromycin
- d. Doxycycline
- e. Streptomycin

>E

4- A 55-year-old woman is hospitalized for treatment of osteomyelitis. The infectious organism is found to be susceptible to gentamicin so she is started on a once daily dose of intravenous gentamicin. Which of the following symptoms may be a signal to the physician to stop gentamicin therapy?

- a. Eosinophilia
- b. Headache
- c. Nausea
- d. Salivation
- e. Tinnitus

>E

5- Why does chloramphenicol sometimes cause gray baby syndrome in infants?

- a. Chloramphenicol's narrow spectrum means empiric therapy is often ineffective
- b. Clindamycin, not chloramphenicol, causes gray baby syndrome
- c. Decreased absorption from the intestines
- d. Decreased conjugation in infant liver
- e. Decreased excretion by infant kidneys

>D

6- The rationale behind the lack of use of the antibiotic tetracycline in modern day medicine relates to which of the following?

- a. Altered targets
- b. Efflux
- c. Enzymatic activation
- d. Permeability

>B

7- A 71-year-old man with osteomyelitis is treated with aminoglycosides. Blood cultures are drawn and reveal resistance to this antibiotic class. What is the most likely reason for this to occur?

- a. Increased hepatic transaminase activity
- b. Increased phosphodiesterase activity
- c. Presence of plasmid-associated synthesis of enzymes
- d. Uptake of drug into oxygen-dependent transport system

>C

8- **A 42-year-old man with a history of recurrent mycoplasma pulmonary infections presents with similar complaints. Sputum culture reveals that the organism present demonstrates resistance to erythromycin and the macrolide antibiotic class. What is the most likely explanation for this finding?**

- a. Ability of the organism to take up the antibiotic
- b. Improved affinity of the 50S ribosome for the antibiotic
- c. Plasmid-associated erythromycin esterase
- d. Presence of an influx pump
- e. Sulfonation of guanine

>C

9- **A 52-year-old man with recurrent Pseudomonas infections now has another infection. Culture and sensitivity now indicate that this pathogen is not sensitive to chloramphenicol. What is the most likely reason for development of resistance?**

- a. Facilitated drug penetration to cell membrane
- b. MDR gene
- c. enzymatic inactivation
- d. Thickened cell membrane
- e. Undesirable pH

>C

10- **Which of the following is considered to have a bactericidal effect at normal doses?**

- a. streptomycin
- b. telithromycin
- c. demeclocycline
- d. chloramphenicol

>A

Quinolones...

- 1- **A 3-year-old girl presents to the emergency department with a history of recurrent UTIs with costovertebral angle tenderness, high fever, and dysuria. A urine culture grows gram-negative lactose-fermenting rods. The physician suspects E. coli pyelonephritis. Ciprofloxacin is highly effective against E. coli in vitro, but the physician chooses not to use it in this case. Why would she choose not to prescribe ciprofloxacin?**
- a. Ciprofloxacin is bacteriostatic, not bactericidal
 - b. Ciprofloxacin is contraindicated in patients younger than 18 years old
 - c. Ciprofloxacin is effective against E. coli in vitro, but not efficacious in vivo
 - d. Ciprofloxacin is nephrotoxic and should not be used to treat kidney infections
 - e. The physician should prescribe ciprofloxacin in this case
- >B

- 2- **A 32-year-old woman in her third trimester presents to the ambulatory care clinic with dysuria and urgency. Urine is nitrite positive and leukocyte esterase positive. A drug commonly used to treat urinary tract infections is trimethoprim–sulfamethoxazole, but the physician is reluctant to use it. What risk is the physician worried about?**
- a. Gray baby syndrome
 - b. Kernicterus
 - c. Limb defects
 - d. Premature labor
 - e. The physician is being overly cautious; trimethoprim–sulfamethoxazole is the best drug to use in this case
- >B

- 3- **A 44-year-old woman with Crohn's disease in the ileum and right colon is currently maintained on medical therapy including sulfasalazine. Symptoms are currently at baseline with minimal abdominal pain and diarrhea. The most likely reason for improved pain may relate to which of the following compounds/ substances?**
- a. Phenazopyridine
 - b. Sulfamethoxazole
 - c. Sulfapyridine
 - d. Tetracycline
 - e. 5-Aminosalicylate
- >E

- 4- **Which of the following statements is incorrect?**
- a. Moxifloxacin & Levofloxacin are respiratory fluoroquinolones
 - b. fluoroquinolones are bactericidal
 - c. second generation fluoroquinolones exhibit intracellular penetration
 - d. Moxifloxacin does not concentrate in urine and is not indicated for the treatment of UTIs
 - e. IV & ophthalmic preparations of Norfloxacin are available
- >E

- 5- **Which of the following statements regarding MOAs is incorrect?**
- a. fluoroquinolones enter bacteria through porin channels and exhibit effects on DNA topoisomerases III & IV
 - b. sulphonamides inhibit de novo synthesis of folate in microorganisms by competing with the substrate for dihydropteroate synthetase
 - c. trimethoprim inhibits dihydrofolate reductase leading to a decreased availability of the tetrahydrofolate cofactors required for purine, pyrimidine, and amino acid synthesis
 - d. Methenamine decomposes at an acidic pH of 5.5 or less in the urine, thus producing formaldehyde, which acts locally and is toxic to most bacteria.
- >A

Anthelmintics & Antiprotozoals

1- **A 4-year-old boy is brought by his mother to the clinic complaining of perianal itching. He spends the weekdays at a daycare center. The mother also brings a strip of adhesive tape from the night before which she had stuck to the child's perianal area as the doctor had ordered on the phone. Microscopic examination of the tape revealed small, white, round worms. Which is the best treatment for this child?**

- a. Fluconazole
- b. Mebendazole
- c. Metronidazole
- d. Nifurtimox
- e. Praziquantel

>B

2- **Which of the following is involved in metronidazole's action?**

- a. Blocking folic acid synthesis
- b. Disruption of DNA
- c. Inhibition of PBPs
- d. Inhibition of ribosomes
- e. Inhibition of topoisomerase

>B

3- **Choose the INCORRECT statement:**

- a. Mebendazole acts by inhibiting the assembly of microtubules in the parasite
- b. Pyrantel pamoate is a depolarising agent causing the release of Ach and inhibition of AChE leading to paralysis of the worm
- c. Ivermectin targets the glutamate-gated chloride channel receptors leading to hyperparalysis & death of the worm
- d. Praziquantel increases the permeability of the cell membrane causing contracture and paralysis of the parasite
- e. Niclosamide inhibits microtubule synthesis and glucose uptake in nematodes

>E

4- **A 17-year-old female presents to you with subcutaneous swelling in her left arm for the last 3 weeks, accompanied by mild pain. Upon cytological examination, a large number of microfilariae is found. What is the drug of choice for filariasis?**

- a. mebendazole
- b. ivermectin
- c. diethylcarbamazine
- d. albendazole

>C

5- **Which of the following combinations is correct?**

- a. metronidazole – luminal amoebicide
- b. paromomycin – mixed amoebicide
- c. chloroquine – luminal amoebicide
- d. dehydroemetine – systemic amoebicide

>D

Antifungals

1- **The toxic effect of amphotericin B which definitely require reduction of dose is:**

- a. Myelosuppression.
- b. Hepatitis.
- c. Renal Toxicity.
- d. Hypotension.
- e. Infusion-related adverse effects.

>C

2- **Which of the following describes part of flucytosine's mechanism of action?**

- a. Disruption of microtubules
- b. Inhibition of ergosterol synthesis
- c. Inhibition of protein synthesis
- d. Inhibition of thymidylate kinase
- e. Pore formation in the fungal cell membrane

>D

3- **How does caspofungin work?**

- a. Inhibition of cell membrane synthesis
- b. Inhibition of cell wall synthesis
- c. Inhibition of ergosterol synthesis
- d. Inhibition of mitotic spindle formation
- e. Inhibition of protein synthesis

>B

4- **What is the mechanism of action of amphotericin B?**

- a. Binds ergosterol
- b. Inhibits cell wall synthesis
- c. Inhibits DNA synthesis
- d. Inhibits ergosterol synthesis
- e. Inhibits squalene epoxidase

>A

5- **Which of the following can be administered in severe hepatic dysfunction?**

- a. Caspofungin
- b. Micafungin
- c. Anidulafungin
- d. Fluconazole

>C

6- **All of the following statements are correct EXCEPT:**

- a. High cost, liposomal preparations are reserved mainly as salvage therapy for patients who cannot tolerate conventional amphotericin B
- b. 5-fluocytosine is fungistatic
- c. one of the adverse effects of 5-fluocytosine is dose-related bone marrow depression
- d. Fluconazole is used for prophylaxis against invasive fungal infections in recipients of bone marrow transplants
- e. Itraconazole capsule should be taken on an empty stomach as food decreases absorption

>E

Antivirals

- 1- **Which of the followings is useful topically for genital herpes infection?**
 - a. Acyclovir.
 - b. Cidofovir.
 - c. Ritonavir.
 - d. Ganciclovir.
 - e. Foscarnet.Key: a
- 2- **A 34-year-old male patient with HIV disease presents to the walk-in clinic of the emergency department with pain and blurry vision in his right eye. A dilated ophthalmoscopic exam of the right eye reveals a diffuse retinitis. What is the most appropriate treatment for this patient?**
 - a. Administer rimantadine
 - b. Administer ganciclovir
 - c. Administer ribavirin
 - d. Temporal artery biopsy
 - e. Check HbA1c levels>B
- 3- **A 27-year-old man presents to the urgent care clinic with multiple painful ulcers on the shaft of his penis. Some strains of the causative virus are resistant because of a mutated thymidine kinase enzyme. Which of the following antivirals may be less effective in treating this man's infection if his strain of virus has a mutated thymidine kinase?**
 - a. Acyclovir
 - b. Cidofovir
 - c. Foscarnet
 - d. Oseltamivir
 - e. Rimantadine>A
- 4- **Five patients with influenza A are being considered for treatment with either rimantadine or amantadine. Which of the following patients would be better suited to receive treatment with rimantadine?**
 - a. A 34-year-old woman with epilepsy
 - b. A 36-year-old pregnant female
 - c. A 36-year-old woman who is postpartum and nursing
 - d. A 39-year-old man with chronic diarrhea
 - e. A 39-year-old woman with intermittent dizziness and tinnitus>E
- 5- **A 45-year-old man with HIV disease and herpesvirus has begun on therapy with foscarnet. The medication is administered intravenously. If serum electrolytes are drawn on this patient after 1 week of therapy, which of the following laboratory values would be expected to be abnormal?**
 - a. Calcium
 - b. Chloride
 - c. Creatinine
 - d. Glucose
 - e. Sodium>A
- 6- **What is the mechanism of resistance for acyclovir?**
 - a. Lack of thymidine kinase
 - b. Lack of viral kinase
 - c. Mutated CMV DNA polymerase
 - d. Mutation in DNA polymerase
 - e. Mutated M2 protein>A
- 7- **A 27-year-old man presents with multiple painful ulcers on the shaft of his penis. The physician wants to prescribe a drug that he can take orally as an outpatient to treat his herpes infection. Which of the following would be the best choice for this patient?**
 - a. Acyclovir
 - b. Cidofovir
 - c. Foscarnet
 - d. Ganciclovir
 - e. Valacyclovir>E
- 8- **Which antiviral blocks the M2 ion channel?**
 - a. Zanamavir
 - b. Oseltamivir
 - c. Rimantadine
 - d. Valganciclovir
 - e. Cidofovir>C

1- One of the following combinations of poisons and antidotes is wrong:

- A- A- acetaminophen- N-acetylcysteine
- B- organophosphates – atropine
- C- heparin - protamine sulfate
- D- iron-hydroxocobalamin
- E- warfarin- vitamin K1

>B

2- The coma cocktail consists of all of the following EXCEPT:

- A- dextrose
- B- naloxone
- C- niacin
- D- thiamine

>C

3- Which of the following statements is incorrect?

- A- fomepizole is used as an antidote for methanol and ethylene glycol
- B- in patients with smoke inhalation and cyanide toxicity the induction of methemoglobin with sodium nitrite is advised
- C- toxic effects of iron can be expected with as little as 20 mg/kg of elemental ingested and Doses of 60 mg/kg may be lethal
- d- succimer is the oral chelator of choice for lead poisoning

>B

4- A patient presents to you in the emergency room with headaches, dyspnea, lethargy, drowsiness, and cherry-red skin. A few minutes later he starts seizing. What type of intoxication do you suspect and what measures are recommended for the prompt treatment of this patient?

- A- Carbon monoxide poisoning – 100% oxygen nonrebreathing mask
- B- Carbon monoxide poisoning – oxygenation in a hyperbaric chamber
- C- Iron poisoning – IV deferoxamine
- D- Lead poisoning – Oral Succimer
- E- Lead poisoning – IM dimercaprol & IV calcium disodium edetate

>B