

- 1. Which penicillin is administered only through IV or IM routes?
 - a. Amoxicillin
 - b. Ampicillin
 - c. Oxacillin
 - d. Penicillin V
- 2. What is the primary route of administration for amoxicillin?
 - a. IV
 - b. IM
 - c. Oral
 - d. Subcutaneous
- 3. What is a depot form of penicillin used for intramuscular administration?
 - a. Piperacillin-tazobactam
 - b. Procaine penicillin G
 - c. Ceftriaxone
 - d. Amoxicillin-clavulanic acid
- 4. Which penicillin is effective against penicillinase-producing Staphylococcus aureus (MSSA)?
 - a. Amoxicillin
 - b. Nafcillin
 - c. Cefotaxime
 - d. Cefepime





What adverse effect is associated with 5-10% of patients using penicillins?

- a. Hepatitis
- b. Nephritis
- c. Hypersensitivity reactions
- d. Neurotoxicity
- 6. Which generation of cephalosporins covers MSSA but not MRSA?
 - a. First-generation
 - b. Second-generation
 - c. Third-generation
 - d. Fourth-generation
- 7. Cefazolin and cephalexin are examples of which generation of cephalosporins?
 - a. Second-generation
 - b. Third-generation
 - c. First-generation
 - d. Fourth-generation
- 8. What is the primary administration route for most cephalosporins?
 - a. Oral
 - b. Intravenous (IV)
 - c. Intramuscular (IM)
 - d. Subcutaneous





9. Which cephalosporin is indicated for complicated skin MRSA infections and pneumonia?

- a. Ceftriaxone
- b. Cefepime
- c. Ceftaroline
- d. Cefoxitin
- 10. What mechanism of resistance is shared between penicillins and cephalosporins?
 - a. Efflux pumps
 - b. Altered target sites
 - c. Extended-spectrum beta-lactamase (ESBL)
 - d. Penicillinase production
- 11. Which cephalosporin is eliminated primarily through bile rather than renal tubular secretion?
 - a. Cefazolin
 - b. Ceftriaxone
 - c. Cefepime
 - d. Cephalexin
- 12. What is a common adverse effect associated with cephalosporins, especially first-generation?
 - a. Hematological toxicities
 - b. Neurotoxicity
 - c. Hypersensitivity (cross-reactivity with penicillin)
 - d. Diarrhea



- 13. Ceftaroline is the only cephalosporin active against:
 - a. Pseudomonas aeruginosa
 - b. Methicillin-resistant Staphylococcus aureus (MRSA)
 - c. Extended-spectrum beta-lactamase (ESBL) producers
 - d. Streptococcus pneumoniae

14. Which cephalosporin generation exhibits the broadest spectrum of activity against both gram-negative and gram-positive bacteria?

- a. Third-generation
- b. Fourth-generation
- c. Second-generation
- d. First-generation
- 15. What is the primary limitation for using ceftaroline?
 - a. Lack of activity against MRSA
 - b. Poor oral absorption
 - c. Cross-reactivity with penicillin
 - d. Limited efficacy against gram-negative bacteria





Answers:

1. c. Oxacillin

2. c. Oral

- 3. b. Procaine penicillin G
- 4. b. Nafcillin
- 5. c. Hypersensitivity reactions
- 6. a. First-generation
- 7. c. First-generation
- 8. b. Intravenous (IV)
- 9. c. Ceftaroline
- 10. d. Penicillinase production
- 11. b. Ceftriaxone
- 12. c. Hypersensitivity (cross-reactivity with penicillin)
- 13. b. Methicillin-resistant Staphylococcus aureus (MRSA)
- 14. b. Fourth-generation
- 15. c. Cross-reactivity with penicillin