

ANTIBIOTICS

HOW MUCH DO YOU KNOW?

TRY OUR QUIZ FOR PRESCRIBERS: Principles of antimicrobial prescribing

Are the following statements true or false?

- | | |
|--|---------------------|
| 1. You should not start antibiotics without clinical evidence of bacterial infection | True / False |
| 2. Broad spectrum antibiotic use promotes <i>Clostridioides difficile</i> infections. | True / False |
| 3. Unnecessary or inappropriate antibiotic prescribing increases the emergence and spread of resistant bacteria. | True / False |
| 4. You should take appropriate cultures before starting antibiotics | True / False |
| 5. You should always use intravenous (IV) antibiotics for 5 days before switching to oral | True / False |
| 6. IV antibiotics should be reviewed on a daily basis | True / False |
| 7. Antibiotics remove the need for surgical or other intervention | True / False |
| 8. What is the nearest approximate percentage figure for the proportion of patients with penicillin allergy who may also be allergic to cephalosporins?
<div style="margin-left: 20px;"> a. 2 to 4.8%
 b. 5 to 10.5%
 c. 30%
 d. 50% </div> | |

9 Which of these drugs are penicillins or penicillin related? (tick)

Drug	Yes	No
Penicillin VK		
Gentamicin		
Phenoxymethylpenicillin		
Co-amoxiclav		
Augmentin		
Erythromycin		
Ceftriaxone		
Meropenem		
Cefotaxime		
Amoxicillin		
Flucloxacillin		
Clarithromycin		
Benzylpenicillin		
Cefalexin		
Vancomycin		
Cefuroxime		
Piperacillin/Tazobactam		
Tazocin		
Ciprofloxacin		
Doxycycline		

10 Which of the following patients could be considered suitable to be offered a penicillin challenge?

- Adult patient with childhood history of rash with no other symptoms / hospitalisation.
- Adult patient who developed a rash after 1 day in 2005
- Adult patient who reported feeling unwell and had diarrhoea
- Adult patient who reported facial swelling without hospitalisation 25 years ago
- All of the above

11 Which of the following are NOT effective in preventing the emergence or spread of antibiotic resistant pathogens

- Adherence to hand hygiene
- Contact isolation during hospitalisation for patients colonised with MRSA
- Avoiding the use of antibiotics for viral infections
- Treating infections for a longer duration

12 Which of the following is NOT a current example of clinically important antibiotic resistance?

- Meticillin resistant *Staphylococcus aureus*
- Penicillin resistant *Streptococcus pyogenes* (Group A Strep)
- Fluoroquinolone resistant *P. aeruginosa*
- Vancomycin resistant *Enterococci*

- 13 Which of these conditions have become harder to treat because of antibiotic resistance?
- Gonorrhoea
 - Staphylococcal infections
 - Urinary tract infections
 - Meningitis
 - All of the above
- 14 Which of the following conditions should generally be treated with antibiotic therapy in patients who are not immunosuppressed and not pregnant?
- Acute bronchitis
 - Asymptomatic urinary tract infection
 - Cellulitis
 - All of the above
- 15 Which of the following is NOT a way that a bacterium can acquire antibiotic resistance
- Acquiring resistance gene from its host's cells
 - On its own through evolution
 - From its parent cell
 - Scavenging resistance genes from the environment
 - Exchanging DNA with another bacterium
- 16 Which of these antibiotics have useful clinical activity against *Pseudomonas*?
- Ciprofloxacin
 - Co-amoxiclav
 - Ceftazidime
 - Cefotaxime
- 17 Which of these would be suitable to treat Gram positive cocci isolated from a blood culture?
- Flucloxacillin
 - Vancomycin
 - Ciprofloxacin
 - Trimethoprim
- 18 For each additional day of antibiotic therapy, the risk of side effects and antimicrobial resistance increases by
- No increase
 - 1 to 2%
 - 3 to 4%

- 19 Which of these blood culture results most likely represents a contamination and should NOT automatically be treated with antibiotics?
- a. One of two blood culture bottles positive with Group A *Streptococci*
 - b. One of two blood culture bottles positive with a gram negative bacterium
 - c. One of two blood culture bottles positive with coagulase negative *Staphylococci*
 - d. One of two blood culture bottles positive with *Klebsiella* sp.
- 20 Which of these conditions needing IV antibiotics could be referred to an outpatient parenteral antibiotic therapy (OPAT) team?
- a. Resolving cellulitis needing a further 7 days therapy
 - b. An ESBL positive urinary tract infection
 - c. Meningitis – from day 2 of therapy
 - d. Osteomyelitis needing a further 6 weeks of treatment
 - e. All of the above

SEE OVERLEAF FOR THE ANSWERS – NO PEEKING!

ANTIBIOTICS

PRESCRIBERS QUIZ – ANSWERS

1. You should not start antibiotics without clinical evidence of bacterial infection **True**
2. Broad spectrum antibiotic use promotes *Clostridioides difficile* infections. **True**
3. Unnecessary or inappropriate antibiotic prescribing increases the emergence and spread of resistant bacteria **True**
4. You should take appropriate cultures before starting antibiotics see [start smart then focus toolkit](#) **True**
5. You should always use intravenous (IV) antibiotics for 5 days before switching to oral **False**
6. IV antibiotics should be reviewed on a daily basis see [national antimicrobial intravenous-to-oral switch \(IVOS\) criteria for prompt switch for adults](#) **True**
7. Antibiotics remove the need for surgical or other intervention **False**
8. What is the nearest approximate percentage figure for the proportion of patients with penicillin allergy who may also be allergic to cephalosporins?
 - a. **2 to 4.8% (Khan D, 2022)**
 - b. 5 to 10.5%
 - c. 30%
 - d. 50%

9 Which of these drugs are penicillins or penicillin related? (tick)

Drug	Yes	No
Penicillin VK	✓	
Gentamicin		✓
Phenoxymethylpenicillin	✓	
Co-amoxiclav	✓	
Augmentin	✓	
Erythromycin		✓
Ceftriaxone	✓	
Meropenem	✓	
Cefotaxime	✓	
Amoxicillin	✓	
Flucloxacillin	✓	
Clarithromycin		✓
Benzylpenicillin	✓	
Cefalexin	✓	
Vancomycin		✓
Cefuroxime	✓	
Piperacillin/Tazobactam	✓	
Tazocin	✓	
Ciprofloxacin		✓
Doxycycline		✓

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- e. **All of the above**

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 - d. Trimethoprim

- 18** For each additional day of antibiotic therapy, the risk of side effects and antimicrobial resistance increases by
- a. No increase
 - b. 1–2%
 - c. **3–4% (3% side effects, 4% AMR) (Curran J,2022)**
- 19** Which of these blood culture results most likely represents a contamination and should NOT automatically be treated with antibiotics?
- a. One of two blood culture bottles positive with Group A Streptococci
 - b. One of two blood culture bottles positive with a gram-negative bacterium
 - c. **One of two blood culture bottles positive with coagulase negative Staphylococci**
 - d. One of two blood culture bottles positive with Klebsiella sp.
- 20** Which of these conditions needing IV antibiotics could be referred to an out-patient parenteral antibiotic therapy (OPAT) team?
- a. **Resolving cellulitis needing a further 7 days therapy**
 - b. **An ESBL positive urinary tract infection**
 - c. Meningitis – from day 2 of therapy
 - d. **Ciprofloxacin resistant pseudomonas in a patient with osteomyelitis**
 - e. All of the above

Find out how you can play your part to stop the spread of antibiotic resistance, choose a pledge at [AntibioticGuardian.com](https://antibioticguardian.com). Your actions can help protect antibiotics.



Choose Your Pledge