



ANTIBIOTIC GUARDIAN

Keep Antibiotics Working

ANTIBIOTICS

HOW MUCH DO YOU KNOW? TRY OUR QUIZ FOR PRESCRIBERS: Principles of antimicrobial prescribing

Are the following statements True or False?

- 1 Do not start antibiotics without clinical evidence of bacterial infection True / False
- 2 Broad spectrum antibiotic use promotes *C. difficile* infections True / False
- 3 Unnecessary or inappropriate antibiotic prescribing increases the emergence and spread of resistant bacteria True / False
- 4 Take appropriate cultures before starting antibiotics True / False
- 5 Always use 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 Penicillin Allergy
What is the nearest approximate percentage figure for the proportion of patients with penicillin allergy who may also be allergic to cephalosporins?
 - a) 0.5–6.5%
 - b) 5 – 10.5%
 - c) 30%
 - d) 50%
- 9 Which antibiotic(s) can be used in a patient who has had an anaphylactic reaction to penicillin?
 - a) Cefuroxime
 - b) Meropenem
 - c) Gentamicin
 - d) Ciprofloxacin
 - e) Clarithromycin
 - f) All of the above

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

- 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
 - 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** Which of these conditions is an indication for therapy?
- A catheter specimen urine of a stroke patient positive with $> 10^5$ CFU/ml *Candida* species
 - A catheter specimen urine of a patient with heart failure, positive with $> 10^5$ CFU/ml Coliforms
 - Repeat isolation in a catheter specimen of urine of $> 10^5$ *Candida* species in an immunosuppressed patient
- 19** Which of these blood culture results most likely represents a contamination and should NOT automatically be treated with antibiotics?
- One of two blood culture bottles positive with Group A *Streptococci*
 - One of two blood culture bottles positive with a gram negative bacterium
 - One of two blood culture bottles positive with coagulase negative *Staphylococci*
 - 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?
- Resolving cellulitis needing a further 7 days therapy
 - An ESBL positive urinary tract infection
 - Meningitis – from day 2 of therapy
 - Osteomyelitis needing a further 6 weeks of treatment
 - All of the above

PLEASE SEE OVERLEAF FOR THE ANSWERS – NO PEEKING!



ANTIBIOTICS

PRESCRIBERS QUIZ – ANSWERS

- 1 Do not start antibiotics without clinical evidence of bacterial infection True
- 2 Broad spectrum antibiotic use promotes *C. difficile* infections True
- 3 Unnecessary or inappropriate antibiotic prescribing increases the emergence and spread of resistant bacteria True
- 4 Take appropriate cultures before starting antibiotics True
- 5 Always use IV antibiotics for 5 days before switching to oral False
- 6 IV antibiotics should be reviewed on a daily basis True
- 7 Antibiotics remove the need for surgical or other intervention False
- 8 Penicillin Allergy
What is the nearest approximate percentage figure for the proportion of patients with penicillin allergy who may also be allergic to cephalosporins?
 - a) 0.5–6.5%
 - b) 5 – 10.5%
 - c) 30%
 - d) 50%
- 9 Which antibiotic(s) can be used in a patient who has had an anaphylactic reaction to penicillin?
 - a) Cefuroxime
 - b) Meropenem
 - c) Gentamicin
 - d) Ciprofloxacin
 - e) Clarithromycin
 - f) All of the above

10 Which of these drugs are penicillins or penicillin related?

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

- 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
 - 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 Which of these conditions is an indication for therapy?
- A catheter specimen urine of a stroke patient positive with $> 10^5$ CFU/ml Candida species
 - A catheter specimen urine of a patient with heart failure, positive with $> 10^5$ CFU/ml Coliforms
 - Repeat isolation in a catheter specimen of urine of $> 10^5$ Candida species in an immunosuppressed patient
- 19 Which of these blood culture results most likely represents a contamination and should NOT automatically be treated with antibiotics?
- One of two blood culture bottles positive with Group A Streptococci
 - One of two blood culture bottles positive with a gram negative bacterium
 - One of two blood culture bottles positive with coagulase negative Staphylococci
 - 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?
- Resolving cellulitis needing a further 7 days therapy
 - An ESBL positive urinary tract infection
 - Meningitis – from day 2 of therapy
 - Osteomyelitis needing a further 6 weeks of treatment
 - All of the above