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Antibiotic Therapy: When Are Shorter Courses Better?

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To determine the appropriate duration of antibiotic therapy, consider infection type, source control, severity of infection, antibiotic choice, symptom resolution, potential for relapse, comorbidities, and immune status.[1-3] See our toolbox, *Antimicrobial Stewardship*, for more on using antibiotics effectively.

What are the **benefits** of shorter courses of antibiotics?

- minimized risk of **antibiotic resistance**.[4]
- reduced **adverse effects** from the antibiotic and/or superinfections from eliminating normal flora (e.g., *Clostridium difficile*).[4]
- lower **cost** and improved **adherence** with fewer antibiotic doses.[3]

What duration of antibiotic therapy is appropriate for common infections?

Common Infection	Duration of Antibiotic Therapy
Acute sinusitis	• Antibiotics are not usually necessary, as most cases are viral or self-limiting bacterial infections.[5] • For acute uncomplicated bacterial sinusitis in adults, recommend 5 to 7 days of antibiotics.[5] • Longer durations (e.g., 10 to 14 days) may be necessary for more complicated infections and in children.[5]
Acute bronchitis	• Antibiotics are not routinely recommended for **acute uncomplicated bronchitis**.[6] • Rule out pneumonia and treat acute exacerbations of chronic bronchitis and COPD appropriately.[6]
Community acquired pneumonia	• Recommend 3 to 5 days (5 days in Canada) of antibiotics, provided patient becomes clinically stable.[7,8] • Recommend longer therapy for CAP due to suspected or proven MRSA, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, suspected *Legionella pneumophila*, or other intracellular microorganisms.[7] • Longer courses may also be necessary in certain patients (e.g., recent hospitalization, long-term care resident, underlying lung disease, high burden of disease on x-ray).[7]
Cellulitis	• Recommend 5 days (5 to 7 days in Canada) for most patients with uncomplicated cellulitis that show improvement.[4,9] • Longer courses may be needed if there is insufficient improvement, or in more complicated/severe cases (e.g., purulent/skin abscess, when debridement is necessary, deep soft tissue infections).[9]
Hospital- and ventilator-associated pneumonia	• Recommend 7 days of antibiotics for both HAP and VAP.[10] • Use clinical criteria (e.g., cultures, fever) and consider using procalcitonin (PCT) levels to determine duration.[10] • Longer courses may be necessary in some patients (e.g., known Pseudomonas or Acinetobacter).[10]
Intra-abdominal infections	• Recommend 4 days of antibiotics if the source of the infection is controlled.[11,12] • If using medical management only (i.e., no surgical intervention), longer courses of antibiotic therapy are needed.[11,12]
Osteomyelitis	• Generally, recommend 6 weeks of antibiotic therapy for uncomplicated cases of osteomyelitis.[4] • Shorter courses may be used in some cases (e.g., post-surgical drainage when organism known, pediatric acute osteomyelitis).[4] • Longer durations are often necessary in complicated cases (e.g., implants, prosthetic joints, undrained abscesses).[4]
Otitis media, acute	• Antibiotics are not always necessary, as many cases are viral or self-limiting bacterial infections.[4] • Recommend oral pain relievers for less severe cases (symptoms <48 hours, temperature <102.2°F [39°C], mild ear pain, no drainage from the ear) and observation/"watchful waiting" (antibiotic **treatment is recommended** for **bilateral** AOM in ages 6 months to 23 months).[13,14] • Recommend 10 days of therapy for children younger than 2 years, recurrent otitis media, or a ruptured eardrum.[13,14] • Recommend 5 to 7 days (5 days in Canada) of antibiotic therapy for children 2 years and older.[13,14]
UTI, pediatric	• Recommend 7 to 10 days (7 to 14 days in Canada) of antibiotics for most children with an UTI.[15,16] • Consider a shorter course of antibiotics (e.g., 2 to 4 days) for older, school-aged children without fever.[4,16]
UTI, uncomplicated adult	• Recommend short courses of antibiotics for uncomplicated UTI (e.g., 3 days with trimethoprim/sulfamethoxazole, 5 days with nitrofurantoin).[4,17] • Longer durations of therapy are necessary for complicated UTIs (e.g., during pregnancy, catheter-associated).[4,18]
Pyelonephritis	• Recommend a short course (5 to 7 days of a fluoroquinolone OR 7 days with a non-fluoroquinolone) for uncomplicated pyelonephritis.[19] • Longer courses (e.g., 10 to 14 days) may be necessary if treating with trimethoprim/sulfamethoxazole, males, some hospitalized patients (e.g., bacteremia and hypotension), those with urogenital abnormalities.[4,19]
Uncomplicated gram-negative bacteremia	• Recommend 7 days of antibiotics for most patients.[20]
Confirmed strep throat	• Treat effectively to eradicate from the pharynx and to prevent complications (e.g., rheumatic fever).[21] • Recommend 10 days of amoxicillin or penicillin for most patients with acute group A streptococcal pharyngitis.[4,21] • Consider a one-time intramuscular injection of benzathine penicillin G for patients unlikely to be adherent for 10 days.[21]

When are prescribed antibiotics **required** to be completed?

- Patients should not stop antibiotics (even if symptoms resolve) for active tuberculosis, endocarditis, osteomyelitis, or strep throat.[4]
- Patients should complete the prescribed duration of therapy for these potentially asymptomatic conditions:[4]
  - asymptomatic bacteriuria during pregnancy
  - latent tuberculosis

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Abbreviations

AOM = acute otitis media; CAP = community-acquired pneumonia; COPD = chronic obstructive pulmonary disease; HAP = hospital-acquired pneumonia; MRSA = methicillin-resistant Staphylococcus aureus; UTI = urinary tract infection; VAP = ventilator-associated pneumonia.

References

1. Spellberg B. The New Antibiotic Mantra-"Shorter Is Better". JAMA Intern Med. 2016 Sep 1;176(9):1254-5.
2. Uranga A, España PP, Bilbao A, et al. Duration of Antibiotic Treatment in Community-Acquired Pneumonia: A Multicenter Randomized Clinical Trial. JAMA Intern Med. 2016 Sep 1;176(9):1257-65.
3. File TM Jr. Duration and cessation of antimicrobial treatment. J Hosp Med. 2012;7 Suppl 1:S22-33.
4. Grant J, Saux NL; members of the Antimicrobial Stewardship and Resistance Committee (ASRC) of the Association of Medical Microbiology and Infectious Disease (AMMI) Canada. Duration of antibiotic therapy for common infections. J Assoc Med Microbiol Infect Dis Can. 2021 Sep 30;6(3):181-197.
5. Payne SC, McKenna M, Buckley J, et al. Clinical Practice Guideline: Adult Sinusitis Update. Otolaryngol Head Neck Surg. 2025 Aug;173 Suppl 1:S1-S56.
6. CDC. Antibiotic prescribing and use: adult outpatient treatment recommendations. April 16, 2024. https://www.cdc.gov/antibiotic-use/hcp/clinical-care/adult-outpatient.html?CDC_AAref_Val=https://www.cdc.gov/antibiotic-use/clinicians/adult-treatment-rec.html. (Accessed October 21, 2025).
7. Jones BE, Ramirez JA, Oren E, et al. Diagnosis and Management of Community-acquired Pneumonia. An Official American Thoracic Society Clinical Practice Guideline. Am J Respir Crit Care Med. 2025 Jul 18.
8. Choosing Wisely Canada. The cold standard: a toolkit for using antibiotics wisely for the management of respiratory tract infaections in primary care, 5th edition. 2023. https://choosingwiselycanada.org/download/17352. (Accessed October 21, 2025).
9. Yadav K, Ohle R, Yan JW, et al. Canadian Emergency Department Best Practices Checklist for Skin and Soft Tissue Infections Part 1: Cellulitis. CJEM. 2024 Sep;26(9):593-599.
10. Kalil AC, Metersky M, Klompas M, et al. Management of Adults With Hospital-acquired and Ventilator-associated Pneumonia: 2016 Clinical Practice Guidelines by the Infectious Diseases Society of America and the American Thoracic Society. Clin Infect Dis. 2016 Sep 1;63(5):e61-e111. Erratum in: Clin Infect Dis. 2017 May 1;64(9):1298. Erratum in: Clin Infect Dis. 2017 Oct 15;65(8):1435. Erratum in: Clin Infect Dis. 2017 Nov 29;65(12):2161.
11. Huston JM, Barie PS, Dellinger EP, et al. Therapeutics and Guidelines Committee. The Surgical Infection Society Guidelines on the Management of Intra-Abdominal Infection: 2024 Update. Surg Infect (Larchmt). 2024 Aug;25(6):419-435.
12. Sunnybrook Health Sciences Centre. Treatment guidelines:intra-abdominal infection. https://sunnybrook.ca/content/?page=antimicrobial-stewardship-treatment-guidelines. (Accessed October 21, 2025).
13. Lieberthal AS, Carroll AE, Chonmaitree T, et al. The diagnosis and management of acute otitis media. Pediatrics. 2013 Mar;131(3):e964-99. Erratum in: Pediatrics. 2014 Feb;133(2):346.
14. Le Saux N, Robinson JL; Canadian Paediatric Society, Infectious Diseases and Immunization Committee. Management of acute otitis media in children six months of age and older. Paediatr Child Health. 2016 Jan-Feb;21(1):39-50.
15. Mattoo TK, Shaikh N, Nelson CP. Contemporary Management of Urinary Tract Infection in Children. Pediatrics. 2021 Feb;147(2):e2020012138. Erratum in: Pediatrics. 2022 Oct 1;150(4):e2022059259.
16. Canadian Paediatric Society. Urinary tract infections in infants and children: diagnosis and management. Reaffirmed January 1, 2020. https://www.cps.ca/en/documents/position/urinary-tract-infections-in-children. (Accessed October 20, 2025).
17. Lee RA, Centor RM, Humphrey LL, et al. Appropriate Use of Short-Course Antibiotics in Common Infections: Best Practice Advice From the American College of Physicians. Ann Intern Med. 2021 Jun;174(6):822-827.
18. Mo Y, Tan WC, Cooper BS. Antibiotic duration for common bacterial infections-a systematic review. JAC Antimicrob Resist. 2025 Jan 29;7(1):dlae215.
19. Trautner BW, Cortes-Penfield NW, Gupta K, et al. Complicated urinary tract infections (cUTI): clinical guidelines for treatment and management. July 17, 2025. https://www.idsociety.org/practice-guideline/complicated-urinary-tract-infections/. (Accessed October 20, 2025).
20. Sheppard D. Short-course antibiotic therapy: The next frontier in antimicrobial stewardship. Can Commun Dis Rep. 2022 Nov 3;48(11-12):496-501.
21. Shulman ST, Bisno AL, Clegg HW, et al. Clinical practice guideline for the diagnosis and management of group A streptococcal pharyngitis: 2012 update by the Infectious Diseases Society of America. Clin Infect Dis. 2012 Nov 15;55(10):e86-102. Erratum in: Clin Infect Dis. 2014 May;58(10):1496.