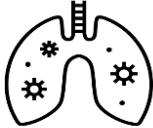



Recommended Durations of Antibiotic Therapy for Common Infections

Community Acquired
Pneumonia (CAP)




3-5 days

Hospital Acquired
Pneumonia (HAP)



3-7 days

Ventilator Associated
Pneumonia (VAP)




5-7 days

Cellulitis/Skin & Soft
Tissue Infection




5 days

Diabetic Foot Wounds



Wounds: 10d
Osteo: 3-6 wks

Urinary Tract
Infection



3-5 days

Streptococcal
Pharyngitis




10 days

Acute Otitis Media




5-10 days

Sinusitis




5-7 days
(adults)

Uncomplicated
Bloodstream Infection



7 days

Post Operative
Prophylaxis

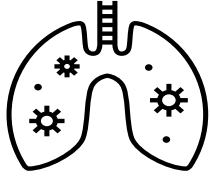


Single Dose

Background:

The duration of antibiotic therapy for bacterial infections historically reflected long-standing dogma and relied largely on expert opinion and tradition. The lack of high-quality data and early concerns for the development of resistance with short durations led to longer fixed durations of therapy with the assumption that overtreatment occurred but ensured that every patient was “maximally cured.”¹⁻² In 2010 Paul Sax, MD wrote a satirical piece in the New England Journal of Medicine’s blog highlighting the lore in figuring out the length of antibiotic therapy, using non-evidence-based multiples of 5 (fingers on a hand) or 7 (days of the week).³ Since that piece, there has been an ongoing push towards studying proper durations of therapy, a movement dubbed “Shorter is Better” by Brad Spellberg, MD.⁴⁻⁷ This refers to shortening the number of days an antibiotic course is given, while not increasing risk for treatment failure. Shorter courses of antibiotics lead to less risk of harm, including decreased antibiotic resistance, fewer adverse effects, and less *Clostridioides difficile* infections. Newer evidence supports shorter durations for many common infections. This document encourages translating that evidence into clinical practice.

Community Acquired Pneumonia (CAP)



3-5 days

Key Points⁸⁻¹²

- Since 2019, guidelines have recommended 5 days of antibiotics for patients with CAP who are clinically improving.
- Randomized controlled trials found antibiotics could be safely stopped at 3 days in patients who met stability criteria (temp $\leq 37.8^{\circ}\text{C}$, HR < 100 bpm, RR < 24 bpm, arterial oxygen saturation $> 90\%$, systolic blood pressure > 90 mm Hg, and normal mental status).
- Procalcitonin levels can be used to safely stop antimicrobials when it normalizes (< 0.25 ng/mL) or decreased by $\geq 80\%$.
- Extra-pulmonary infections, slow to improve infections or those with resistant pathogens (*P. aeruginosa* or *S. aureus*) may require longer courses of treatment.
- [CAP - UNMC Guidance Document](#)

Hospital Acquired Pneumonia (HAP)



3-7 days

Key Points³⁴⁻³⁵

- Patients with new radiographic infiltrates and a low suspicion of pneumonia can be given 3 days of antibiotics
 - Not associated with worse clinical outcomes
 - Lower chance of acquiring resistant organisms
- 5-7 days of Antibiotics for Non-Ventilator HAP
 - Shorter therapy reduces the risk of infection with resistant organisms
- [HAP - UNMC Guidance Document](#)

Ventilator Associated Pneumonia (VAP)



5-7 days

Key Points³⁵⁻³⁸

- 5-7 days from the first day of culture-directed antibiotic coverage according to the susceptibility of at least one pathogen recovered from respiratory cultures was shown to be effective at treating VAP
 - No increase in 60-day mortality or pneumonia recurrence
 - Reduction in antibiotic adverse events

[VAP - UNMC Guidance Document](#)

Cellulitis/Skin & Soft Tissue Infection (SSTI)



5 days

Key Points²⁴⁻²⁶

- Treatment of skin infections for 5-7 days is appropriate for most patients if there has been improvement in symptoms.
- Shorter courses (3 days) have been shown to be effective at treating impetigo.
- Longer courses may be required for severe infections or infections without source control (undrained abscess).
- Diabetes alone is not an indication for treating cellulitis with a longer course.
- [SSTI - UNMC ASP Guidance Document](#)

Diabetic Foot Wounds



Wounds: 10d

Osteo: 3-6 wks

Key Points³²⁻³³

- Debridement + 10 days adequate for soft tissue infection
 - No difference in remission (persistent, recurrent or newly acquired osteomyelitis or SSTI)
- Diabetic Foot Osteomyelitis
 - With debridement, partial amputation (even positive margins) 3 weeks equivalent to 6 weeks
 - Without debridement treat for 6 weeks
- If surgical cure obtained (i.e., amputated infected limb and margins negative) can stop antibiotics after 48 hours
- [DFI - UNMC ASP Guidance Document](#)

Urinary Tract Infection



3-5 days

Key Points¹³⁻¹⁷

- Bacteria in the urine without any urinary symptoms (asymptomatic bacteriuria) should NOT be treated (exceptions: pregnancy, prophylaxis for impending urologic surgery).
- For uncomplicated cystitis, evidence supports 3 days of TMP-SMX (Bactrim) or 5 days of nitrofurantoin. Alternate options include 3 days of fluoroquinolones or 5 days of a beta-lactam (e.g., amoxicillin-clavulanate, cephalexin, cefuroxime).
- For complicated cystitis (including catheterized patients and those with urologic abnormalities), evidence supports 5 days of fluoroquinolone or IV beta-lactam and 7 days of nitrofurantoin
- For pyelonephritis, courses of 5-7 days (fluoroquinolones or IV beta-lactams) to 10 days (TMP/SMX, oral beta-lactams) are appropriate.
- [UTI - UNMC Guidance Document](#)

Streptococcal Pharyngitis



10 days

Key Points²⁹⁻³⁰

- 10 days for penicillin, amoxicillin, 1st generation oral cephalosporins (cephalexin, cefadroxil)
- 5 days for azithromycin (not preferred due to increasing macrolide resistance)

Acute Otitis Media

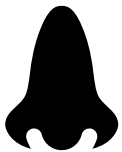


5-10 days

Key Points³¹

- Amoxicillin, amoxicillin-clavulanate (preferred if antibiotic exposure within 30 days, recurrent infection), or oral 2nd/3rd generation cephalosporins:
 - For children <2 years and children (any age) with tympanic membrane perforation or history of recurrent infection: 10 days
 - For children >2 years and adult with intact tympanic membrane and no history of recurrent AOM 5-7 days

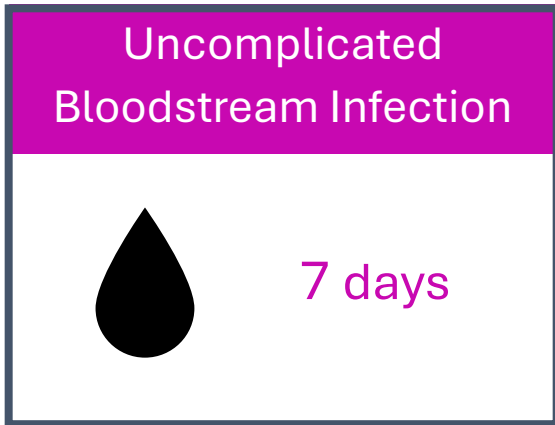
Sinusitis



5-7 days
(adults)

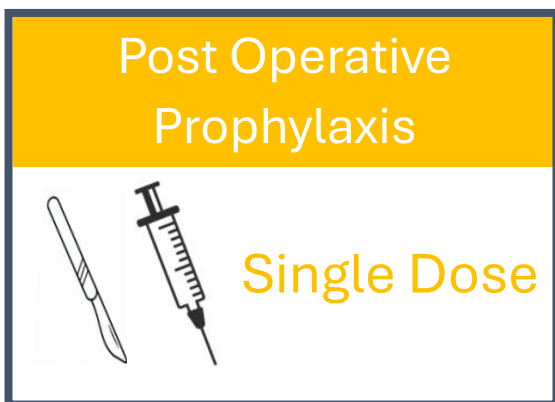
Key Points²⁷⁻²⁸

- Most adults with sinus symptoms will improve without treatment and antibiotics provide minimal benefit
- Bacterial rhinosinusitis should only be treated when:
 - Symptoms persist without evidence of improvement for ≥10 days OR
 - After double worsening (getting better and then worsening)
- In adults, 5-7 days of narrow spectrum therapy (amoxicillin, amoxicillin-clavulanate)
- If response to antibiotic is poor re-evaluate diagnosis:
 - If sinusitis confirmed consider alternative regimen for 5-7 days (amoxicillin-clavulanate, doxycycline, cephalosporin)
- In children, longer treatment duration of 10 days is recommended



Key Points¹⁸⁻²³

- Multiple studies have demonstrated that 7 days of active antibiotic therapy is non-inferior to 14 days in clinically stable patients who have adequate source control
- Conversion to oral antibiotics is appropriate in patients who demonstrate clinical improvement while on IV therapy
 - Use oral agents with high bioavailability and demonstrated activity against the pathogen (TMP/SMX, levofloxacin, high dose cephalexin or amoxicillin +/- clavulanate)
- Longer durations may be necessary for those with inadequate source control, or for certain pathogens such as *Staphylococcus aureus*.
- [BSI -UNMC ASP Guidance Document](#)



Key Points³⁹⁻⁴²

- There is no conclusive evidence to show benefit for continuation of postoperative antibiotic prophylaxis beyond surgical closure.
 - Multiple procedures and patient populations have been studied including those orthopedic, plastic, and urologic procedures
- Longer durations of prophylaxis have been associated with increased risk of *C. difficile* infection, antimicrobial resistance and adverse effects.
- [Surgical Prophylaxis – Nebraska Medicine Policy and UNMC Guidance Document](#)

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