

## Amoxicillin:

**Class:** Antibiotic

**Indications:** Treatment of otitis media, sinusitis, and infections caused by susceptible organisms involving the upper and lower respiratory tract, skin, and urinary tract; prophylaxis of infective endocarditis in patients undergoing surgical or dental procedures; as part of a multidrug regimen for *H. pylori* eradication; periodontitis

**Available dosage form in the hospital:** 125MG/5ML SUSP, 250MG CAPS, 250MG/5ML SUSP, 500MG CAPS, 1000MG CAPS.

**Trade Names:**

**Dosage:**

- Usual dosage range: Oral: 250-500 mg every 8 hours or 500-875 mg twice daily **or** extended-release tablet 775 mg once daily
- Chlamydial infection during pregnancy (unlabeled use): Oral: 500 mg 3 times/day for 7 days (CDC, 2010)
- Ear, nose, throat, genitourinary tract, or skin/skin structure infections: Note: Amoxicillin-clavulanate is preferred for first-line treatment of acute bacterial rhinosinusitis (Chow, 2012):
  - Mild-to-moderate: Oral: 500 mg every 12 hours **or** 250 mg every 8 hours
  - Severe: Oral: 875 mg every 12 hours **or** 500 mg every 8 hours
  - Tonsillitis and/or pharyngitis: Oral: Extended release tablet: 775 mg once daily
- Helicobacter pylori* eradication: Oral: 1000 mg twice daily; requires combination therapy with at least one other antibiotic and an acid-suppressing agent (proton pump inhibitor or H<sub>2</sub> blocker)
- Lower respiratory tract infections: Oral: 875 mg every 12 hours **or** 500 mg every 8 hours
- Lyme disease: Oral: 500 mg every 6-8 hours (depending on size of patient) for 21-30 days
- Periodontitis (aggressive) (in combination with metronidazole) associated with presense of *Actinobacillus actinomycetemcomitans* (AA): Oral: 500 mg every 8 hours for 10 days used in addition to scaling and root planing (Varela, 2011)
- Pharyngitis, group A streptococci (IDSA guidelines): 1000 mg once daily or 500 mg twice daily (maximum daily dose: 1000 mg) for 10 days (Shulman, 2012)
- Postexposure inhalational anthrax prophylaxis (ACIP recommendations): Oral: 500 mg every 8 hours. **Note:** Use **only** if isolates of the specific *B. anthracis* are sensitive to amoxicillin (MIC  $\leq$ 0.125 mcg/mL); may be administered to pregnant and breast-feeding women. Duration of antibiotic postexposure prophylaxis (PEP) is  $\geq$ 60 days in a previously unvaccinated exposed person. Antimicrobial therapy should continue for 14 days after the third dose of PEP vaccine. Those who are partially or fully vaccinated should receive at least a 30-day course of antimicrobial PEP and continue with licensed vaccination regimen. Unvaccinated workers, even those wearing personal protective

equipment with adequate respiratory protection, should receive antimicrobial PEP. Antimicrobial PEP is not required for fully vaccinated people (five-dose I.M. vaccination series with a yearly booster) who enter an anthrax area clothed in personal protective equipment. If respiratory protection is disrupted, a 30-day course of antimicrobial therapy is recommended (ACIP, 2010).

- Prophylaxis against infective endocarditis: Oral: 2 g 30-60 minutes before procedure. **Note:** American Heart Association (AHA) guidelines now recommend prophylaxis only in patients undergoing invasive procedures and in whom underlying cardiac conditions may predispose to a higher risk of adverse outcomes should infection occur. As of April 2007, routine prophylaxis for GI/GU procedures is no longer recommended by the AHA.
- Prophylaxis in total joint replacement patients undergoing dental procedures which produce bacteremia: Oral: 2 g 1 hour prior to procedure
- Prosthetic joint infection, chronic antimicrobial suppression of prosthetic joint infection associated with beta-hemolytic streptococci, penicillin-susceptible *Enterococcus* spp, or *Propionibacterium*spp (unlabeled use): Oral: 500 mg 3 times daily (Osmon, 2013)

- Renal Impairment:

The 875 mg tablets and the 775 mg extended-release tablets should not be given to patients with CrCl less than 30 mL/min.

-Cl<sub>cr</sub> 10-30 mL/minute: 250-500 mg every 12 hours

-Cl<sub>cr</sub> <10 mL/minute: 250-500 mg every 24 hours

**Common side effect:** dizziness, headache, Acute exanthematous pustulosis, erythematous maculopapular rash, erythema multiforme, exfoliative dermatitis, diarrhea, vomiting

**Pregnancy Risk Factor:** B