Name(s)

- **Generic:** amoxicillin *(am OX i sil in)* |**Brand:** Amoxil

Therapeutic Category

- Antibiotic (Penicillin)

Indication(s)

1. **Ear/nose/throat infections** (a, b, c, d)
2. **Urinary tract infections (UTD)** (e, f, g)
3. H. pylori eradication (h)
4. **Lower respiratory tract infections** (including pneumonia) (a, b, h, i)
5. **Acute bacterial rhinosinusitis** (a, b, c)
6. **Skin and skin structure (soft tissue) infections (SSTI)** (a, e, i)

- Bacteria:
    - *(a) Streptococcus spp. (alpha-, beta-hemolytic isolates)*
    - *(b) Streptococcus pneumonia*
    - *(c) Haemophilus influenza*
    - *(d) Streptococcus pyrogenes*
    - *(e) Escherichia coli (beta-lactamase-negative)*
    - *(f) Proteus mirabilis*
    - *(g) Enterococcus faecalis*
    - *(h) Helicobacter pylori*
    - *(i) Staphylococcus spp.*
- OFF LABEL: Antrax; Prophylaxis in asplenia, endocarditis; Lyme disease (Borrelia spp.); Periodontitis; Prosthetic joint infections

Dosage Form / Strength / Dosing

- **Dosage Form:** Capsule, Suspension for reconstitution, Tablet, Chewable Tablet
    - Capsule: 250 mg; 500 mg
    - Suspension: 125 mg/5ml; 250 mg/5ml; 400 mg/5ml
    - Tablet: 500 mg; 875 mg
    - Chewable Tablet: 125 mg; 250 mg
- **Dosing:** Adult & Geriatric (NOTE: Off Label not covered)
    - General Dosing: 500 mg-1000 mg po q8-12h
    - **Ear infections:** 500 mg po q8h OR 875mg po q12h for 5-7days
    - **Pneumonia (Community acquired, outpatient, empiric):** 1000 mg po tid for 5 days minimum
    - **Acute bacterial rhinosinusitis:** 500 mg po q8h OR 875 mg po q12h for 5-7 days
    - **H. pylori eradication:** 1 g po bid (with clarithromycin 500 mg bid + a standard or double dose of PPI) for 14 days.
    - **SSTI:** 500 mg po tid OR 875 mg po bid for 5 days (14 days for slow response, severe infections, or immunosuppression)
    - **Streptococcal pharyngitis (group A):** 500 mg po bid OR 1000 mg po qd for 10 days
    - **UTI:** 500 mg po q8h OR 875 mg po q12h for 4-7 days (5 days if acute, uncomplicated, simple)
- **Dosing:** Pediatrics
    - **General Dosing:**
        - **Infants ≤ 3 months**
            - **Mild to moderate infections:** 25 to 50 mg/kg/day divided into doses given every 8 hours (Red Book), Max dose 30mg/kg/day (MFG)
        - **Infants > 3 months, children, adolescents**
            - **Mild to moderate infections:** 25 to 50 mg/kg/day divided into doses every 8 hours, max 500mg/dose (Red Book); 20 to 40 mg/kg/day divided into doses every 12 hours, max 875mg/dose (MFG)

- **Severe infections:** 80 to 100 mg/kg/day divided every 8 hours, max 500mg/dose (Red book)

- **Ear infections:**
  - **Infants ≥ 2 months, children**: 80 to 90 mg/kg/day divided every 12 hours
  - **Duration of therapy:**
    - <2 years old OR severe symptoms: 10 days | Mild to moderate: 5-7 days
    - 2-5 years, mild to moderate: 7 days
    - ≥ 6 years, mild to moderate: 5-7 days
  - Suggested max 4000 mg/day
- **Pneumonia (Community acquired, outpatient, empiric):**
  - Infants ≥ 3 months, children, adolescents
    - **Empiric:** 90 mg/kg/day divided every 12 hours, max 4000mg/day
- **Acute bacterial rhinosinusitis:**
  - ≥ 2 years old, adolescents, uncomplicated, mild to moderate
    - Low dose: 45 mg/kg/day divided every 12 hours
    - High dose: 80 to 90 mg/kg/day divided every 12 hours; max 2000 mg/dose

Mechanism of Action & Pharmacology

- Inhibition of bacterial cell wall synthesis. Amoxicillin binds to penicillin-binding proteins (or PBPs) which inhibits final cell wall synthesis and then allows autolytic enzymes to cause the bacteria to lyse.
- **Absorption:** Rapid
- **Distribution:** Liver, lungs, prostate, muscle, middle ear, sinus, bone
  - Poor cerebrospinal fluid (CSF) penetration
- **Excretion:** 60% in urine; Peak serum levels in 1-2 hours; Half-life 60-90min

Side Effects

- N/V/D; headache; skin rash
- **CAUTION:** PCN hypersensitivity reactions (anaphylactic reactions); Fungal/bacterial superinfections (C. diff)

Drug Interactions

- APAP may increase PCN serum concentrations
- PCNs may increase Methotrexate serum concentrations
- PCN may increase warfarin's anticoagulant effects

Monitoring Parameters

- May interfere with urinary glucose tests; Renal, hepatic functions

Patient Counseling Information

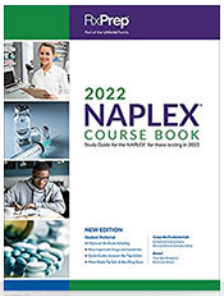
- Used to treat infections | Complete full course
- **Pregnancy:** Crosses placenta; Risk factor B

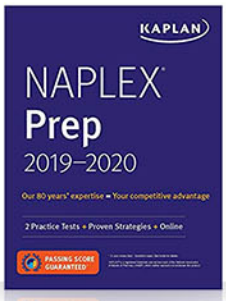
Reference(s)

- https://www.drugs.com/ppa/amoxicillin.html

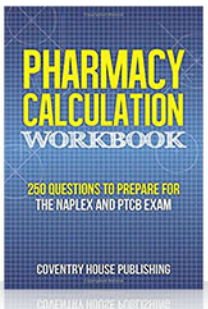
PREPARE FOR SUCCESS!

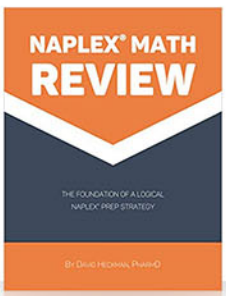
Comprehensive (NAPLEX)

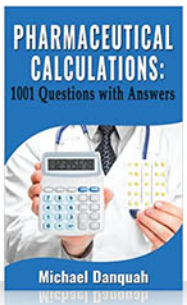


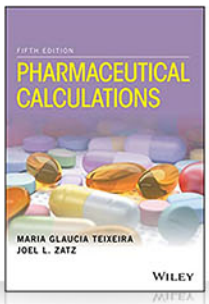


Calculations (NAPLEX)

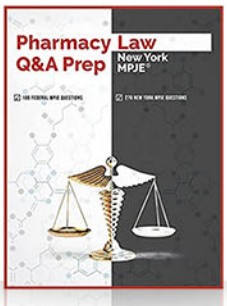


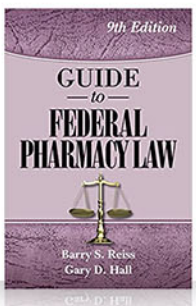




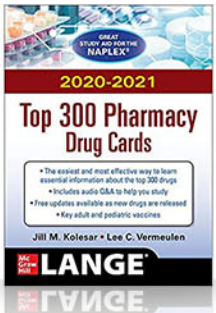


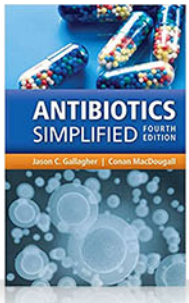
Pharmacy Law (MPJE)

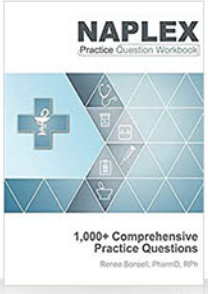


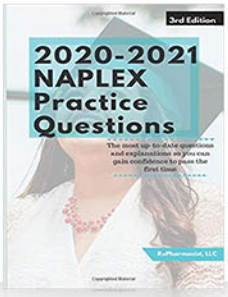


Supplemental









DISCLAIMERS

DRUG CARDS DAILY

Monday at 7 am EST
(6 am CST, 4 am PST)

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*HEY **STUDENT!***

When I was P1 one of the best pieces of advice I got from those before me was to use a NAPLEX Prep book while learning each topic.

This helps focus your learning and the repetition helps to retain info and indirectly prepare you for the NAPLEX

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