

amoxicillin

amoxicillin trihydrate

Amoxil, Amoxil Pediatric Drops, Apo-Amoxil*, Novamoxin*, Nu-Amoxil*, Trimox, Trimox Pediatric Drops, Wymox

Pharmacologic class: Aminopenicillin

Therapeutic class: Anti-infective

Pregnancy risk category B

Action

Inhibits cell-wall synthesis during bacterial multiplication, leading to cell death. Shows enhanced activity toward gram-negative bacteria compared to natural and penicillinase-resistant penicillins.

Availability

Capsules: 250 mg, 500 mg

Powder for oral suspension: 50 mg/ml and 125 mg/5 ml (pediatric), 200 mg/5 ml, 250 mg/5 ml, 400 mg/5 ml

Tablets: 500 mg, 875 mg

Tablets (chewable): 125 mg, 200 mg, 250 mg, 400 mg

Indications and dosages

➤ Uncomplicated gonorrhea

Adults and children weighing at least 40 kg (88 lb): 3 g P.O. as single dose

Children ages 2 and older weighing less than 40 kg (88 lb): 50 mg/kg P.O.

given with probenecid 25 mg/kg P.O. as a single dose

➤ Bacterial endocarditis prophylaxis for dental, GI, and GU procedures

Adults: 2 g P.O. 1 hour before procedure

Children: 50 mg/kg P.O. 1 hour before procedure

➤ Lower respiratory tract infections caused by streptococci, pneumococci,

non-penicillinase-producing staphylococci, and *Haemophilus influenzae*

Adults and children weighing more than 20 kg (44 lb): 500 mg P.O. q 8 hours

Children weighing less than 20 kg (44 lb): 40 mg/kg P.O. in divided doses q 8 hours

➤ Ear, nose, and throat infections caused by streptococci, pneumococci, non-penicillinase-producing staphylococci, and *H. influenzae*; GU infections caused by *Escherichia coli*, *Proteus mirabilis*, and *Streptococcus faecalis*; skin and soft-tissue infections caused by streptococci, susceptible staphylococci, and *E. coli*

Adults and children weighing more than 20 kg (44 lb): 250 to 500 mg P.O. q 8 hours

Children weighing less than 20 kg (44 lb): 20 to 40 mg/kg P.O. in divided doses q 8 hours

➤ Postexposure anthrax prophylaxis

Adults: 500 mg P.O. t.i.d. for 60 days

Children: 80 mg/kg/day P.O. t.i.d. for 60 days

Dosage adjustment

- Renal impairment
- Hemodialysis

Off-label uses

- *Chlamydia trachomatis* infection in pregnant patients

Contraindications

- Hypersensitivity to drug or to penicillins or cephalosporins
- History of jaundice or hepatic dysfunction

Administration

- Give with or without food.
- Store liquid form in refrigerator when possible.

Route	Onset	Peak	Duration
P.O.	30 min	1-2 hr	8-12 hr

Adverse reactions

CNS: lethargy, hallucinations, anxiety, confusion, agitation, depression, dizziness, fatigue, hyperactivity, insomnia, behavioral changes, **seizures** (with high doses)

GI: nausea, vomiting, diarrhea, bloody diarrhea, abdominal pain, gastritis, stomatitis, glossitis, black “hairy” tongue, furry tongue, enterocolitis, **pseudomembranous colitis**

GU: nephropathy, vaginitis, **interstitial nephritis**

Hematologic: eosinophilia, anemia, **thrombocytopenia, thrombocytopenic purpura, leukopenia, hemolytic anemia, agranulocytosis, bone marrow depression**

Hepatic: hepatic cholestasis, **cholestatic hepatitis, nonspecific hepatitis, cholestatic jaundice**

Respiratory: wheezing

Skin: rash

Other: superinfections (oral and rectal candidiasis), fever, **anaphylaxis**

Interactions

Drug-drug. *Allopurinol:* increased risk of rash

Chloramphenicol, macrolides, sulfonamides, tetracycline: decreased amoxicillin efficacy

Hormonal contraceptives: decreased contraceptive efficacy

Probenecid: decreased renal excretion

Drug-diagnostic tests. *Alanine aminotransferase, alkaline phosphatase, eosinophils, lactate dehydrogenase:* increased levels

Granulocytes, hemoglobin, platelets,

white blood cells: decreased values

Direct Coombs' test, urine glucose, urine protein: false-positive results

Drug-food. *Any food:* delayed or reduced drug absorption

Drug-herb. *Khat:* decreased antimicrobial efficacy


Precautions

Use cautiously in:

- severe renal insufficiency, infectious mononucleosis
- pregnant patients
- children.

Patient monitoring

• Monitor for signs and symptoms of hypersensitivity reaction.

 Evaluate for seizures when giving high doses.

• Monitor patient's temperature and watch for other signs and symptoms of superinfection (especially oral or rectal candidiasis).

Patient teaching

• Instruct patient to immediately report signs and symptoms of hypersensitivity reactions, such as rash, fever, or chills.

• Tell patient he may take drug with or without food.

• Advise patient to minimize GI upset by eating small, frequent servings of food and drinking plenty of fluids.

• Tell patient taking hormonal contraceptives that drug may reduce contraceptive efficacy; suggest she use alternative birth control method.

• Inform patient that drug lowers resistance to other types of infections. Instruct him to report new signs and symptoms of infection, especially in mouth or rectum.

• Tell parents they may give liquid form of drug directly to child or may mix it with food or beverages.