trimethoprim/sulfamethoxazole
(trye-meth-op-prim/sul-fa-meth-ox-a-zole)

Diarrhea: Dilution 1.0. Sulfisoxazole, Septra DS, Sulfatrium, TMP/SA, TMP/SMZ, Trimethox, Trimeth 5.

Classification
Therapeutic: anti-infectives, antiprotozoals
Pharmacologic: folic antagonist, sulfonamides

Pregnancy Category C

Indications

Unlabeled Use: Bactericidal action against susceptible bacteria.

Action
Combination inhibits the metabolism of folic acid in bacteria at two different points. Therapeutic Effects: Bactericidal action against susceptible bacteria. Spectrum: Active against many strains of gram-positive aerobic pathogens including: Staphylococcus aureus, Streptococcus pneumoniae, Staphylococcus epidermidis, Neisseria gonorrhoeae, Haemophilus influenzae. Has activity against many aerobic gram-negative pathogens, such as: Acinetobacter, Enterobacter, Klebsiella pneumoniae, Proteus mirabilis, Staphylococcus epidermidis, Staphylococcus aureus, Staphylococcus pyogenicus, Escherichia coli, Pasteurella multocida, Pseudomonas aeruginosa, Klebsiella pneumoniae, Proteus mirabilis, Haemophilus influenzae, Staphylococcus aureus, Neisseria gonorrhoeae, Clostridium perfringens, anaerobes, Pseudomonas aeruginosa, Proteus mirabilis, Escherichia coli, Neisseria gonorrhoeae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Enterococcus faecalis, Streptococcus pyogenes, Haemophilus influenzae; P. aeruginosa, Staphylo-
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Trends in levels of and risk of nephrotoxicity with cyclosporine. Concurrent use
with ACE inhibitors may risk of hyperkalemia. May risk of tricyclic anti-
depressants. Concurrent use with tricyclic may result in treatment failure and
risk of death (avoid concurrent use).

Route/Dosage

(THR — trimethoprim; SMX — sulfamethoxazole). Dosing based on TMP content.

Bacterial Infections

PO, IV (Adults and Children ≥2 mo): Mild-moderate infections — 6–12 mg
TMP/kg/day divided q 12 hr; Serious infection/Pneumocystis — 15–20 mg TMP/
kg/day divided q 6–8 hr.

PO (Adults): Prophylaxis to prevent shigellosis — 1 double-strength tab-
let (160 mg TMP/800 mg SMX) q 12 hr for 10–14 days.

Urinary Tract Infection Prophylaxis

PO (Adults and Children ≥2 mo): 2 mg TMP/kg/dose daily or 5 mg TMP/kg/
dose every other wk.

P. jirovecii Pneumonia (Prevention)

PO (Adults): 1 double-strength tablet (160 mg TMP/800 mg SMX) daily (may also
be given 3 times weekly).

PO (Children ≥2 mo): 150 mg TMP/kg/day divided q 12 hr or given as a single
dose on 3 consecutive days/wk (not to exceed 320 mg TMP/1600 mg SMX per day).

NURSING IMPLICATIONS

Assessment

● Assess for infection (site, signs, appearance of wound, sputum, urine, and stool;
WBC) at beginning of and during therapy.
● Obtain specimens for culture and sensitivity before initiating therapy. First dose
may be given before receiving results.
● Inspect IV site frequently. Phlebitis is common.
● Monitor intake and output ratios. Fluid intake should be sufficient to maintain a
urine output of at least 1200–1500 mL daily to prevent crystalluria and stone for-
mation.
● Monitor bowel function. Diarrhea, abdominal cramping, fever, and bloody stools should be reported to health care professional promptly
as a sign of pseudomembranous colitis. May begin up to several weeks
following cessation of therapy.
● Monitor for rash periodically during therapy. May cause Stevens-Johnson
syndrome. Discontinue therapy if severe or if accompanied with fever,
general malaise, fatigue, muscle or joint aches, blisters, oral lesions,
conjunctivitis, hepatitis and/or eosinophilia.

● Lab Test Considerations: Monitor CBC and urinalysis periodically dur-
ing therapy.

● May produce ↑ serum bilirubin, ↑ potassium, creatinine, and alkaline
phosphatase.

Potential Nursing Diagnoses

Risk for infection (Indications) (Side Effects)
Noncompliance (Patient/Family Teaching)

Implementation

● Do not confuse DS (double-strength) formulations with single-strength
formulations.
● Do not administer medication IM.

PO:

● Administer around the clock with a full glass of water. Use calibrated measur-
ing device for liquid preparations.

IV Administration

● Interim Infusion: Diluent: Dilute each 5–mL of trimethoprim/sulfa-
methoxazole with 125 mL of D5W (stable for 24 hr at room temperature). May
also dilute each 5–mL of drug with 75 mL of D5W if fluid restriction is required
(stable for 6 hr at room temperature). Do not refrigerate. Concentration:
Should not exceed 1.06 mg/mL. Rate: Infuse over 60–90 min.

● Y-Site Compatibility: acyclovir, aldesleukin, alemtuzumab, amifostine,
amphotericin B cholesteryl, amphotericin B liposome, amikacin, aztreonam,
bevacizumab, biotin, bleomycin, carboplatin, carmustine, cisplatin, cyclophosphamide, daunorubicin,
dexamethasone, dexamethasone sodium phosphate, dexamethasone sodium succinate,
edaravone, etoposide, etoposide phosphate, filgrastim, fludarabine, fluorouracil,
gemcitabine, gemcitabine hydrochloride, heparin, hydrocortisone, hydromorphone,
leukoglobin, lenalidomide, lidocaine, linezolid, mitomycin, methotrexate, mirtazapine,
methotrexate sodium, pegfilgrastim, pemetrexed disodium, pentostatin, pamidronate,
plasmolytic amebicide, potassium chloride, piperacillin, thiotepa, thiopeptide
phosphate, tirofiban, vancomycin, vinorelbine, vincristine, vinorelbine phosphate, vinorelbine
monoclonal antibody, vitamin K1.

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CONTINUED
**Patient/Family Teaching**

- Instruct patient to take medication around the clock and to finish drug completely as directed, even if feeling well. Take missed doses as soon as remembered unless almost time for next dose. Advise patient that sharing of this medication may be dangerous.
- Instruct patient to notify health care professional if rash, or fever and diarrhea develop, especially if diarrhea contains blood, mucus, or pus. Advise patient not to treat diarrhea without consulting health care professional.
- Caution patient to use sunscreen and protective clothing to prevent photosensitivity reactions.
- Advise patient to notify health care professional if skin rash, sore throat, fever, mouth sores, or unusual bleeding or bruising occurs.
- Instruct patient to notify health care professional if symptoms do not improve within a few days.
- Emphasize importance of regular follow-up exams to monitor blood counts in patients on prolonged therapy.

**Evaluation/Desired Outcomes**

- Resolution of the signs and symptoms of infection. Length of time for complete resolution depends on organism and site of infection.
- Resolution of symptoms of traveler’s diarrhea.
- Prevention of Pneumocystis jirovecii pneumonia in patients with HIV.

Why was this drug prescribed for your patient?