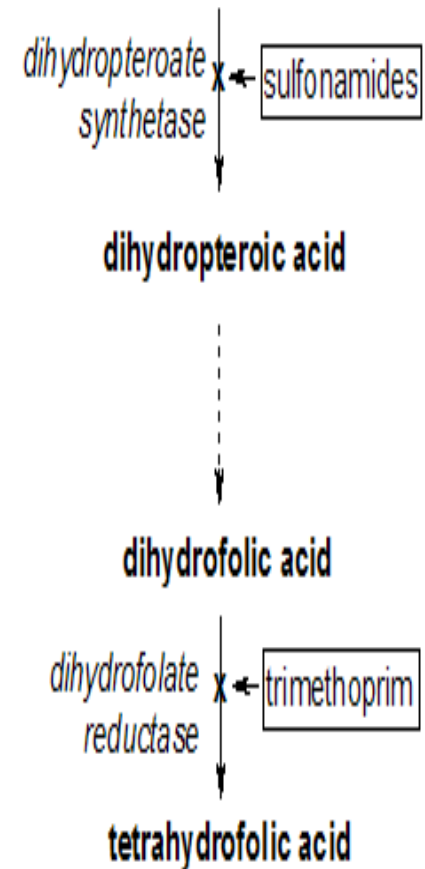


# Resprim (Trimethoprim - sulfamethoxazole) toxicity

By Tal Berger

# Mechanism of action

- Inhibiting bacterial synthesis of folic acid.
- **Trimethoprim** – selective inhibitor of bacterial dihydrofolate reductase
- **Sulfamethoxazole** – competitive inhibitors of dihydropteroate synthetase (competition with PABA).
- Usually are given together as a combination, due to synergic effect.



# Indications

- UTI (treatment and prevention)
- Acute exacerbations of chronic bronchitis
- Traveler's diarrhea (Entrogenic E.coli)
- Enteritis (caused by Shigella bacteria)
- Severe otitis media (in children)

# contraindications

- Hypersensitivity to the drug
- Megaloblastic anemia due to folate deficiency
- Marked hepatic damage
- Severe renal disease
- Pregnancy
- Breast feeding

# Adverse effects (toxicity)

- **GI effects** - nausea, diarrhea, abdominal pain, anorexia, loss of appetite)
- **Blood dyscrasias** – agranulocytosis, megaloblastic anemia, thrombocytopenia
- **Dermatologic reactions** – pruritus, rash, photosensitivity, Steven Johnson syndrom, Toxic epidermal necrosis

- **Hepatotoxicity**
- **Renal manifestations** – crystalluria, increased BUN, increased creatinine, interstitial nephritis, nephrotoxicity, renal failure
- **Respiratory effects** – cough, dyspnea, pulmonary infiltrates
- **Metabolic disturbances** – hyperkalemia, hyponatremia

# Therapeutic Doses

- 100 mg every 12 hours
- 200 mg every 24 hours
- Therapy is maintained for 10 days
- In patients with renal diseases it may be needed to give lower doses (drug is eliminated by the kidneys)

# And the connection to our patient...

- Patient's name: Reuven Even Shushan
- Age: 71 years old
- Main complains: weakness, nausea, vomiting.
- Current Disease: A week before admission a Resprim treatment was started directed against Resprim sensitive S.maltophilia( **13.5 ampules were given during this week**).
- In the background : Chronic renal failure (treated with dialysis).
- Labs: Hemoglobin 10.28 g/dl, MCV 102.6 fL, Platelets 123 K/microL



## conclusion

Always keep in mind the danger of overdose when treating your patient with Trimethoprim-sulfamethoxazole, especially when the patient suffers from renal diseases.



Thank you!