

Medications organ systems cont.

Table showing common antidiabetic combinations

Drugs in combination	Brand names
Sitagliptin and metformin	Janumet, Janumet XR
Canagliflozin and metformin	Invokamet
Empagliflozin and linagliptin	Glyxambi
Empagliflozin and metformin	Synjardy, Synjardy XR
Metformin and saxagliptin	Kombiglyze XR
Glyburide and metformin	Glucovance
Empagliflozin, linagliptin, and metformin	Trijardy XR

• **Thyroid hormone**

Synthetic T3, also known as liothyronine (Triostat, Cytomel,) and synthetic T4, also known as levothyroxine (Synthroid, Unithroid, Levoxyl). Iron, calcium, and antacids can interfere with the absorption of levothyroxine.

• **Gastrointestinal drugs**

omeprazole (Prilosec), pantoprazole (Protonix), esomeprazole (Nexium) and lansoprazole (Prevacid), ranitidine (Zantac), famotidine (Pepcid), and cimetidine (Tagamet), loperamide (Imodium A-D) and atropine plus diphenoxylate (Lomotil), polyethylene glycol (MiraLAX) and magnesium hydroxide (Milk of Magnesia), docusate (Colace), psyllium (Metamucil), bisacodyl (Dulcolax) and senna (Fletcher's Laxative, Senokot).

• **Sedatives - hypnotics**

zolpidem (Ambien), eszopiclone (Lunesta), zaleplon (Sonata), ramelteon (Rozerem), suvorexant (Belsomra), phenobarbital (Sezaby), amobarbital (Amytal sodium), diazepam (Valium), alprazolam (Xanax), triazolam (Halcion), lorazepam (Ativan), clonazepam (Klonopin), elprazolam (Prosom), flurazepam (Dalmane), temazepam (Restoril) and midazolam (Versed). Buspirone (BuSpar, Vanspar) - anxiolytic.

Adverse effects

- **ACE inhibitors and ARBs**
fetal anomalies, fetal death
- **Aldosterone antagonists**
hyperkalemia, erectile dysfunction and gynecomastia.
- **Alpha blockers**
orthostatic hypotension
- **ACE inhibitors**
dry cough
- **Beta blockers**
mask symptoms of hypoglycemia
- **Diuretics**
electrolyte imbalances
- **Statins**
myalgia, elevation of liver enzymes
- **Fibrates**
gallstones
- **Aminoglycosides**
Nephrotoxicity, muscle weakness and paralysis, hearing loss.
- **Fluoroquinolones:**
Tendinitis, bone and cartilage anomalies like Achilles tendon rupture, prolongation of QTc, pseudomembranous colitis, photosensitivity.
- **Chloramphenicol**
Aplastic anemia, "gray baby" syndrome due to severe inhibition of red blood cell production in the bone marrow.
- **Macrolides:**
Hypersensitivity reactions, erythromycin and clarithromycin have highest risk of QTc prolongation, cholestatic jaundice, tinnitus and deafness; clarithromycin and erythromycin are potent inhibitors of liver enzymes cyt P450.
- **Colistin and Polymyxin B**
Nephrotoxicity

Adverse effects

- **Tetracyclines**
Yellowing of teeth, dizziness, vertigo, pseudomembranous colitis, photosensitivity, fatty liver, risk of esophageal ulcerations
- **Trimethoprim plus sulfamethoxazole**
Stevens-Johnson syndrome, crystalluria, kernicterus (severe jaundice in neonates), renal failure, sulfa allergies.
- **Metronidazole**
Neuropathy, headache, seizures, alcohol withdrawal syndrome with severe nausea, vomiting, dizziness, sweating, etc when taken with alcohol.
- **Clindamycin**
Pseudomembranous colitis, esophageal ulcers
- **Imipenem**
Seizures
- **Cephalosporins**
Pseudomembranous colitis, hypersensitivity reactions, leukopenia, thrombocytopenia, Coombs positive hemolytic anemia
- **Penicillins**
Hypersensitivity reactions, rashes, anaphylaxis, urticaria, angioedema, serum sickness, exfoliative dermatitis, seizures, nephritis, pseudomembranous colitis, Coombs positive hemolytic anemia, leukopenia, thrombocytopenia. Patients who are allergic to penicillin may show 2-10% cross reactivity to cephalosporins.
- **Vancomycin**
Hypersensitivity reactions like rash, fever, neutropenia, phlebitis, and "red man" syndrome due to histamine release on rapid intravenous infusion.
- **Antipsychotics that may prolong QTc**
They include thioridazine, haloperidol, olanzapine, risperidone, and ziprasidone. That may precipitate cardiac arrest and arrhythmias.