Common drug interaction

What is drug interaction?

A drug interaction is a reaction between two (or more) drugs or between a drug and a food or beverage. A drug interaction can decrease or increase the action of a drug or cause unwanted side effects.

Interaction of some commonly use drug

Drugs	Interaction	What should do?
Iron with PPI	Reduce iron absorption (iron needs acidic environment for absorption, PPI decrease acid secretion in stomach)	Avoid use concomitantly (if use concomitantly then give one in morning and other at night)
Azithromycin with ondansetron	Azithromycin together with ondansetron can increase the risk of an irregular heart rhythm	Avoid combine use
Clopidogrel with PPI	Decreased efficacy of clopidogrel	Avoid use of PPIs with clopidogrel, use aspirin or use prasugrel or use ranitidine with clopidogrel.
Beta-blockers with verapamil, diltiazem	Bradycardia, AV block	Avoid using together
Verapamil, diltiazem with digoxin	Increase digoxin levels, digoxin toxicity (mainly with verapamil)	Avoid use together, decrease digoxin dose by upto 50%, monitor digoxin levels

Diuretics with digoxin	Increased digoxin toxicity due to hypokalemia	Use potassium sparing diuretic Monitor blood potassium levels
Sulfonylureas with fluconazole, H2-antagonists, clarithromycin, verapamil	Increased efficacy of sulfonylureas, hypoglycemia	Dose reduction of sulfonylurea, blood glucose monitoring
Sulfonylureas with rifampicin, phenytoin, carbamazepine, non-selective beta-blockers	Decreased efficacy of sulfonylureas, hyperglycemia	Increase dose of sulfonylurea, blood glucose monitoring
Metformin with Iodinated contrast media	High risk of contrast induced nephropathy	Contraindicated 48 hours prior and 48 hours after use of contrast media
DPP-4 inhibitors (vildagliptin, linagliptin) with Diltiazem, clarithromycin	Increased efficacy of DPP-4 inhibitors, hypoglycemia	Dose reduction of DPP-4 inhibitor, blood glucose monitoring
DPP-4 inhibitors (vildagliptin, linagliptin) with rifampicin	Decreased efficacy of DPP-4 inhibitors, hyperglycemia	Increase dose of DPP-4 inhibitor, blood glucose monitoring

ACE inhibitors and ARBs	Increase potassium level	Avoid concomitant use
Carbamazepine plus cimetidine, erythromycin, clarithromycin or fluconazole	Increased carbamazepine levels	Monitor drug level, use other drugs
Phenytoin plus cimetidine, erythromycin, clarithromycin or fluconazole	Increased phenytoin levels	Monitor drug level, use other drugs
Theophylline and ciprofloxacin	Concurrent administration may lead to toxic increases in theophylline. This problem occurs because the hepatic metabolism of theophylline is inhibited by ciprofloxacin via the cytochrome P-450 enzyme system.	Avoid combine use
Warfarin plus aspirin	Increase bleeding, increase INR	Limit aspirin dosage to 100 mg per day and monitor INR.
Warfarin and NSAID	Increase the risk for gastrointestinal (GI) bleeding and the anticoagulant response of warfarin	Use paracetamol or other non-NSAID analgesic.
Warfarin plus ciprofloxacin, clarithromycin, erythromycin, metronidazole or trimethoprim-sulfamethoxazole	Increased effect of warfarin, generally within 1 week.	Select alternative antibiotic
Sildenafil and isosorbide mononitrate	Sildenafil may markedly increase the hypotensive effects of isosorbide	Before prescribe sildenafil must exclude IHD and co-

	mononitrate	concomitant use of nitrates
Sildenafil plus cimetidine, erythromycin, itraconazole or ketoconazole	Increased sildenafil levels	Initiate sildenafil at 25-mg dose
Potassium chloride and spironolactone	The combination may result in hyperkalemia. The resulting hyperkalemia can be serious and may lead to sudden death.	Avoid using this two drugs concomitantly.
Clonidine and propranolol	This combination may produce a mysterious hypertension	Never use this combination
Methotrexate and probenecid	2 to 3 fold increase in methotrexate levels. Probenecid acts as an active tubular secretion inhibitor and prevents methotrexate from being excreted, thus potentially causing toxicity.	Avoid combine use
Bromocriptine and pseudoephedrine	The interaction can lead to severe peripheral vasoconstriction, ventricular tachycardia, seizures, and possibly death.	Avoid combine use
Lithium plus NSAID or diuretic	Increased lithium levels	Decrease lithium dosage by 50% and monitor lithium levels
Oral contraceptive pills plus rifampicin	Decrease effectiveness of oral contraception	Avoid if possible. If combine therapy is necessary, have the patient take an oral

		contraceptive pill with a higher estrogen content (>35 μg of ethinyl estradiol) or recommend alternative method of contraception.
Carbamazepine with OCP	Decrease effectiveness of oral contraception	Avoid use together, use OCP with high dose oestrogen, use alternative method of contraception, use AEDs which do not interact with OCPs
HMG-CoA reductase inhibitor (statin) plus niacin, gemfibrozil, erythromycin or itraconazole	Possible rhabdomyolysis	Avoid if possible. If combine therapy is necessary, monitor the patient for toxicity
SSRI plus tricyclic antidepressant	Increased tricyclic antidepressant level	Monitor for anticholinergic excess and consider lower dosage of tricyclic antidepressant
SSRI plus selegiline or nonselective monoamine oxidase inhibitor	Hypertensive crisis, soon after initiation	Avoid combine use
SSRI plus tramadol	Increase potential for seizures; serotonin syndrome	Monitor the patient for signs and symptoms of serotonin syndrome.