50 common and harmful drug-drug interactions

Drug 1	Drug 2	Interaction Type	Mechanism/Effect	Potential Harm
Mebendazole	**Metronidazole**	Increased toxicity	Metronidazole inhibits the metabolism of mebendazole.	Increased risk of adverse effects (nausea, vomiting, liver toxicity)
Metronidazole	**Warfarin**	Increased warfarin effect	Metronidazole inhibits warfarin metabolism, increasing its anticoagulant effect.	Increased bleeding risk, hemorrhage
Furosemide	**Gentamicin**	Increased nephrotoxicity	Both drugs are nephrotoxic, increasing risk of kidney damage.	Renal failure, hearing loss
Sildenafil	**Sublingual Nitroglycerin**	Severe hypotension	Both drugs lower blood pressure, leading to an additive hypotensive effect.	Severe hypotension, cardiovascular collapse
Non-dihydropyridine CCB (e.g., Verapamil)	**Beta-blockers (e.g., Metoprolol)**	Severe bradycardia	Both drugs slow the heart rate, causing excessive bradycardia.	Bradycardia, heart block, hypotension
Tetracyclines	**Penicillins**	Reduced efficacy of tetracyclines	Penicillins may interfere with the bactericidal effect of tetracyclines.	Ineffective treatment of bacterial infections

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Antacids	Iron supplements	Decreased iron absorption	Antacids increase pH, decreasing the absorption of iron.	Iron deficiency, ineffective iron therapy
Omeprazole	Clopidogrel	Decreased clopidogrel activation	Omeprazole inhibits CYP2C19, reducing the activation of clopidogrel.	Increased risk of thrombosis, myocardial infarction
Azithromycin	Antihistamines (e.g., Diphenhydramine)	Increased risk of QT prolongation	Azithromycin can prolong the QT interval, increasing the risk of arrhythmias.	Arrhythmias, torsades de pointes, sudden cardiac death
Ondansetron	Tramadol	Increased serotonin syndrome risk	Both drugs increase serotonin levels, leading to serotonin syndrome.	Hyperthermia, seizures, confusion, death
Warfarin	NSAIDs (e.g., Ibuprofen)	Increased bleeding risk	NSAIDs inhibit platelet aggregation and affect coagulation.	Gastrointestinal bleeding, hemorrhagic stroke
K-sparing Diuretics (e.g., Spironolactone)	ACE Inhibitors (e.g., Captopril)	Hyperkalemia	Both drugs increase potassium levels, leading to hyperkalemia.	Hyperkalemia, cardiac arrhythmias
Statins (e.g., Atorvastatin)	Gemfibrozil	Increased statin toxicity	Gemfibrozil inhibits statin metabolism, leading to	Muscle pain, rhabdomyolysi

Drug 1	Drug 2	Interaction Type	Mechanism/Effect	Potential Harm
			increased statin blood levels.	s, kidney damage
Antibiotics (e.g., Ciprofloxacin)	**Theophylline**	Increased theophylline levels	Antibiotics like ciprofloxacin inhibit theophylline metabolism.	Theophylline toxicity (nausea, arrhythmia, seizures)
Warfarin	**Amiodarone**	Increased warfarin effect	Amiodarone inhibits warfarin metabolism, increasing its effects.	Increased risk of bleeding, hemorrhage
Phenytoin	**Valproate**	Increased phenytoin levels	Valproate inhibits phenytoin metabolism.	Phenytoin toxicity (nystagmus, ataxia)
Rifampin	**Oral contraceptives**	Decreased contraceptive effectiveness	Rifampin induces CYP3A4, increasing the metabolism of contraceptives.	Unintended pregnancy due to decreased contraceptive efficacy
Diuretics	**Lithium**	Increased lithium toxicity	Diuretics reduce sodium levels, leading to lithium retention.	Lithium toxicity (tremors, confusion, seizures)
Cimetidine	**Warfarin**	Increased warfarin levels	Cimetidine inhibits CYP450 enzymes, slowing warfarin metabolism.	Increased bleeding risk, hemorrhage
Furosemide	**ACE Inhibitors (e.g., Enalapril)**	Increased risk of hypotension	Both lower blood pressure, leading	Severe hypotension,

Drug 1	Drug 2	Interaction Type	Mechanism/Effect	Potential Harm
			to additive hypotension.	dizziness, fainting
Calcium Channel Blockers (e.g., Diltiazem)	Beta-blockers	Severe bradycardia	Both lower heart rate and blood pressure, increasing risk of bradycardia.	Bradycardia, heart block, hypotension
Clonidine	Beta-blockers	Rebound hypertension	Clonidine withdrawal may cause rebound hypertension, which beta-blockers worsen.	Hypertensive crisis, stroke
Ciprofloxacin	Warfarin	Increased warfarin effect	Ciprofloxacin inhibits warfarin metabolism, leading to increased warfarin levels.	Increased bleeding risk, hemorrhage
Hydrocodone	Benzodiazepines	Increased CNS depression	Both drugs depress the central nervous system, increasing sedation and respiratory depression.	Respiratory depression, overdose death
Azithromycin	Statins	Increased statin levels	Azithromycin inhibits CYP3A4, slowing statin metabolism.	Statin toxicity (muscle pain, rhabdomyolysis)

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Metformin	Cimetidine	Increased metformin levels	Cimetidine inhibits renal clearance of metformin.	Lactic acidosis, kidney failure
Methotrexate	NSAIDs	Increased methotrexate toxicity	NSAIDs reduce renal clearance of methotrexate.	Bone marrow suppression, hepatotoxicity
Corticosteroids	NSAIDs	Increased gastrointestinal risk	Both drugs increase risk of gastrointestinal bleeding and ulcers.	Gastric bleeding, ulceration
Amiodarone	Warfarin	Increased warfarin effect	Amiodarone inhibits CYP450 enzymes, increasing warfarin levels.	Increased risk of bleeding, hemorrhage
Tetracyclines	Antacids	Decreased tetracycline absorption	Antacids reduce absorption of tetracycline antibiotics.	Ineffective antibiotic therapy, treatment failure
Alprazolam	Alcohol	Increased CNS depression	Both drugs are central nervous system depressants, leading to enhanced sedative effects.	Severe sedation, respiratory depression
Omeprazole	Diazepam	Increased diazepam levels	Omeprazole inhibits CYP2C19, slowing diazepam metabolism.	Increased sedation, respiratory depression

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Barbiturates	Warfarin	Decreased warfarin effect	Barbiturates induce CYP450 enzymes, increasing warfarin metabolism.	Decreased anticoagulant effect, increased risk of clotting
Ketoconazole	Warfarin	Increased warfarin levels	Ketoconazole inhibits CYP450 enzymes, slowing warfarin metabolism.	Increased bleeding risk, hemorrhage
Ceftriaxone	Calcium-containing IV solutions	Precipitation in lungs & kidneys	Ceftriaxone binds calcium in the bloodstream, causing precipitation.	Pulmonary or renal complications (e.g., embolism)
Tramadol	Antidepressants (e.g., SSRIs)	Serotonin syndrome	Both drugs increase serotonin levels in the brain.	Hyperthermia, muscle rigidity, seizures
Acetaminophen	Alcohol	Liver toxicity	Both are hepatotoxic, especially with chronic use.	Liver damage, failure, potential for fatality
Insulin	Beta-blockers	Masking of hypoglycemia	Beta-blockers can mask the symptoms of low blood sugar, making hypoglycemia harder to detect.	Severe hypoglycemia, unawareness of low blood sugar

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Methadone	Benzodiazepines	Respiratory depression	Both depress the central nervous system, increasing respiratory depression.	Respiratory failure, overdose death
Clopidogrel	Omeprazole	Decreased antiplatelet effect	Omeprazole inhibits CYP2C19, reducing clopidogrel activation.	Increased risk of thrombosis, heart attack
Valproic Acid	Carbamazepine	Decreased carbamazepine levels	Valproic acid inhibits carbamazepine metabolism.	Seizure recurrence, loss of control over seizure activity
Benzodiazepines (e.g., Lorazepam)	CNS depressants (e.g., opioids)	Enhanced sedation	Both drugs depress the CNS, enhancing sedative effects.	Severe sedation, respiratory depression, overdose
Dantrolene	Calcium Channel Blockers (e.g., Verapamil)	Increased risk of hyperkalemia	Dantrolene affects muscle contraction, and calcium blockers interfere with calcium regulation.	Hyperkalemia, cardiac arrhythmia
Albuterol	Beta-blockers	Decreased bronchodilation	Beta-blockers antagonize the effects of albuterol, reducing its	Worsening bronchospasm, difficulty breathing

Drug 1	Drug 2	Interaction Type	Mechanism/Effect	Potential Harm
			bronchodilatory effects.	
Carbamazepine	Erythromycin	Increased carbamazepine levels	Erythromycin inhibits carbamazepine metabolism, increasing drug levels.	Toxicity (drowsiness, ataxia, nausea)