Drug-Drug Interactions with nsNSAIDs/Coxibs

Drug	Effect	Management
Aminoglycoside antibiotics	Renal clearance inhibited	Monitor antibiotic concentration and adjust dose as necessary
Anticoagulants	Increased risk of bleeding	Monitor prothrombin time Avoid ASA use
Antihypertensive agents (with some NSAIDs)	Reduced antihypertensive effect Potential hyperkalemia with diuretics and ACE-Is	Monitor blood pressure, cardiac function and potassium concentration
Digoxin	Renal clearance inhibited	Monitor digoxin concentration and adjust dose as necessary
Lithium	Increased lithium concentration	Monitor lithium concentrations
Methotrexate	Increased methotrexate concentration	Monitor methotrexate concentration Avoid NSAIDs with high-dose methotrexate
Phenytoin (with ibuprofen)	Increased phenytoin levels	Monitor phenytoin concentration and adjust dose as necessary
Probenecid (with naproxen)	Reduced clearance of naproxen	Monitor for adverse effects

ACE-I = angiotensin-converting enzyme inhibitor; ASA = acetylsalicylic acid; coxib = COX-2-specifc inhibitor; NSAID = non-steroidal anti-inflammatory drug; nsNSAID = non-selective non-steroidal anti-inflammatory drug

Adapted from: American Medical Association. *Table: Potential Drug Interactions with NSAID Analgesics.* Available at: http://www.ama-cmeonline.com/pain_mgmt/tables/table_nsaids_interactions.htm. Accessed: September 5, 2013.

Drug-Drug Interactions with Opioids

Drug	Opioid(s)	Effect
Antibiotics		
Clarithromycin	Fentanyl	Reduced fentanyl clearance, respiratory depression
Erythromycin	Methadone	Increased opioid metabolism (may induce withdrawal)
Rifampicin	Morphine	Reduced analgesic effect, increase dose if needed
Antifungals (ketoconazole, itroconazole)	Fentanyl	Reduced fentanyl clearance and respiratory depression
Antihistamines	All	Increased sedation
Antiretrovirals		
Lopinavir	Methadone	Increased opioid metabolism (may induce withdrawal)
Nelfinavir	Fentanyl	Reduced fentanyl clearance, respiratory depression
Ritonavir	Fentanyl	Reduced fentanyl clearance, respiratory depression
Zidovudine	Methadone	Zidovudine metabolism inhibited
Beta-blockers (metoprolol, propanolol)	Propoxyphene	Increased plasma levels of beta-blockers
Butyrophenones	All	Increased sedation
Cimetidine	Meperidine, morphine	Increased opioid effects
Desipramine	Methadone, morphine	Possible toxicity due to inhibition of desipramine metabolism
Doxepin	Propoxyphene	Possible toxicity due to increased doxepin levels
Erythromycin	Methadone	Increased opioid metabolism (may induce withdrawal)
MAOIs	Meperidine	Excitatory response (includes seizures, arrythmia, hyperpyrexia)
Phenytoin	Methadone	Increased opioid metabolism (may induce withdrawal)
Quinidine	Codeine	Decreased analgesia
TCAs	All	Increased sedation

MAOI = monoamine oxidase inhibitor; TCA = tricyclic antidepressant

Adapted from: American Medical Association. *Table: Important Opioid Drug Interactions.* Available at: http://www.ama-cmeonline.com/pain_mgmt/tables/table_opioid_interactions.htm. Accessed: September 5, 2013;
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