

## Drugs to Manage Pain

Drug		Action	Uses	Adverse/SE	Implications
acetaminophen  TYLENOL		-inhibits PG synthesis in CNS -may block pain impulse generation in periphery	<b>-DOC for mild pain &amp; fever</b> -tension HA, muscle/joint pain -used w/codeine for analgesia	-no anti-inflammatory properties -fewer side effects than aspirin	-MUCOMYST=Antidote -avoid use of ASA & NSAIDs at same time -seek medical care if: fever > 3days pain > 10d/adult; 5d/child
NON STEROIDAL ANTI-INFLAMMATORY DRUGS	Aspirin (acetylsalicylic acid)	-inhibits cyclooxygenase (COX 1 & 2) -blocks formation of PGs in periphery	Prophylaxis dose: (80 mg/d) to prevent MI -antiplatelet action (COX 1 inhibition)-irreversible  Low dose: (1-2 325 g/tab)=60 mg codeine -mild fever, pain, HA  High dose: (3-8 Gm/d) <b>-DOC for rheumatoid arthritis</b> -pain and inflammation	-protein bound so can displace other meds -GI irritation -Reye's syndrome-children -tinnitus, ototoxicity -respiratory alkalosis -pregnancy category D -hepatotoxic -hypersensitivity	-give w/food -avoid alcohol; incr. effects -take w/ 8 oz. water -DC before surgery -observe for bleeding -assess for tinnitus <b>-do not give to children</b>
	NSAIDs  ibuprofen (ADVIL, MOTRIN) naproxen (ALEVE) indomethacin (INDOCIN)	-inhibits cyclooxygenase (COX 1 & 2) and blocks PG in periphery -aka 1 <sup>st</sup> generation	-pain relief: menstrual, strains/sprains, dental postpartum, rheumatoid/osteo arthritis -fever relief in children -acute gout attacks -minimal anti-inflammatory properties	-GI irritation -inhibition of platelet aggregation (reversible) -rash, peripheral edema	-same as for ASA -monitor lab (CBC, BUN, LFT) -check for allergies -if one NSAID not effective try another -warn about photosensitivity
	ketorolac  TORADOL	-inhibits COX 1 & 2 pathway in periphery	-moderate to severe pain	-ulcerogenic	-OK for impaired renal -not addicting <b>-no</b> ventilatory depression -analgesic efficacy comparable to morphine
	COX-2 Inhibitors  CELEBREX,VIOXX	-blocks proinflammatory PGs -guards the GI tract by leaving COX-1 intact -aka 2nd generation	-chronic pain & inflammation management	-GI problems	-assess for sulfonamide allergies (CELEBREX)

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GOUT MEDICATIONS	colchicine	-inhibits phagocytosis of urate crystals by neutrophils -interferes w/ inflammatory process	-for <b>acute</b> gout attacks	-GI upset -allopurinol is P450 inhibitor	-encourage fluid intake 2-3L/day to prevent kidney stones -avoid high purine diet -avoid salicylates -caution w/ diuretics -avoid alcohol -may take w/ meals if GI upset -avoid vitamin supplements -CBC alert for agranulocytosis -stress compliance w/ tx -probenecid incr. plasma & tissue concentration of PCN and cephalosporins
	allopurinol	-inhibits uric acid formation	-for <b>chronic</b> gout treatment		
	probenecid  BENEMID	-inhibits reabsorption of uric acid by kidneys	-for <b>chronic</b> gout treatment		
	Opiates  morphine, DEMEROL, fentanyl, codeine	Medullary actions: -CNS-drowsiness, euphoria, N/V, respiration depression, cough suppression  Peripheral actions: -CV-hypotension -GI-constipation, ↓GI motility -GU-spasm, urinary retention -ocular- <b>pinpoint pupils</b>	-for control of moderate to severe pain	-respiratory depression -sedation -nausea/vomiting -constipation/urinary retention -hypotension -dizziness, lightheadedness -mental clouding/drowsiness	<b>Antidote:</b> NARCAN or naltrexone (ReVIA)  <u>Contraindicated/precaution in:</u> -closed head injury; shock -respiratory impaired—asthma, COPD -undiagnosed abdominal conditions -pregnancy -hx of addiction to opiates  -assess pain w/ scale -instruct to ask before pain is severe -assess respiratory status and VS—hold med if R < 12/min -monitor bowel elimination •monitor I & O