

Best Practices for Patients With Pain

**Satellite Conference and Live Webcast
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Faculty

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Commonly Used Over the Counter (OTC) Pain Relievers

- Acetaminophen
- Aspirin
- Ibuprofen
- Naproxen
- Combination products:
 - Excedrin
 - Goody Powders

Most Commonly Used Prescription (RX) Pain Relievers

- Hydrocodone and Hydrocodone combination products
- Oxycodone and Oxycodone combination products
- Tramadol
- Pregabalin
- Gabapentin

Acetaminophen

- Maximum daily dose of 4000 mg per 24 hours (from all sources)
- Frequent use above maximum daily dose can lead to liver toxicity
- Added boxed warning in 2011
- Limit of 325 mg per dosage unit in prescription medications

Acetaminophen

- Has no peripheral anti - inflammatory activity
- Has no effect of platelet function
- Fewer hematologic, GI and renal effects than aspirin
- Is available in immediate release, biphasic release and extended release

Aspirin

- Has anti - inflammatory, anti - pyretic, and anti - thrombotic properties
- Use cautiously in children:
 - Reye's syndrome
- Dose is dependent on indication
 - Higher dose may be needed for thrombosis prophylaxis

Aspirin

- Use with caution when taking a NSAID
- Overdose can result in renal failure
- Caution: Bleeding disorders, warfarin, renal disease, peptic ulcers, gastritis, platelet inhibitors
- High dose and over use can cause tinnitus and hearing loss

OTC Combination Products

- Goody Powders and Excedrin:
 - Contains acetaminophen, aspirin and caffeine
 - Caffeine may increase bioavailability of some analgesics
 - Level 1 interactions: MAOIs and Probenecid

OTC Combination Products

- Dosing limits for adults and elderly:
 - Acetaminophen 4000 mg/day
 - Aspirin 2080 mg/day
 - Caffeine 520 mg/day

Non-steroidal Anti-inflammatory Pain Relievers (NSAIDs)

- Risk of serious GI adverse effects including bleeding, ulceration and perforation of stomach and intestines
- Increased risk of serious cardiovascular thrombotic events, myocardial infarction and stroke

Non-steroidal Anti-inflammatory Pain Relievers (NSAIDs)

- Should dose at lowest effective dose for shortest possible duration
- Not recommended for persistent pain in the elderly

Non-steroidal Anti-inflammatory Pain Relievers (NSAIDs)

- **Contradicted:**
 - After coronary artery bypass graft surgery
 - Patients with NSAID hypersensitivity
 - Patients with salicylate hypersensitivity
 - Patients with sulfonamide hypersensitivity

Non-steroidal Anti-inflammatory Pain Relievers (NSAIDs)

- **Level 1 (severe) drug - drug interactions:**
 - Cidofovir: due to increased risk for nephrotoxicity
 - Other NSAIDs

Non-steroidal Anti-inflammatory Pain Relievers (NSAIDs)

- **Black Box Warnings:**
 - GI Bleeding
 - GI Perforation
 - Myocardial Infarction
 - Stroke

Non-steroidal Anti-inflammatory Pain Relievers (NSAIDs): OTC

- **Ibuprofen 200 mg**
 - Advil
 - Motrin
 - Midol
- **Naproxen 220 mg**
 - Aleve

Non-steroidal Anti-inflammatory Pain Relievers (NSAIDs): RX

- **Celecoxib: Celebrex**
 - COX-2 inhibitor
- **Meloxicam: Mobic**
 - COX-2 inhibitor but less selective
- **Piroxicam: Feldene**
 - Similar in structure to Meloxicam

Non-steroidal Anti-inflammatory Pain Relievers (NSAIDs): RX

- Single daily dose
- **Naproxen dosage units greater than 220 mg**
- **Ibuprofen dosage units greater than 200 mg**

DEA Schedules

- **Schedule I:**
 - No currently acceptable medical use in the United States
 - Lack accepted safety
 - High potential for abuse

DEA Schedules

- **Schedule II:**
 - High potential for abuse which may lead to severe psychological or physical dependence
 - acceptable medical use in the United States

DEA Schedules

- **Schedule III:**
 - Potential for abuse less than Schedules I or II
 - May lead to moderate or low psychological or physical dependence

DEA Schedules

- **Schedule IV:**
 - Low potential for abuse relative to substance in Schedule III

DEA Schedules

- **Schedule V:**
 - Low potential for abuse relative to substance in Schedule IV
 - Primarily preparations containing limited quantities of certain narcotics

Opioids

- Hydrocodone extended release (II)
- Hydrocodone with acetaminophen (II)
- Hydrocodone with ibuprofen (II)
- Oxycodone immediate release (II)
- Oxycodone extended release (II)
- Oxycodone with acetaminophen (II)
- Oxycodone with aspirin (II)
- Morphine (II)

Opioids

- Methadone (II)
- Fentanyl (II)
- Meperidine (II)
- Hydromorphone (II)
- Codeine (II)
- Oxycodone (II)
- Tramadol (IV)
- Heroin (I)

History of Opium

- Earliest reference to opium use is in 5000 BC
- Today heroin is less expensive on the street than prescription drugs (\$15/ bag compared to \$10 to \$30/ pill of Hydrocodone or Oxycodone)
- The heroin of today is 50 - 60% pure compared to 6 - 10% in the 1970's

Opioids

- **Contraindications:**
 - GI obstruction
 - Paralytic ileus
 - Respiratory depression
 - Status asthmaticus

Opioids

- **Black Box Warnings:**
 - Respiratory depression
 - Accidental exposure
 - Ethanol ingestion
 - Neonatal opioid withdrawal syndrome
 - Potential for overdose or poisoning
 - Substance abuse

Opioids

- No level 1 interactions but medications with CNS activities can be additive
- **Adverse effects:**
 - CNS related effects: drowsiness, depression, etc.
 - GI effects: constipation, nausea, etc.
 - Addiction and withdrawal symptoms
 - Respiratory depression which can be fatal

Other

- **Pregabalin (Lyrica):**
 - Indicated for diabetic neuropathy, fibromyalgia, neuropathic pain, postherpetic neuralgia and spinal cord injury
 - Schedule V controlled substance
 - Use with caution in patients taking ACE inhibitors

Other

- **Gabapentin (Neurontin)**
 - Indicated for postherpetic neuralgia and restless legs syndrome
- **Ropinirole (Requip):**
 - Indicated for restless legs syndrome

Other

- **Oxcarbazepine (Trileptal):**
 - Off label use in trigeminal neuralgia
 - Level 1 interactions: Carbamazepine, eslicarbazepine, Ibrutinib, Ranolazine, Selegiline (Transdermal)

Other

- **Carisoprodol (Soma)**
 - Indicated for musculoskeletal pain
 - Schedule IV controlled substance
 - Use for no more than 2 to 3 weeks at the lowest effective dose

Anti-spasmodic

- **Cyclobenzaprine (Flexeril):**
 - Indicated for muscle spasm
 - Off label use in fibromyalgia
- **Baclofen (Lioresal):**
 - Indicated for muscle spasms, spasticity and spinal cord injury

Anti-migraine

- **Isometheptene / Dichloalphenazone / Acetaminophen (Midrin):**
 - Indicated for headache and migraine
 - Give with or without food
 - Contraindications include cardiac disease, glaucoma, hepatic disease, hypertension, MAOI therapy, and renal disease or failure

Anti-migraine

- Level 1 interactions include disulfiram, MAOIs, and procarbazine
- Schedule IV

Beers Criteria Medication List

- Medications that are potentially inappropriate for older patients
- Evidence of drug - related problems and adverse drug events
- All commonly used pain relievers can be found on one of the Beers lists
- Fall precautions when elderly taking pain medications

Red Flag Combinations

- Trinity
 - Combination of Hydrocodone, Carisoprodol and Alprazolam (or other benzodiazepine)
- Holy Trinity
 - Combination of Oxycodone, Carisoprodol and Alprazolam (or other benzodiazepine)

How to Dispose of Controlled Substances

- The DEA suggest three options for disposal of controlled Substances:
 - Take - back events
 - Mail - back programs
 - Collection receptacles

How to Dispose of Controlled Substances

- If none of these are available, crush meds and place in cat litter or coffee grounds and discard in trash
- Patches should be flushed
- www.deadiversion.usdoj.gov

Reference List

- Clinical Pharmacology- online
- GeriatricsCareOnline.org
- CDC/NCHS, National Vital Statistics System
- Vital Signs: Variation Among States in Prescribing of Opioid Pain Relievers and Benzodiazepines- United States , 2012 (CDC MMWR Weekly Report Vol. 63)
- CDC, Morbidity and Mortality Weekly Report, 60(43):1489, 2011
- SAMHSA; Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings

Contact Information

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