Pain Management Pocket Tool

American Cancer Society®
Connecticut Cancer Pain Initiative

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www.cancer.org/pain

Commonly Used Non-Opioid Analgesics

Drug	Average Dose	Dosing Interval	Maximum Dose in 24h	Side Effects	Comments
Acetaminophen (Tylenol)	500-1000 mg	4-6h	4 g **(<3 g in patients with liver dysfunction and in the elderly)**	Minimal, if any, side effects	Toxic to the liver in overdose
Non Steroidal Anti-Inflammatory Drugs (NSAIDS) (use with extreme caution in the elderly)					
Aspirin	500-1000 mg	4-6h	4000 mg	*see below	Caution with hepatic/renal disease.
Choline Magnesium Trisalicylate (Trilisate)	500-1000 mg	8-12h	3000 mg	Lower incidence of GI bleeding, minimal anti-platelet activity	Caution with hepatic/renal disease.
Ibuprofen (Motrin & others)	200-400 mg	4-6h	2400 mg	*see below	Caution with hepatic/renal disease.
Naproxen (Naprosyn)	500 mg initial, 250 mg subsequent	6-8h	1500 mg	*see below	Caution with hepatic/renal disease.
Nabumetone (Relafen)	500-750 mg	8-12h	2000 mg	*see below	Caution with hepatic/renal disease.
Ketorolac (Toradol)	30 mg IV initial, 15-30 mg subsequent	6h	150 mg first day, 120 mg thereafter	*see below	In elderly, 30 mg starting dose, 15 mg thereafter. Use restricted to 5 days max. Caution with hepatic/renal disease
Celecoxib (Celebrex)	100-200 mg	12h	200-400 mg	Lower incidence of adverse GI effects	Contraindicated in sulfonamide allergy. No platelet effects. Risk of cardiovascular events. Use lowest dose possible.
Tramadol (Ultram)	25-50 mg	4-6h	400 mg **(300 mg in the elderly)**	Headache, confusion, sedation	Atypical opioid with additional non-opioid effects. Available combined with non-opioids. Lowers seizure threshold.

* Monitor for common adverse effects: GI ulceration and bleeding, decreased platelet aggregation, and renal toxicity.

Management of Opioid Side Effects

Adverse Effect	Management Considerations
Constipation	**Begin bowel regimen when opioid therapy is initiated.** Include a mild stimulant laxative (e.g., Senna, Cascara) + stool softener (e.g., Colace) at hs, or in divided doses as routine prophylaxis
Sedation	Tolerance typically develops. Hold sedatives/anxiolytics, dose reduction; consider CNS stimulants (e.g., increase caffeine intake, methylphenidate or dextroamphetamine)
Nausea/Vomiting	Dose reduction, opioid rotation; consider metoclopramide, prochlorperazine, scopolamine patch
Pruritus	Dose reduction, opioid rotation; consider an antihistamine such as diphenhydramine
Hallucinations	Dose reduction, opioid rotation, consider neuroleptics (haloperidol or risperidone)
Confusion/Delirium	Dose reduction, opioid rotation, neuroleptic therapy (haloperidol, risperidone)
Myoclonic Jerking	Dose reduction, opioid rotation; consider clonazepam, baclofen
Respiratory Depression	**Sedation precedes respiratory depression**. Hold opioid. Give low dose naloxone - dilute 0.4 mg (1ml of a 0.4 mg/ml amp of naloxone) in 9 ml normal saline for final concentration of 0.04 mg/ml

References

1) American Geriatric Society Clinical Practice Guidelines (2002). The management of persistent pain in older persons. AGS.
2) American Pain Society (2002), Guideline for the management of pain in osteoarthritis, rheumatoid arthritis, and juvenile chronic arthritis, 2nd ed., Glenview, ILL: APS.
3) American Pain Society (2003), Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain, 5th edition.
4) American Pain Society (2005), Guideline for the Management of Cancer Pain in Adults and Children.

Principles of Pain Management

1. Ask the patient about the presence of pain
2. Accept the patient's report of pain
3. Perform a comprehensive pain assessment, including:
   - Onset, duration, and location
   - Intensity (use appropriate scale)
   - Effect on function and quality of life
   - What makes the pain better or worse
   - Quality
   - Patient's goal
   - Response to prior treatment
   - History/physical exam
4. **Avoid intramuscular route, the oral route is preferred**
5. Treat persistent pain with scheduled medications
6. Ordinarily two drugs of the same class (e.g., NSAIDs) should not be given concurrently; however, one long-acting and one short-acting opioid may be prescribed concomitantly
7. Assess, anticipate and manage opioid side effects aggressively
8. Most opioid agonists have no ceiling dose for analgesia; titrate to relief and assess for side effects
9. With older adults, start low, go slow, but go!
10. Discuss goals and plans with patient and family
11. Assess and reassess pain frequently
12. **Avoid meperidine and propoxyphene**
13. Addiction occurs rarely unless there is a history of substance abuse; the hallmarks include:
    a) compulsive use, b) loss of control, c) use despite harm

Management of Breakthrough Pain

When using long-acting opioids around-the-clock for persistent pain, obtain order for a short-acting opioid (rescue) for breakthrough pain.

- The rescue dose is 10-15% of the 24h total daily dose.
- Oral rescue doses should be available every 1-2h; parenteral doses every 15-30 minutes.
- If patient is consistently using 3 or more rescue doses daily, consider increasing the around-the-clock dose.
- Whenever the around-the-clock dose is increased, the rescue dose will need to be recalculated.
- Consider using the same drug for both scheduled and breakthrough doses when possible (e.g., long-acting morphine + short-acting morphine).

Examples:

Oral rescue dosing: Pt. is on MS Contin 200 mg q 12h.

1. Total daily dose (200 mg x 2 = 400 mg morphine/24h)
2. Calculate 10 to 15% of 24h dose for rescue dose.
   (10% = 40 mg, 15% = 60 mg short-acting morphine)
3. Rescue dose = 40-60 mg of morphine q 1-2h.

Parenteral Dosing: (based on continuous infusion)
Calculate rescue dose based on 25-50% of hourly dose.

Switching From One Opioid To Another: (Examples)

1. Calculate the total 24h dose of pt's opioid regimen. (morphine 30 mg q 4h = 180 mg/24h)
2. Locate new opioid on equianalgesic chart. (hydromorphone 7.5 mg = 30 mg morphine)
3. Set-up equation.
   $\frac{180\text{ mg}}{30\text{ mg}} = \frac{X}{7.5\text{ mg}}$ and cross multiply
   (X = 45 mg hydromorphone in 24h)
4. Divide the total daily dose of the new opioid by the number of doses given per day.
   (45 mg divided by 6 doses = 7.5 mg q 4h)
5. Reduce calculated dose of new opioid by 25% -50% for incomplete cross tolerance; titrate up as needed.

Transdermal Fentanyl (Duragesic patch)
Use caution in opioid-naïve patient.
Duragesic patch 25 µg q 72h = 50 mg oral morphine q 24h.
Divided into 6 doses = 8.3 mg oral morphine or 2.8 mg IV morphine q 4h. **These are approximate doses.**

*Opioid Equianalgesic Chart
(opioids with no ceiling dose)

Opioid	Parenteral Route	Oral Route	Starting Dose for Opioid Naïve
Morphine	10 mg	30 mg	15 mg for both sustained release and immediate release
Hydromorphone	1.5 mg	7.5 mg	4 mg
Oxycodone	N/A	20 mg	10 mg sustained release, 5 mg immediate release
Fentanyl	0.1 mg (100 µg)	N/A	25 µg patch is equal to approx. 50 mg of oral morphine q 24h
Methadone	5 mg	10 mg	3-5 mg po for long term use (can accumulate due to long half life) Consult pain specialist before prescribing

*Combination Opioid Drugs (have ceiling dose)

Hydrocodone + aspirin, acetaminophen, or ibuprofen (Vicodin, Lortab, Vicoprofen)	N/A	30 mg	5, 7.5, or 10 mg hydrocodone with acetaminophen, aspirin or ibuprofen (4 g/24h ceiling dose with acetaminophen)
Oxycodone (Percocet, Tylox)	N/A	20 mg	5 mg oxycodone with 325 or 500 mg acetaminophen (4 g/24h ceiling dose with acetaminophen)

*Equianalgesic doses are approximate. Individual patient response must be observed. Doses and intervals are titrated according to patient's response.

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Adjuvant Analgesic Drugs

Most commonly used drugs. Consideration should be given to comorbidities, hepatic and renal insufficiency, and age.

Drug	Uses	Starting Dose	Dose Range	Comments
Antidepressants (often use lower doses to treat pain than to treat depression)				
Tricyclic Antidepressants				
Amitriptyline (Elavil)	Neuropathic pain	25 mg po hs **(10 mg or less for elderly)**	75-150 mg po hs	For all: Side effects include dry mouth, drowsiness, dizziness, constipation, urinary retention, confusion. Titrate dose every few days to minimize side effects. **Avoid in the elderly. Caution in patients with cardiovascular disease.**
Nortriptyline (Pamelor)	Neuropathic pain	Same as above	75-150 mg po hs	Lower side effect profile than amitriptyline. Titrate as above.
Desipramine (Norpramin)	Neuropathic pain	Same as above	75-150 mg po hs	Lower side effect profile than amitriptyline. Titrate as above.
Selective Serotonin and Norepinephrine Reuptake Inhibitor (SSNRI) Antidepressant				
Duloxetine (Cymbalta)	Diabetic peripheral neuropathy	30 mg	60mg once daily sustained release	Should not use with MAOIs. Consider lower starting dose for patients for whom tolerability is a concern.
Anticonvulsants				
Gabapentin (Neurontin)	Neuropathic pain	100-300 mg po tid increase by 100 mg tid q 3 days	300-3600 mg /day in three divided doses.	Adjust dose for renal dysfunction. Usually first choice anticonvulsant. Can cause drowsiness. No drug-drug interactions.
Carbamazepine (Tegretol)	Neuropathic pain	100 mg po bid	400-800 mg/day; max 1600 mg/day	Monitor serum levels; multiple drug-drug interactions.
Lamotrigine (Lamictal)	Neuropathic pain	25-50 mg/day	200-600 mg/day	Serious skin rashes have been reported.
Corticosteroids				
Dexamethasone (Decadron)	Spinal cord compression, bony metastases	4-8 mg po q 8-12h 10-20 mg IV q 6h	Minimal effective dose	High dose therapy should not exceed 72h. May improve appetite.
Prednisone	Spinal cord compression, bony metastases	5-10 mg po daily or bid	Minimal effective dose	For cancer pain, continue treatment until side effects outweigh benefit.
Local Anesthetic				
Lidoderm Patch (Topical Lidocaine)	Post Herpetic Neuralgia	1-3 patches over painful area(s)	1-3 patches 12h on and 12h off	Patch may be cut to fit painful area(s). Place only on intact skin.
Other Adjuvant				
Baclofen (Lioresal)	Muscle spasticity	5-10 mg po tid–qid	80-120 mg po in 24h	Caution in renal insufficiency.

Disclaimer: The intent of this guide is to provide a brief summary of commonly used analgesics. It is not a complete pharmacological review. All medications should be administered only with physician or licensed allied health provider orders. No liability will be assumed for the use of this tool.
6/2005