

Opioid Analgesics

Morphine Receptor Agonists	Usual starting oral dose range	Comments	Precautions
Codeine	15-60 mg every 4-6 hours	May be used orally in conjunction with nonopioids, such as acetaminophen. Has analgesic and antitussive properties.	<i>Precautions similar to morphine.</i>
Fentanyl (Duragesic)	25 mcg/hour, each patch may be worn for up to 72 hours (NOTE unlike other dosage routes, transdermal dosing is by amount of drug delivered per hour)	Transdermal fentanyl (Duragesic). Also given as Oral Transmucosal Fentanyl Citrate (Actiq) for breakthrough pain. Provides continuous opioid analgesia for chronic pain. Not for acute or post-operative pain.	Transdermal creates skin reservoir of drug and 12-hr delay in onset and offset. May cause life-threatening hypoventilation in opioid-nontolerant patients.
Hydrocodone (Vicodin*)	2.5 - 10 mg every 3-6 hours	Semi-synthetic opioid synthesized from codeine. Used orally in combination with nonopioids for less severe pain (one Vicodin tablet usually contains 5mg Hydrocodone / 500mg Acetaminophen). Has antitussive properties.	<i>Precautions similar to morphine.</i> Beware daily max 3,000 mg acetaminophen.
Hydromorphone (Dilaudid)	2-4 mg every 3-6 hours	Semi-synthetic opioid synthesized from morphine. Slightly shorter acting. High potency parenteral dosage form for tolerant patients.	<i>Precautions similar to morphine</i>
Mepiridine (Demerol)	NOT RECOMMENDED	Slightly shorter acting than morphine. Used orally for less severe pain.	Mepiridine's metabolite, normepiridine, accumulates with repetitive dosing causing CNS excitation, seizures. Not for patients with impaired renal function or receiving monoamine oxidase inhibitor
Morphine	5-30 mg every 4-6 hours	Standard of comparison for opioid analgesics.	Side effects include respiratory depression (potentially fatal), sedation, dizziness, dysphoria, N/V, paralytic ileus, mental clouding. Use lower dose in older patients and patients with pulmonary disease. Beware risk of serotonin syndrome when used with SSRIs, tricyclics, MAOIs, or neuroleptics.
Morphine - Sustained Release (MS Contin)	Initial dose varies based on prior opioid tolerance.	MS Contin lasts 8-12 hours. Use when opioids are needed for more than a few days.	<i>Precautions similar to morphine</i>
Oxycodone (Percocet*)	5 mg every 6 hours	Immediate- release (Roxicodone and OxyIR) and extended-release (Oxy-Contin) oral dosage. Also used in combination with nonopioids (one Percocet tablet usually contains 5mg Oxycodone / 325 mg Acetaminophen) for less severe pain.	<i>Precautions similar to morphine.</i> Beware daily max 3,000 mg acetaminophen.
Oxycodone - Sustained Release (Oxycontin)	Initial dose varies based on prior opioid tolerance.	Used for moderate to severe pain when continuous around-the-clock analgesic is needed for an extended period of time.	Precautions similar to morphine

Tramadol (Ultram)	25-50mg ER every 4-6 hours	Multiple mechanisms of action: weak opioid agonist and reuptake inhibitor of serotonin and norepinephrine	Caution: Serotonin syndrome, especially if co-administered with SSRI.
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*Combined with acetaminophen

Opioid Dependence Treatments

Morphine Receptor Antagonists	Starting oral dose (mg)	Comments	Precautions
Naltrexone (Vivitrol, Revia, Depade)	25-50 mg daily	Assists patients in overcoming opioid addiction by blocking the effects of opioid drugs. Also used for treatment of alcohol dependence.	Do not initiate therapy until patient is opioid-free (including tramadol) for at least 7-10 days as determined by urinalysis. Side effects include acute opioid abstinence syndrome: hypertension, tachycardia, anxiety, diarrhea, abdominal cramping, etc. Contraindicated in pregnant women and patients with known liver disease.
Naloxone (Narcan)	2 mg (intranasal) x1	Available IV, IM, SQ, intranasal, and inhaled via nebulizer. Short half-life mandates prolonged observation after administration. Used for opioid overdose, reversal of respiratory depression.	May precipitate opioid abstinence. Symptoms may include sweating, nausea, restlessness, trembling, vomiting, flushing, headache, and has in rare cases been associated with heart rhythm changes, seizures, and pulmonary edema
Morphine Receptor Full Agonist	Starting oral dose (mg)	Comments	Precautions
Methadone	2.5 - 10 mg every 8 - 24 hours	Good oral analgesic efficacy; HOWEVER, see precautions and also note long but variable plasma half-life. Rotation dose depends on prior opioid dosage.	<i>Precautions similar to morphine.</i> Special caution: may accumulate with repetitive dosing causing excessive sedation, respiratory depression. Associated with QT prolongation leading to fatal arrhythmias.
Morphine Receptor Partial Agonist	Starting oral dose (mg)	Comments	Precautions
Buprenorphine (Subutex)	75 mcg daily (buccal film)	Used for opioid detoxification as opioid replacement therapy. May also be used to treat chronic pain.	<i>Precautions similar to morphine</i>
Buprenorphine/Naloxone (Suboxone)	2 mg buprenorphine/naloxone 0.5 mg (sublingual film); day 1 induction dose	Used for opioid detoxification as opioid replacement therapy. Formulated with naloxone to deter intravenous abuse.	<i>Precautions similar to morphine</i>

Table adapted from the following resources:

1. Zacharoff, K. L., MD, McCarberg, B. H., MD, Reisner, L., PharmD, MFSHP, & Venuti, S. W. (2010). Managing Chronic Pain with Opioids in Primary Care (2nd ed.). Newton, MA: Inflexion.
2. Pain Control in the Primary Care Setting. (2006). Glenview, IL: American Pain Society.