

MEDICATION	EQUIANALGESIC DOSE (for chronic dosing)		USUAL STARTING DOSES Adult > 50KG; for opioid naïve patients (♦1/2 dose for elderly, or severe renal or liver disease)		COMMENTS	
	IM/IV onset 15-30 min	PO onset 30-60 min	PARENTERAL	PO		
MORPHINE	10 mg	30 mg	2.5-5 mg SC/IV q3-4h (♦1.25–2.5 mg)	5-15 mg q3-4h IR or Oral Solution (♦2.5-7.5 mg)	IR tablet (15,30 mg); Rectal suppository (5,10,20,30 mg) Conc (20 mg/ml) can give buccally; Solution (2 mg/ml, 4 mg/ml) Morphine ER tablet (15, 30, 60, 100, 200 mg) q8-12h Kadian ER capsule (10,20,30,50,60,80,100,200mg) q12-24h Avinza ER capsule (30,45,60,75,90,120mg) q24h <b>Not recommended in renal failure</b>	
OXYCODONE	Not Available	20 mg	Not Available	5-10 mg q3-4h IR or Oral Solution (♦2.5 mg)	IR capsule (5mg); IR tablet (5,10,15,20,30mg) Oral solution (5mg/5ml) Concentrate (20mg/ml) Oxycontin (10,15,20,30,40,60,80mg) – Due to high cost and potential for abuse, use only if failure or contraindication to morphine ER Combos available with APAP or Ibuprofen (generally not recommended) Not enough literature regarding dosing in renal failure. Use caution.	
HYDROMORPHONE	1.5 mg	7.5 mg	0.2-0.6 mg SC/IV q2-3h (♦.2 mg)	1-2 mg q3-4h (♦0.5-1 mg)	Tablet (2,4,8mg); Oral liquid (1mg/ml); Suppository (3mg) <b>Use carefully in renal failure.</b>	
METHADONE (see detailed sheet for dosing conversions)	1/2 oral dose 2mg PO methadone = 1mg parenteral methadone	24 hour oral morphine < 30 mg 31-99 mg 100-299 mg 300-499 mg 500-999 mg 1000-1200 mg > 1200 mg	Oral morphine: methadone ratio 2:1 4:1 8:1 12:1 15:1 20:1 consider consult	1.25-2.5 mg q8h (♦1.25 mg)	2.5-5 mg q8h (♦1.25-2.5 mg)	Tablet (5,10mg); Solution (1mg/ml, 2mg/ml); Concentrate 10 mg/ml Usually q12h or q8h; Long variable t½; <b>Acceptable with renal disease</b> Small dose change makes big difference in blood level Tends to accumulate with higher doses, always advise “hold for sedation” Because of long half-life, do not use methadone prn unless experienced Many drug interactions with commonly used medications When converting from oral to parenteral, cut dose in half for safety When converting from parenteral or oral, keep dose the same
FENTANYL	100 mcg (single dose) t 1/2 and duration of parenteral doses variable	24 hour MS dose 30-59 mg 60-134 mg 135-224 mg 225-314 mg 315-404 mg	Initial patch dose 12 mcg/hr 25 mcg/hr 50 mcg/hr 75 mcg/hr 100 mcg/hr	25-50 mcg IM/IV q1-3h (♦12.5-25 mcg)	Transdermal patch 12 mcg/hr q72h <i>Use with caution in opioid naïve and in unstable patients because of the 12 hour delay in onset and offset</i>	Transdermal patch (12,25,50,75,100mcg); Due to its high potency and potential for overdose and abuse, use only if failure or contraindication to morphine sulfate ER in the primary care setting <b>N.B. Incomplete cross-tolerance already accounted for in conversion; when converting to other opioid from fentanyl, generally reduce equianalgesic amount by 50%</b> IV: very short acting; associated with chest wall rigidity. Oral lozenge (200mcg start) and buccal tablet (100mcg start) indicated for breakthrough cancer pain only Acceptable with renal disease, monitor carefully if using long term
CODEINE	130 mg	200 mg	15-30 mg IM/SC q4h (♦7.5-15 mg) IV Contraindicated	30-60 mg q3-4h (♦15-30 mg)	Tablet (15,30,60mg); Elixir 12mg and 120mg APAP/5ml Tylenol #3 (30mg w/ 300mg APAP); Tylenol #4 (60mg w/ 300mg APAP) Monitor total APAP dose	
HYDROCODONE	Not available	30 mg	Not Available	5 mg q3-4h (♦2.5 mg)	Tablet – multiple brand and generic strengths ranging from 2.5-10mg combined with 300-750mg APAP Tablet (hydrocodone/ibuprofen: 7.5 /200 mg) Elixir 2.5mg and 167mg APAP/5ml Monitor total acetaminophen or ibuprofen dose	

HALF LIFE (hours)	DURATION (hours)	RELATIVE COST (30 day supply of equianalgesic dose) \$ <\$50 \$\$ \$50-\$100 \$\$\$ \$100-\$400 \$\$\$\$ >-\$400
1.5-2	3-7	\$\$ (IR tablet) \$\$ (Solution) \$\$ (ER Generic) \$\$\$\$ (ER Brand)
3-4	4-6	\$\$ (IR tablet) \$\$ (Combo) \$\$\$ (Solution) \$\$\$\$ (ER Brand)
2-3	4-5	\$\$ (Tablet) \$\$\$ (Solution) \$\$\$\$ (Suppository)
15-190 (N.B. Huge Variaton)	6-12	\$ (Tablet) \$ (Solution)
13-22 (Patch) 7 (Lozenge) 12-22 (Buccal)	48-72 (Patch) 60+ min (Lozenge) 120+ min (Buccal)	\$\$ (Transdermal) \$\$\$\$ (Lozenge) \$\$\$\$ (Buccal)
3	4-6	\$\$ (Comb. w/APAP) \$\$\$ (Tablet)
3.3-4.5	4-6	\$ (Comb. w/APAP) \$\$ (Comb. w/IBU)

## GUIDELINES

- Evaluate pain on all patients using a 0 -10 scale
  - Mild pain: 1 – 3
  - Moderate pain: 4 – 7
  - Severe pain: 8 – 10
- For chronic moderate or severe pain:
  - Give baseline medication around the clock
  - Order 10% total daily dose as a PRN given q 1-2h for oral and q 30-60 min for SC/IV
  - For continuous infusion, PRN can be either the hourly rate q 15 minutes or 10% of total daily dose q 30-60 minutes.
  - Adjust baseline upward daily in amount roughly equivalent to total amount of PRN
  - Negotiate with patient target level of relief, but usually at least achieving level <4.
- In general, oral route is preferable, then trans-cutaneous > subcutaneous > intravenous.
- When converting from one opioid to another, some experts recommend reducing the equianalgesic dose by 1/3 to 1/2, then titrate as in #2 above.
- Elderly patients, or those with severe renal or liver disease, should start on half the usual starting dose.
- If parenteral medication is needed for mild to moderate pain, use half the usual starting dose of morphine or equivalent.
- Refer to PDR for additional fentanyl guidelines.
- Naloxone (Narcan) should only be used in emergencies:
  - Dilute naloxone 0.4 mg with 9 ml NS
  - Give 0.1mg (2.5 ml) slow IVP until effect
  - Monitor patient q15 minutes
  - May need to repeat naloxone again in 30-60 minutes
- Short-acting preparations should be used acutely & post-op. Switch to long-acting preparations when pain is chronic and the total daily dose is determined.

Information adapted from Facts and Comparisons 2008 and APS Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain (4th Ed.) 1999.

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# Equianalgesic Table for Adults

Half-life, Duration,  
Costs and Guidelines

The **5<sup>th</sup>**  
**Vital Sign**  
**Pain**®

## Community Principles of Pain Management

Developed by ViaHealth Pain Initiative  
Revised by Strong Health Palliative Care 11/01  
Revised by Specialty Advisory Committee, 2/02  
Adopted by Excellus BlueCrossBlueShield 5/02  
Reviewed and adopted by AAHPM 12/09

Guidelines and principles are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines & principles should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, care can and should be tailored to fit individual needs. Approved on May 18, 2010.  
Next scheduled Update by May 2012.