

OPIOID ANALGESIC COMPARISON TABLE

Drug	Equianalgesic Doses Parenteral (IV, IM, SQ)	Equianalgesic Doses - Oral	Parenteral			Oral			Usual dosing Interval (hours)
			Onset (min)	Peak (min)	Duration (hours)	Onset (min)	Peak (min)	Duration (hours)	
AGONISTS									
Morphine	10 mg	30 mg	< 5	SQ: 30-60 IV: 20	3-6	15-60	30-60	3-6	3-4
Codeine	75-120 mg	130-200 mg	10-30	30-60	4-6	30-60	30-60	4-6	3-4
Fentanyl	0.1 mg	Transdermal 25 mcg/hr ≈ 45 mg of oral sustained release morphine	IM: 7-15 IV: <1	ND	1-2 (TD: 48-72)				IV: 1 TD: 72
Hydrocodone		30 mg				ND	ND	4-8	3-4
Hydromorphone	1.5 mg	7.5 mg	ND	30-60	4-6	15-30	30-60	4-6	3-4
Levorphanol	2 mg	4 mg	ND	30-60	4-8	10-60.	30-60	4-8	6-8
Meperidine	100 mg	300 mg	< 5	30-60	2-4	10-15	30-60	2-4	2-3
Methadone	10 mg ⁺⁺	7.5 mg ⁺⁺	10-20	30-60	4-8	30-60	30-60	4-8	6-8
Oxycodone	ND	20 mg	<5	60	4	10-15	120-180	4-6	4
Oxymorphone	1 mg	10 mg	5-15	30-60	3-6	10-15	30	4-6	3-6
Tapentadol		100mg				ND	1.25 hr	4-6	4-6
PARTIAL AGONISTS									
Buprenorphine	0.4 mg	ND	15	60	4-8	~15 SL admin	40-210 SL admin		6-8
Butorphanol	2 mg	Not available	IM: 30-60 IV: 4-5	30-60	3-5				3-4
Nalbuphine	10 mg	Not available	IM: 30 IV: 1-3	60	3-6				3-4
Pentazocine	60 mg	150 mg	IV: 2-3	~15	2-3	15-30	~60	4-5	3-4

++ The ratio of PO morphine:PO methadone is dependent on the dose of morphine prior to switching to methadone. With low doses of morphine (<90 mg/day), the ratio is approximately 4:1 (morphine:methadone). With higher doses of morphine, i.e. > 300 mg/day, the ratio of PO morphine: PO methadone approaches 12:1. Inbetween, a ratio of 8:1 has been studied. (Davis,2001)
ND – not determined

The opiate analgesic comparison chart is meant to act as a guideline when switching patients from one opioid to another. It is important to recognize that there is a wide variation in response to opiates between individuals. Therefore, all doses should be titrated to effect for individual patients. (Foley, 1985 and Pereira, 2000)

REFERENCES

Pereira, J; Lawlor , P; Vigano, A; et al. Equianalgesic Dose Ratios for Opioids: A Critical Review and Proposals for Long-Term Dosing. J Pain Symptom Manage 2001;22:672-687

Davis, MP and Walsh, D. Methadone for relief of cancer pain: a review of pharmacokinetics, pharmacodynamics, drug interactions and protocols of administration. Support Care Cancer 2001;9:73-83.

Foley, K. The treatment of cancer pain. NEJM 1985; 313: 84-95.