

**World Health Organization Analgesic Ladder
Step 1 Analgesics: Pharmacokinetics and Costs**

Generic Drug (Trade Drug)	Typical Dose and (Maximum Dose)	Approximately Equivalent to	Onset Effect (min)	Peak Effect (min)	Duration Effect (hr)	Plasma Half-Life (hr)	Cost in \$ for Typical Dose (daily)
Acetaminophen (Tylenol, Tempra, others)	600 mg PO 600 mg PR (2,600-4,000 mg/day)	Aspirin 600 mg	30	60	3-4	1-4	0.02 0.55 (0.14-0.21)
Acetylsalicylic acid (aspirin)	600 mg PO 600 mg PR (5,200 mg/day)	Morphine 2 mg IM	30	60	3-4	.25	0.07 (0.64)
Ibuprophen (Motrin, Advil, others)	200 mg PO (3,200 mg/day)	Aspirin 650 mg	30	60-120	4	3-4	0.08 (1.34)
Choline magnesium trisalicylate (Trilisate)	2,000-3,000 mg PO (3,000 mg/day)		5-30	60-180	3-6	7-18	1.80-2.71 (2.71)
Diflunisal (Dolobid)	500 mg PO (1,500 mg/day)	Aspirin 650 mg	60	120-180	8-12	8-12	1.17 (3.51)
Ketoprofen (Orudis)	25 mg PO (300 mg/day)	Aspirin 650 mg	30	30-120	6	2-3	0.81 (9.68)
Naproxen (Naprosyn)	250 mg PO (1,250 mg/day)	Aspirin 650 mg	60	120-240	6-8	13	0.75 (3.73)
Ketorolac Tromethamine (Toradol)	30-60 mg IM initially (120 mg IM /day x 5 day, max 30 mg IM x 20 doses)	Morphine 6-12 mg IM	10	60	3-6	3-9	0.72-0.77 (1.55-1.94)
Nabumetone (Relafen)	1,000 mg PO (2,000 mg/day)	(Aspirin 3600 mg/day)	1-2 days	Days- 2 wk	Unknown	24	2.04 (4.08)
Etodolac (Lodine)	200-400 mg PO (1200 mg/day)	Aspirin 650 mg	30	60-120	4-12	7	1.09-2.18 (6.54)
Piroxicam (Feldene)	20 mg PO (20 mg/day)		60	180-300	>12	50	(2.47)
Sulindac (Clinoril)	200 mg PO (400 mg/day)	(Aspirin 4800 mg/day)	1-2 days	60-120	Unknown	18	(2.29)
Indomethacin (Indocin)	25 mg PO (100 mg/day)	Aspirin 650 mg	60	60-120	4	4-5	0.03 (0.12)
Celecoxib (Celebrex)	100-200 mg (400 mg)			180		11	
Rofecoxib (Vioxx)	12.5-25 mg (50 mg/day)	2400 mg Ibuprophen	45	120- 180	24	17	

Key: PO=oral; PR=rectal; IM=intramuscular; IV=intravenous. *PO cost is based on least expensive, 100 tablet quantity, generic preparation if available, and IV or IM is based on least expensive.*

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