

Generic name	Time Cmax	Elimination t _½
Analgesics		
Acetaminophen (paracetamol)	PO: 1–2 hr PR: 1.8–4.8 hr	2–4 hr
Acetylsalicylic acid (ASA) (salicylic acid derivative)	PO: buffered tab: 20 min PO: effervescent solution: 15 min	6 hr (4.7–9, dose-related)
Diclofenac (acetic acid derivative)	IR PO: (diclofenac K): 1 hr (0.33–2) ER PO: (diclofenac Na): 2 hr (1–4) PR: 30 min	2 hr
Celecoxib (COX-2)	PO: ≈ 3 hr	11 hr
Ibuprofen (propionic acid derivative)	PO: 1.4–1.9 hr	1.8–2 hr
Ketorolac (acetic acid derivative)	PO: 44 min IM: 30–45 min IV: 1–3 min	5.6 hr
Tramadol	PO: 2 hr	Tramadol: 6.3 hr Metabolite: 7.4 hr
Opioids		
Codeine (methylmorphine)	PO: 1–2 hr IM: 30 min PR: 30 min	2.5–3.5 hr
Fentanyl	Epi: 30 min TM: 24 min (20–40) SC/IM: 30 min IV: 15 min (6–15)	4 hr (3.3–4.1) TD patch: 20–50 hr
Hydrocodone	PO IR: 1.3 hr PO ER: 3.4 hr	4 hr (3.8–4.5)
Hydromorphone	PO IR: 48–60 min SC/IM: 30 min IV: 15 min (6–15) Epi: 8 min	IR: ≈ 3–4 hr
Methadone	PO: 2–4 hr	Methadone: 23 hr Metabolite: 39.8–48 hr Post a single PO dose, t _½ is biphasic – initial phase 12–24 hr; second phase up to 55 hr
Morphine	IR PO: 1 hr SC/IM: 30 min IV: 15 min (6–15) IR buccal: 5 hr (1.5–12) IR supp PR: 0.75–1 hr IR supp colostomy: 0.5–1 hr ER PO tabs: 8.4 hr ER PO capsules: 30 min ER PR (using ER PO tabs): 5.4–6.7 hr Epi/IT: 5–10 min Inhalation (nebulized): 10–45 min	4 hr
Naproxen (propionic acid derivative)	IR PO: naproxen: 2–4 hr, naproxen Na: 1–2 hr ER PO: 3 hr Topical gel: 24 hr	12–15 hr
Oxycodone	IR PO: 1.6 hr ER PO: 2.1–3.2 hr	PO IR: 4 hr PO ER: 4.5–8 hr
Remifentanyl	1–3 min	3–10 min
Sufentanyl	SC: 30 min IV: 15 min (6–10) Epi: 20 min	2.5 hr

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Anaesthetics		
Lidocaine	IM: 30 min–2 hr Topical initial response (2% jelly): 3–5 min	1.5–2 hr Metabolites: 1–6 hr
Lidocaine + Prilocaine	Topical cream: 2–4 hr Topical periodontal gel: 30 min	Lidocaine: 1.5–2 hr Prilocaine: 10–150 min
Nitrous oxide	Rapid	5 min
Antacids		
Cimetidine (H ₂ receptor antagonist)	PO: 45–90 min IM: 15 min	2 hr Metabolites: 2.2 hr
Famotidine (H ₂ receptor antagonist)	PO: 1–3.5 hr	2.6–4 hr
Lansoprazole (H ⁺ , K ⁺ -ATPase inhibitor)	Enteric-coated granules: 1.5–3 hr ODT: 1.8–2.0 hr	0.9–1.5 hr Metabolites: 3 hr
Omeprazole (H ⁺ , K ⁺ -ATPase inhibitor)	PO: 0.5–3.5 hr	0.5–1 hr
Ranitidine (H ₂ receptor antagonist)	PO: 0.5–2 hr IM: 15 min	2–3 hr
Sucralfate	PO Initial response: 1 hr	Duration: 6 hr
Anticholinergics		
Atropine	PO: 1 hour IM: 30 min	Biphasic: initial ~ 2 hr; final: 12.5–38 hr
Glycopyrrolate	PO: 90 min IM: 10 min	2.2–33.4 min
Hyoscyamine	PO SR: 2.5 hr	3.5 hr ER: ≈ 7 hr
Scopolamine	4 hr	9.5 hr
Anticonvulsants		
Carbamazepine	PO IR: 4–5 hr PO chew tas: 6 hr PO ER: 3–12 hr PO suspension: 1.5 hr	12–17 hr
Fosphenytoin (prodrug of phenytoin)	SC/IM: 30 min IV: immediate (at end of infusion)	Conversion to phenytoin: 15 min Phenytoin: 7–42 hr
Gabapentin	PO: 1.5–4 hr	5–7 hr
Phenobarbital	PO: 8–12 hr IM: 1 hr IV: 15 min	1.5–4.9 days
Phenytoin (not first order kinetics)	IR PO: 1–2 hr ER PO caps: 4–12 hr IV loading dose: 25 min (20–25)	PO: 7–42 hr IV: 10–15 hr
Pregabalin	1–1.5 hr	5–6.5 hr
Valproic acid	PO valproic acid capsules Depakene®: 1–4 hr PO divalproex tab: 4–8 hr PO divalproex sprinkle capsule: 3.3–4.8 hr PO divalproex Na ER: 4–17 hr PO: Na valproate solution: 1.2 hr PR: diluted valproic acid syrup: 3.1 hr IV Depacon®: at end of 1 hr infusion	6–17 hr

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Antidepressants		
Amitriptyline	PO: 4 hr	15 hr (range: 9–25 hr)
Clomipramine	PO: 2–6 hr	19 hr–37 hr Metabolite: 54–77 hr
Desipramine	PO: 3–6 hr	14.3–24.7 hr
Doxepin Prominent H ₁ antagonist	PO: 30 – 60 min	16.8 hr (8–25) Metabolites: 51.3 hr (33.2–80.7)
Fluoxetine	PO: 6–8 hr	4–6 days Metabolites: 4–16 days
Imipramine	PO: 1 hr	6–18 hr Metabolite - Desipramine: 12–36 hr
Nortriptyline	PO: 1 hr	15–39 hr
Sertraline	PO: 4–8 hr	24 hr Metabolites: 62–104 hr
Trazodone	PO: 0.5–2 hr	7.1 hr
Venlafaxine	PO IR: 1–2 hr PO ER: 5.5 hr	5 hr Metabolite: 11 hr
Benzodiazepines		
Alprazolam	PO: 0.8–2 hr	11.2 hr
Clonazepam	PO: 1–4 hr PR: 10–30 min	30–40 hr
Diazepam	PO: 0.89–1.32 hr IV: 8 min IM: 1 hr PR gel: 1.5 hr	0.83–2.25 days Metabolites: 40–194 hr
Lorazepam	PO: 2 hr IM: 1–3 hr SL: 60 min	12 hr Metabolites: 12–18 hr
Midazolam	SC/IM: 30 min IV: 15 min (6–15) PR: 20–50 min	2 hr (1–3)
Oxazepam	PO: 2–3 hr	2.8–8.6 hr
Zolpidem (non-benzo hypnotic)	PO: 1.6–2.0 hr	2–2.6 hr
Laxatives		
Glycerin (irritant)	PR initial response: 15–30 min	30–45 min
Magnesium citrate (osmotic)	PO initial response: 0.5–3 hr	NA
Psyllium (not absorbed)	PO initial response: 12–24 hr (up to 3 days)	NA
Sennosides (stimulant)	PO initial response: 6–12 hr PR: 0.5 –2 hr	NA
Sodium phosphate (osmotic)	PR initial response: 0.5–3 hr	NA
Sorbitol (osmotic)	PO initial response: 0.5–3 hr	NA
Neuroleptics		
Chlorpromazine (sedating)	PO: 2.8 hr IM: 1–4 hr IV: 2–4 hr	6 hr
Haloperidol (sedating)	PO: 2–6 hr IM: 20 min	21 hr (10–38)
Olanzapine (sedating)	PO: 6 hr IM: 15–45 min	21–54 hr (mean 30 hr)
Prochlorperazine	1.5–5 hr	6.8–9 hr
Quetiapine (sedating)	PO: 1.5 hr	6 hr
Risperidone (non-sedating)	PO tabs: 1–2 hr PO solution: 1 hr	PO: 20–30 hr Metabolites: 21–30 hr

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Diuretics		
Furosemide	PO: 60–120 min IV: 6–10 min	30–120 min
Spironolactone	PO: 1–3 hr	1.3–1.4 hr Metabolite: 8.9–23 hr
Steroids		
Dexamethasone (not first order kinetics)	PO tabs: 1 hr (1–2) PO elixir: 10–60 min SC/IM: 30 min IV: 15 min (6–15)	Plasma: 2 hr (1.88–2.23) Biological: 36–54 hr
Prednisone (not first order kinetics)	PO: 1.3 hr	Plasma: 2.6–3 hr Biological: 12–36 hr
Stimulants		
Methylphenidate	IR PO: 1–3 hr ER PO: 6–8 hr	PO: 3 hr (2–7)
Pemoline	PO: 2–4 hr	7–13 hr
Others		
Baclofen	PO: 2 hr	3–6.8 hr
Diphenhydramine (H₁ receptor antagonist)	PO: 2–4 hr	4–8 hr Metabolites: 8.6–10 hr
Flecainide (class 1C antiarrhythmic)	PO: 1.5–6 hr PO cap: 1–8 hr	7–22 hr
Metoclopramide (dopaminergic)	IV: 15 min PO: 60–160 min PR: 1–3 hr SC: 30 min	5–6 hr
Metronidazole	PO: 1–2 hr PR: 3 hr IV: end of infusion Topical: 8–12 hr	6–14 hr
Misoprostol (prostaglandin E1 analogue)	PO: 9 – 15 min	20–40 min
Octreotide (somatostatin analogue)	SC: 15–30 min	1.5 hr
Ondansetron (serotonin receptor antagonist)	PO: 1–2.2 hr IM: 0.38 hr IV: end of 30 min. infusion	3–5.5 hr
Oxybutynin	PO: 1 hr TD: NA	1.1–2.3 hr