

ADULT ICU COMMON INTRAVENEOUS INFUSION RATES



Generic (Brand)	Usual Concentration	Loading Dose	Usual Dosage Range	Maximum	Comments
Abciximab (Reopro)	see pre-printed order	0.25 mg/kg IVP	0.125 mcg/kg/min for 12hrs	10 mcg/min for 12hrs	AMI (unlabeled use); PCI adjunct doses; (Use REOPRO pre-printed orders)
Acetylcysteine (Aceta-Dote)	see pre-printed order	150mg/kg in 200ml over 1hr	50mg/kg in 500ml over 4hrs then 100mg/kg in 1liter over 16hrs	300mg/kg total in 21hrs	Use D5W as IV diluent; alternate dilutions available for <40kg and fluid restricted patients; see pre-printed Acetaminophen Overdose
Amiodarone (Cordarone)	- see doses -	150 mg over 10 min (150mg/100ml D5W)	1 mg/min for 6 hrs then 0.5mg/min (900mg/500ml D5W)	2200 mg in 24hrs	
Argatroban	250mg/250ml		2 mcg/kg/min titrate to 1.5-3 x baseline aPTT (45-90sec)	10 mcg/kg/min or aPTT >100	(see pre-printed order sheet) start at 0.5mcg/kg/min for Hepatic impairment
Bivalirudin (Angiomax)	250mg/250ml		0.15 mg/kg/hr titrate to 1.5-2.5 x baseline aPTT (45-75 sec)		HIT (not FDA approved); see pre-printed order sheet for renal dosing adjustment for CrCl <60
	250ml/50ml (cath lab only)	0.75mg/kg	1.75mg/kg/hr	1.75mg/kg/hr	PCI doses only - refer to package insert for specific dosing guide; renal dosing adjustment CrCl <30
Cisatracurium (Nimbex)	see pre-printed order	0.05 - 0.15mg/kg (max=0.2mg/kg)	3mcg/kg/min (0.5-10mcg/kg/min) titrate by 0.5mcg/kg/min every 10min	titrate to twitches	Must have adequate sedation and analgesia; preferred in renal impairment (**Use pre printed orders)
Dexmedetomidine (Precedex)	400mcg/100ml	not recommended	0.2-0.7 mcg/kg/hr	0.7mcg/kg/hr	1.4 to 1.5mcg/kg/hr max rate used in SEDCOM, MENDS Trail (unlabeled) Titrate in 0.1mcg/kg/hr increments; monitor HR and BP. Not to be used as sole sedative if receiving paralytics.
Diltiazem (Cardizem)	250mg/250ml	0.25 mg/kg over 2min; may repeat 0.35mg/kg	5-10 mg/hr	15mg/hr for <24hrs	Use ABW for Load ; doses >15mg/hr no benefit
DoBUTamine (Dobutrex)	500mg/250ml		2.5-15 mcg/kg/min	>15-40 mcg/kg/min	Call MD for doses >15mcg/kg/min; tachyarrhythmias
DoPAMine	400mg/250ml		1-20 mcg/kg/min	>20-50 mcg/kg/min	May cause tachyarrhythmias in doses >20mcg/kg/min; consider alternative agents
Drotrecogen Alfa (Xigris)	see pre-printed order		24 mcg/kg/hr x 96hrs		See Preprinted Order: Must be signed by an Attending physician * Use Actual Body Weight *
Epinephrine (Adrenalin)	4mg/250ml		1-10 mcg/min (for Hypotension) -OR- 0.05mcg/kg/min	0.5 mcg/kg/min (refractory hypotension)	Anaphylaxis LD = 0.1mg epinephrine; Cardiac arrest LD = 1mg; Tachyarrhythmias in high doses; Doses >10mcg/min must be supervised by a physician
Eptifibatid (Integrilin)	75mg/100ml	180mcg/kg (max 22.6mg) over 1-2min	2mcg/kg/min	15mg/hr -OR- 250mcg/min	Adjust infusion rate if CrCl <50ml/min; - See preprinted orders-
Esmolol (Brevibloc)	2500mg/250ml	500mcg/kg over 1 min	50-200 mcg/kg/min	300 mcg/kg/min	titrate in 50mcg/kg/min increments for 4min
Esomeprazole (Nexium)	80mg/250ml	80mg IVP (bolus)	8mg/hr	8mg/hr x 72hrs	For prevention of rebleeding after endoscopic therapy of bleeding peptic ulcers. Based on Omeprazole data.
Etomidate (Amidate)	n/a	0.1-0.3mg/kg over 1min			- For Rapid Sequence Intubation Only -
Fenoldopam (Corlopam)	10mg/250ml		0.1-0.3 mcg/kg/min initially then titrate	1.6 mcg/kg/min	titrate in 0.05-0.1mcg/kg/min q15min; start low to avoid reflex tachycardia
Fentanyl	1500mcg/150ml	25-100mcg	25-200 mcg/hr	titrate to pain score goal	Call Physician for doses >200mcg/hr
Fomepizole (Antizol)	N/A	15mg/kg over 30min	10mg/kg q12h x 4 then 15mg/kg q12h (all doses infused over 30min each); goal: ethylene glycol/methanol level <20mg/dl + normalized pH + resolution of symptoms		Significant dose adjustments for patients on Hemodialysis (see Fomepizole Package Information)
Labetalol (Normodyne)	250mg/250ml		0.5-2mg/min	titrate to HR and BP (300mg total cumulative dose)	Alternate dosing: 10-20mg IVP q10min and titrate incrementally to max cumulative dose of 300mg; Continuous infusions of up to 6mg/min reported for aortic dissection

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Lidocaine	2gm/250ml	1-1.5mg/kg over 2-3min	1-4 mg/min	4mg/min	Repeat bolus of 0.5-0.75mg/kg q5-10min up to total dose=3mg/kg for refractory VT/Vfib
Lorazepam (Ativan)	40mg/250ml	0.5-4mg IVP; may repeat q2-6hrs	0.5-8mg/hr	titrate to sedation goal	Adult ICU mech vent sedation doses only; Call MD if dose >10mg/hr; Monitor for Propylene Glycol toxicity at doses >1mg/kg/day + renal failure; Check Osmol gap (goal <10)
Midazolam (Versed)	50mg/50ml	1-4mg IVP ; may repeat q5-15min	1-10mg/hr	titrate to sedation goal	Adult ICU mech vent sedation doses only; Call MD if dose >10mg/hr; use Pre-printed orders for Status Epilepticus
Milrinone (Primacor)	40mg/200ml	50mcg/kg over 10min	0.375-0.5 mcg/kg/min	0.75 mcg/kg/min	Adjust maintenance rate in renal insufficiency (CrCl <50); Increased risk for proarrhythmia/hypotension at doses >0.5mcg/kg/min
Morphine	50mg/50ml	1-5mg IVP (10mg max IVP dose) q2-6hr	1-10mg/hr	titrate to pain score goal	Titrate in 1-2 mg/hr increments ; call Physician if dose >10mg/hr
Nesiritide (Natrecor)	1.5mg/250ml	2mcg/kg	0.01mcg/kg/min	0.03 mcg/kg/min	See Pre-printed Order for dose titration parameters
Nicardipine (Cardene)	40mg/200ml		5-15 mg/hr	15 mg/hr	Titrate in 2.5mg/hr increments q15min; May use higher concentration if via Central Line (125mg/250ml)
Nitroglycerin	50mg/250ml		5-100 mcg/min	titrate to response	Max reported rate 400mcg/min; methemoglobinemia, ethanol intoxication and heparin resistance at high infusion rates
Nitroprusside (Nitropress)	50mg/250ml		0.3-4mcg/kg/min	10 mcg/kg/min	Watch thiocyanate levels at doses >4mcg/kg/min -OR- for >3 days use
Norepinephrine (Levophed)	8mg/250ml		2-30mcg/min	30 mcg/min	0.01-3mcg/kg/min have been used in septic shock - tachyarrhythmias in high doses
Octreotide (Sandostatin)	1000mcg/100ml	25-50 mcg IVP over 3-5min -OR- IVPB over 15-30min	25-50mcg/hr x 48hrs	50mcg/hr x 5 days	Esophageal variceal bleed; monitor glucose control
PENTobarbital (Nembutal)	2000mg/250ml	Intracranial Hypertension: 10mg/kg over 30min	5mg/kg/hr x 3 hrs, then 1mg/kg/hr and titrate by 0.5mg/kg/hr to goal	3mg/kg/hr; call physician if >3mg/kg/hr	See Preprinted Orders: Pentobarbital Coma for Intracranial Hypertension
		Refractory Status 3mg/kg at 30mg/min	1mg/kg/hr; may repeat bolus 0.5mg/kg IVP and titrate by 0.5mg/kg/hr to goal	4mg/kg/hr; call physician if at max dose	See Preprinted Orders: Refractory Status Epilepticus
Phenylephrine (Neo-synephrine)	30mg/100ml	Initially start at 100-180 mcg/min to stable BP; doses >180mcg/min must be authorized by a physician. Titrate down to maintenance rate of 40-60mcg/min when BP stable.		360 mcg/min (doses >180mcg/min must be authorized by physician)	Dose ranged 0.4-9mcg/kg/min in refractory hypotension/shock
Propofol (Diprivan)	1000mg/100ml	Bolus dose for Refractory Status Epilepticus ONLY - see preprinted orders	5-75 mcg/kg/min (titrate in 5-10mcg/kg/min increments every 5min-10min)	titrate to sedation goal; Doses >75mcg/kg/min must be approved by physician	Avoid doses >75mcg/kg/min due to increased risk of Propofol Infusion Syndrome; See pre-printed orders for Refractory Status Epilepticus or Neurosurgical Propofol Infusion or Adult Mechanical Ventilation for monitoring parameters
Propranolol (Inderal)	n/a		2-3mg/hr		** mostly IVP dose range 1-3mg at rate of 1mg/min (thyrotoxicosis) - repeated doses
Rocuronium (Zemuron)	see pre-printed order	0.6mg/kg over 1-2min	5-12mcg/kg/min (titrate by 1-2mcg/kg/min every 15min)	titrate to twitches	Must have adequate sedation and analgesia
Vasopressin (Pitressin)	40units/100ml		sepsis: 0.01-0.04 units/min	0.06 units/min	Higher doses associated with cardiac, digital, splanchnic ischemia
	100units/100ml		qi bleed: 0.2-1unit/min	1 unit/min	
Vecuronium (Norcuron)	See pre-printed order	0.05- 0.1mg/kg	0.8-1.7mcg/kg/min (titrate by 0.2mcg/kg/min every 15min)	titrate to twitches	Must have adequate sedation and analgesia
Disclaimer:	This Dosing Guide is intended as a tool to assist and guide the ICU staff in dosing and monitoring of commonly used IV infusion in the ADULT ICU at OSF Saint Francis Medical Center. The dose ranges may differ from product prescribing information and reflect a consensus of Contributors based on published literature available, pre-printed orders, and unlabeled uses that are common in the ICU. These data represent general guidelines based on studies in adults. Dosages need to be adjusted for each individual patient based upon that individual's pharmacokinetic properties and pharmacodynamic response. Numerous factors including age, gender, genetic phenotype, physiologic state, presence of concurrent disease, body weight, and presence of interacting drugs, may require an adjustment in dosage. Neither the authors nor OSF Saint Francis Medical Center or the OSF Saint Francis Health Care System and its subsidiaries assume any liability for any injury and/or damage to persons or property arising from this dosing card reference.				