

## Common Sedatives Used in the ICU

	Mechanism of Action	Dosing	Pharmacokinetics	Adverse Effects
<b>Propofol</b>	GABA+ NMDA-	<u>Bolus</u> : 0.25-1 mg/kg Relative Max: 100 mg <u>Infusion</u> : 5-50 mcg/kg/min Max: 75 mcg/kg/min	<u>Onset</u> : < 1 minute <u>Duration</u> : < 10 minutes <i>May be slightly increased with prolonged infusions</i> <u>Metabolism</u> : Hepatic <u>Risk for Accumulation</u> : Minimal	Hypotension – Bradycardia – Respiratory Suppression Hypertriglyceridemia – Propofol Infusion Syndrome (PRIS) Green Urine ( <i>Benign</i> ) – Caloric Contribution (1.1 kcal/mL) Soy/Egg Allergy
<b>Dexmedetomidine</b>	Central α2 Agonist	<u>Loading Dose</u> : <b><i>Not Recommended</i></b> 1 mcg/kg over 10 min <u>Infusion</u> : 0.2-1 mcg/kg/hour Relative Max: 1.5 mcg/kg/hour	<u>Onset (without Loading Dose)</u> : 20-30 minutes <u>Duration</u> : 30-60 minutes <u>Metabolism</u> : Hepatic <u>Risk for Accumulation</u> : Minimal	Bradycardia – Hypotension – No Respiratory Suppression Withdrawal following Prolonged Use (Role for Clonidine) Rare: Fever, HPA Suppression, Electrolyte Abnormalities
<b>Midazolam</b>	GABA+	<u>Bolus</u> : 2-4 mg <u>Infusion</u> : 1-10 mg/hr Consider Bolus with Initiation and Dose Increases	<u>Onset (Bolus)</u> : 2-5 minutes <u>Duration (single dose)</u> : 1-2 hours <i>Can be significantly longer (days-weeks) with prolonged infusion</i> <u>Metabolism</u> : Hepatic w/ Active Renal Metabolite <u>Risk for Accumulation</u> : Very High	Hemodynamically Neutral – Respiratory Suppression Delirium – Prolonged Sedation Withdrawal following Prolonged Use
<b>Lorazepam</b>	GABA+	<u>Bolus</u> : 2-4 mg <u>Infusion</u> : 1-10 mg/hr Consider Bolus with Initiation and Dose Increases	<u>Onset (Bolus)</u> : 5-10 minutes <u>Duration (single dose)</u> : 2-4 hours <i>Can be significantly longer (days-weeks) with prolonged infusion</i> <u>Metabolism</u> : Glucuronidation <u>Risk for Accumulation</u> : High	Hemodynamically Neutral – Respiratory Suppression Delirium – Prolonged Sedation Withdrawal following Prolonged Use Propylene Glycol Toxicity
<b>Ketamine</b>	NMDA-	<i>Subanesthetic (Analgesic)</i> <u>Bolus</u> : 0.1-0.3 mg/kg <u>Infusion</u> : 0.1-0.3 mg/kg/hr <u>Dissociative Sedation</u> <u>Bolus</u> : 0.5-1 mg/kg <u>Infusion</u> : 0.5-1.5 mg/kg/hr	<u>Onset (Bolus)</u> : < 1 minute <u>Duration</u> : 10-20 minutes <i>Recover from Sedation: 1-2 hours</i> <u>Metabolism</u> : Hepatic <u>Risk for Accumulation</u> : Minimal	Hypertension – Tachycardia (Contraindicated with Significant Cardiac Disease) No Direct Respiratory Suppression Emergence Reaction/Acute Psychosis – Nystagmus Secretions (Oral/Ocular)
<b>Fentanyl</b>	Opioid	<u>Bolus</u> : 50-100 mcg <u>Infusion</u> : 25-200 mcg/kg Consider Bolus with Initiation and Dose Increases	<u>Onset (Bolus)</u> : < 1 minute <u>Duration (single dose)</u> : 1-2 hours <i>Can be significantly longer (days) with prolonged infusion</i> <u>Metabolism</u> : Hepatic <u>Risk for Accumulation</u> : Moderate-High	Hemodynamically Neutral – Respiratory Suppression Withdrawal following Prolonged Use Constipation/Ileus Start Bowel Regimen (Miralax+Senna) with Infusion Deescalate as Appropriate