



# REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME  
**midazolam**



<b>Effective Date:</b> Dec 2011	CLASSIFICATION <b>Sedative Benzodiazapine</b>	OTHER NAMES <b>Versed</b>	PAGE 1 of 2
<b>Revised Date:</b> Dec 2022			

**ADMINISTRATION POLICY:**

- IV Infusion – May be administered by a nurse
- IV Bolus – May be administered by a nurse
- IM Injection – May be administered by a nurse
- Subcutaneous – May be administered by a nurse

**RECONSTITUTION/DILUTION/ADMINISTRATION:**

**Available as:** 1 mg/mL and 5 mg/mL

**IV Bolus/intermittent:** Administer dose at 1 mg/mL concentration slowly over 2 minutes, may be repeated

**IM/Subcut:** Administer undiluted

**IV Infusion: Pump Library:**

Drug Library	Dose Rate	Short Name	Care Unit
Yes	mg/h	midz125	Critical Care
Drug	Diluent	Final Volume (VTBI)	Final Concentration
125 mg (25 mL of 5 mg/mL)	100 mL NS	125 mL	1 mg/mL
Clinical Advisory: High Alert			
Soft Low Dose Limit: 0.5 mg/h		Soft High Dose Limit: 15 mg/h	

**DOSAGE:**

**Procedural sedation:** 0.5 to 2.5 mg IV titrate with 1 mg every 2 minutes as required (maximum total equal to 5 mg for less than 60 years; 3.5 mg for 60 years and older)  
 Initial: Some patients respond to doses as low as 1 mg; no more than 2.5 mg should be administered over a period of 2 minutes. Additional doses of midazolam may be administered after a 2-minute waiting period and evaluation of sedation after each dose increment. A total dose greater than 5 mg is generally not needed.  
 Maintenance: 25% of dose used to reach sedative effect

**Sedation:** IV/Subcutaneous infusion:  
 Loading dose: 0.01 to 0.05 mg/kg IV once (approximately 0.5 mg to 4 mg)  
 Maintenance Dose: 1 to 15 mg/hour (0.01 to 0.15 mg/kg/hour)  
 Intermittent IV/ Subcutaneous: 1 to 2 mg every 30 minutes as needed

**Acute Agitation:** IM: 2.5 to 5 mg

**Acute seizures:** IV: 1 to 2 mg every 3 minutes up to a maximum of 9 mg cumulative dose then reassess. Larger doses or more frequent dosing should only be considered if advanced airway support is immediately available.  
**If no available IV access, IM 5 mg once**



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**Status Epilepticus:**

If IV access not available:

IM: 10 mg once (5 mg if less than 40 kg)

If advanced airway support is immediately available then:

IV: Initial dose: 5 mg IV bolus at a rate of 1 mg per minute every 5 minutes to a maximum of 15 mg

Followed by: IV infusions of 0.045 to 0.6 mg/kg/hour (usual 3 to 60 mg per hour)

**Maximum single dose:** 5 mg

**Maximum rate:** 1 mg/minute (60 mg/hour)

**Maximum concentration:** 1 mg/mL

**STABILITY/COMPATIBILITY:**

**Stability of Final Admixture:** Stable 24 hours at room temperature

**Compatibility:** Compatible with D5W, normal saline, combination dextrose-saline solutions

**PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:**

- Respiratory depression/Apnea
  - Use caution in combination with short acting opioids such as fentanyl and other CNS depressants
- Tachycardia, hypotension, dyspnea, apnea, nausea and vomiting

**ADDITIONAL NOTES AND NURSING CONSIDERATIONS:**

- Continuous monitoring and availability of resuscitative drugs and equipment required
- Monitor vital signs frequently
- Onset of action: IV: 1 to 5 minutes. Subcutaneous/IM: 15 minutes
- Elderly patients: Reduce dose by 50% because risk of apnea/dyspnea is greater, dose increments should be smaller and rate of injection slower.
- **ANTIDOTE:** Flumazenil (anexate) Dose: 0.2 mg IV over 15 seconds if desired level of consciousness is not obtained – 0.2 mg may be repeated at one-minute intervals to a maximum cumulative dose of 1 mg