



REGIONAL PEDIATRIC PARENTERAL DRUG MONOGRAPH

GENERIC NAME

LORazepam



Effective Date: Jan 14-2015	CLASSIFICATION Benzodiazepine	OTHER NAMES Ativan	PAGE 1 of 2
Revised Date: Jan 2024			

ADMINISTRATION POLICY:

- IV bolus - May be administered by a nurse
- IV Infusion - Not recommended
- IM Injection - May be administered by a nurse
- Subcut - Not recommended

RECONSTITUTION/DILUTION/ADMINISTRATION:

Available as: 4 mg/mL – 1 ml ampoule REFRIGERATE

IV bolus: Administer over 2 to 5 minutes into an infusing IV solution, near needle hub

Final Concentration	Lorazepam 4 mg/mL	Volume of normal saline	Final volume	Total dose in syringe
2 mg/mL	1 mL	1 mL	2 mL	4 mg
1 mg/mL	0.5 mL	1.5 mL	2 mL	2 mg
0.5 mg/mL	0.25 mL	1.75 mL	2 mL	1 mg

Draw up the desired dose and dilute initially with an equal volume of normal saline, then thoroughly mix by gently inverting the syringe until the solution looks homogenous (this is required to minimize the likelihood of precipitation of the final product).

IM injection: Administer undiluted

DOSAGE:

Anxiety/Sedation:

IV Usual: 0.05 mg/kg/dose (maximum dose: 2 mg/dose) every 4 to 8 hours;
Range – 0.02 to 0.1 mg/kg

Procedural Sedation:

IV, IM Usual: 0.01 to 0.05 mg/kg/dose; may repeat IV dose every 20 minutes if needed to titrate to effect.

Status Epilepticus:

IV Neonate: 0.05 mg/kg/dose
Child over 30 days 0.05 to 0.1 mg/kg mg/kg/dose

Above doses over 2 to 5 minutes. May repeat in 10 to 15 minutes two or three times if necessary.

Anti-emetic: Single dose: 0.04 to 0.08 mg/kg/dose prior to chemotherapy

Maximum concentration: IV 2 mg/mL
IM 4 mg/mL

Maximum single dose: 4 mg

Maximum rate: 2 mg/minute or 0.05 mg/kg over 2 to 5 minutes



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STABILITY/COMPATIBILITY:

Stability (opened container): 24 hours at room temperature

Stability of Final Admixture: prepare immediately prior to use and discard remainder

Compatibility: Compatible with normal saline, D5W, dextrose-saline combinations, Lactated Ringer

POTENTIAL HAZARDS:

- CNS: drowsiness, dizziness, fatigue, ataxia, amnesia, restlessness, slurred speech, headache, paradoxical excitation
- CV: hypertension or hypotension
- Resp: depression (25%) and partial airway obstruction
- GI: nausea and vomiting
- Metab: hyperglycemia, cushingoid appearance
- Local: extravasation adjacent to an artery or inadvertent intra-arterial injection causes spasm which may lead to gangrene. Also redness, pain and burning at site (IV and IM)
- Other: rash, blurred vision

REQUIRED MONITORING:

- monitor respiratory rate, blood pressure, heart rate, CBC with differential and liver function with long term use

CAUTION:

- due to risk of respiratory depression in children under one year, start dose at lower end of range and titrate relative to need

CONTRAINDICATIONS:

- IV LORazepam formulation uses propylene glycol as its solvent, which has been shown to accumulate in the neonates and children between 1 to 15 months of age. Monitor for clinical and laboratory abnormalities.

ADDITIONAL NOTES AND NURSING CONSIDERATIONS:

- Half-life: full-term neonate – 40.2 hours (range 18 to 73 hours); children – 10.5 hours (range 6 to 17 hours)
- Onset of action: IV: peak plasma levels – immediately
IM: peak plasma levels – 1.5 to 3 hours