

HEALTHEAST MEDICAL TRANSPORTATION
MEDICAL OPERATIONS MANUAL

LORAZEPAM (ATIVAN)

Drug Classification: Benzodiazepine

BACKGROUND

Pharmacodynamics

This medication has anxiolytic, sedative, hypnotic, amnesic and skeletal muscle relaxant effects. It suppresses the spread of seizure activity through the motor cortex of the brain while maintaining the abnormal discharge focus. Lorazepam has an onset of 1 to 5 minutes IV and 15 to 30 minutes IM. Peak effects occur in 15 to 20 minutes IV and 2 hours IM. Its duration of action is 6 to 8 hours.

Indications

- Anxiety/agitation
- Seizures

Contraindications

- Allergy or known sensitivity to benzodiazepines

Cautions

- This medication should be protected from excessive heat and should be inspected closely prior to administration. If any discoloration or the presence of a precipitate is noticed, the drug should not be used.

DOSAGE and ADMINISTRATION

ADULT	PEDIATRICS (less than 60 kg)
<p><u>For anxiety/agitation</u></p> <ol style="list-style-type: none">1. Administer 1 to 2 mg³ IV/IO slowly, diluted with an equal volume of IV fluid^{1,2} and titrated to effect. May repeat dose once in 15 minutes, if needed. <p>OR</p> <p>Administer 1 to 2 mg³ IM, undiluted. May repeat dose once in 15 minutes, if needed.</p> <p>OR</p> <p>Administer 1 to 2 mg IN, undiluted. May repeat dose once in 15 minutes, if needed.</p> <ol style="list-style-type: none">2. Maximum total dose is 4 mg³ for all routes.3. Be prepared to support ventilations.	<p><u>For anxiety/agitation</u></p> <ol style="list-style-type: none">1. Administer 0.1 mg/kg³ IV/IO slowly, diluted with an equal volume of IV fluid^{1,2} and titrated to effect. May repeat dose once in 15 minutes, if needed. <p>OR</p> <p>Administer 0.1 mg/kg³ IM, undiluted. May repeat dose once in 15 minutes, if needed.</p> <p>OR</p> <p>Administer 0.1 mg/kg³ IN. If small volume, add normal saline until total volume equals at least 1 ml. May repeat dose once in 15 minutes, if needed.</p> <ol style="list-style-type: none">2. Maximum total dose is 4 mg³ for all routes.

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ADULT	PEDIATRICS (less than 60 kg)
<p><u>For active seizure</u></p> <ol style="list-style-type: none"> Administer 1 to 2 mg IV/IO/IM/IN every 5 minutes to a maximum total dose of 6 mg. 	<ol style="list-style-type: none"> Be prepared to support ventilations. <p><u>For active seizure</u></p> <ol style="list-style-type: none"> Administer 0.1 mg/kg (max single dose of 2 mg) IV/IO/IM/IN every 5 minutes to a maximum total dose of 6 mg.

ADVERSE REACTIONS/SIDE EFFECTS

- Amnesia, drowsiness, confusion, hypertension or hypotension, nausea and vomiting

NOTES

¹ The preferred intravenous method of delivery for this medication is through a flowing fluid line. It should be delivered no faster than 2 mg per minute. **However, the initial dose should be given IN for the seizing patient.**

² Administration of this medication via IV/IO with only a saline lock is the least preferred route. If this method is to be used, the medication must be diluted. To dilute, expel the air in the carpuject and draw up an equal amount of normal saline. Rock the solution to mix. Do not shake. Then, administer slowly at no more than 2 mg per minute.

³Administer one half the dose listed when administering it in addition to opiates and/or antiemetic.

REFERENCE GUIDELINE:

1D Anxiety and Sedation Management

3F Seizures

3J Behavioral Emergencies