



## EMS System for Metropolitan Oklahoma City and Tulsa 2019 Medical Control Board Treatment Protocols



Approved 9/12/18, Effective 1/15/19, replaces all prior versions

### 16BB – LORAZEPAM (ATIVAN®)

#### PARAMEDIC

**Class:** Sedative; Anticonvulsant; Muscle Relaxant; Anxiolytic (Benzodiazepine)

**Actions/Pharmacodynamics:** Long - acting benzodiazepine with central nervous system depressant, anticonvulsant, muscle relaxant, and anxiolytic effects. Like the other benzodiazepines, it has no effect on pain. Ativan has less muscle relaxant properties than diazepam, though no substantial amnestic effects as with midazolam.

**Indications:** Medication Assisted Intubation (2G)  
Post-intubation sedation - onset delay does not favor pre-intubation use  
Seizure (6D)  
(Midazolam preferred benzodiazepine due to faster onset of action)  
Dystonic Reactions (6F)  
Chemical Restraint (7C)  
(Midazolam preferred benzodiazepine due to faster onset of action)  
Poisonings - General Management (8A)  
Suspected stimulant toxicity = severe agitation, HTN, tachycardia, diaphoresis  
Head/Neck/Spine Injury (10A)  
(Midazolam preferred benzodiazepine due to faster onset of action)  
Heat Illness (11A)  
(Midazolam preferred benzodiazepine due to faster onset of action)

**Contraindications:** Patients with intolerance to benzodiazepines, acute narrow - angle glaucoma, shock, or coma. Caution with use in patients with COPD, chronic hepatic or renal failure, CHF, acute alcohol intoxication, and the elderly due to increased risk of respiratory depression.

**Pharmacokinetics:** Onset is 5-10 minutes, IVP/IOP; up to 30 minutes IM; peak effects in 2-3 hours. Duration is 3-6+ hours IVP/IOP/IM; half - life can reach 20 - 50 hours.

**Side Effects:** Headache, euphoria, drowsiness, excessive sedation, confusion, dizziness, blurred vision, diplopia, nystagmus, respiratory arrest, hypotension, nausea, vomiting.

**Dosage:** **Medication Assisted Intubation (Post Intubation Sedation) - Adult (2G)**  
0.1 mg/kg to max 2 mg IVP/IOP, may repeat once if systolic BP > 100 mmHg

**Seizure - Adult (6D)**

**Heat Illness - Adult (11A)**

2 mg IVP/IOP/IM for active seizure

May repeat once in 10 minutes if still seizing.



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### PROTOCOL 16BB: Lorazepam (Ativan®), cont.

#### Dosage, cont.:

##### **Seizure - Pediatric (6D)**

##### **Heat Illness - Pediatric (11A)**

0.1 mg/kg to max 2 mg IVP/IOP/IM for active seizure  
May repeat once in 5 minutes if still seizing.

##### **Dystonic Reactions - Adult (6F)**

2 mg IVP/IM

##### **Dystonic Reactions - Pediatric (6F)**

0.1 mg/kg to max 2 mg IVP/IM

##### **Chemical Restraint - Adult (7C)**

2 mg IVP/IOP/IM  
May repeat once.

##### **Chemical Restraint - Pediatric (7C)**

0.1 mg/kg to max 2 mg IVP/IOP/IM

##### **Poisoning - General Management (Suspected Stimulant Toxic) - Adult (8A)**

1 -2 mg IVP/IM

##### **Poisoning - General Management (Suspected Stimulant Toxic) - Pediatric (8A)**

**\*\*OLMC Order Only**

##### **Head/Neck/Spine Injury - Adult (10A)**

1 mg IVP/IM/IOP for active seizure.  
May repeat once in 5 minutes if still seizing.

##### **Head/Neck/Spine Injury - Pediatric (10A)**

0.1 mg/kg IVP/IM/IOP for active seizure.  
May repeat once in 5 minutes if still seizing.

**How Supplied:** 2 mg/1 mL or 4 mg/1 mL in vials, ampules, or pre-filled syringes.  
(Always check concentration and dose per container at time of patient medication administration)

**Special Comment:** Lorazepam must be kept refrigerated.