

**MEHLVILLE FIRE PROTECTION DISTRICT  
EMERGENCY MEDICAL SERVICES  
GUIDELINES FOR PREHOSPITAL EMERGENCY CARE**

**SUBJECT: 1100.11  
MISCELLANEOUS:  
SEDATION**

**ORIGINAL ISSUE 5/08  
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**Benzodiazepines:**

The use of these medications for sedation requires careful attention to the patient's vital signs and airway as they can cause hypotension and apnea. These medicines may be used to calm an anxious or agitated patient or for use in facilitating endotracheal intubation. The justification for the use of these medications should be clearly documented in the run report. The patient's vital signs and respiratory status should be evaluated before administering the medication and should be followed closely after the medication is given.

**You must have orders from medical control to give these medications for the purpose of sedating the patient to perform endotracheal intubation or to give these medications to pediatric patients.**

**OPTIONS (adult dosing):**

1. Midazolam 1-5 mg IV
2. Diazepam 1-5 mg IV
3. Lorazepam 1-2 mg IV

**Ketamine:**

Ketamine is an anesthetic. It induces a trance-like state called dissociation and also provides some pain relief. It may cause an increase in blood pressure, which may be helpful if the patient is hypotensive, but may be harmful if the patient is in hypertensive crisis. It can also cause an increase in heart rate, increased secretions and a lowering of the seizure threshold. It also can cause bronchodilation which may be helpful in asthmatic or COPD patients. The drug may also cause a twitching of the eyes called nystagmus. There is a possibility that the drug can cause increased intraocular pressure so it should be avoided in patients with eye injuries. As the drug is wearing off or if the patient is given a dose too low to cause dissociation, the patient may experience an "emergence phenomenon" where they may hallucinate or become anxious. This is treated with midazolam. If the patient was given a sub-dissociative dose of ketamine, additional ketamine can be given to cause dissociation.

When using ketamine it may be given IV or IM. Respiratory depression may occur, especially if the drug is given too fast intravenously. The drug should be given over 1-2 minutes if given IV. There is no reversal agent.

The use Ketamine for sedation requires careful attention to the patient's vital signs and airway. The justification for the use of ketamine should be clearly documented in the run report. The patient's vital signs and respiratory status should be evaluated before administering the medication and should be followed closely after the medication is given.

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Ketamine may be used IM in patients with excited delirium if the crew feels that the patient is a danger to themselves or others and traditional methods of getting the patient to cooperate have failed. The drug may also be used as sedation for an excessively painful procedure such as fracture management or cardioversion.

**You must have orders from medical control to give this medication for the purpose of sedating the patient to perform endotracheal intubation or to administer the medication to pediatric patients.**

**Dosing:**

- **3-4 mg/kg IM**
- **1-2 mg/kg IV (over 2 minutes slow IVP to prevent respiratory depression) May repeat 0.5 mg/kg IV every 10 minutes as needed to maintain sedation**

**Note:**

**Ketamine is supplied in two different concentrations.**

- **10 mg/mL (20 mL vial) for IV administration**
- **100 mg/mL (5 mL vial) for IM administration**