



Jackson Hole Fire/EMS Operations Manual

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Title: **Medication Protocol:
Ketamine**
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Ketamine Hydrochloride (Ketalar) (Medication Protocol)

PARAMEDIC PROVIDERS

STANDING ORDER

CLASS: Anesthetic (*high dose*); analgesic (*low dose*)

PHARMACOLOGY/ ACTIONS: Blocks impulses of pain perception; suppresses spinal cord activity; affects CNS transmitter systems; provides anesthesia with profound analgesia and minimal respiratory depression and minimal skeletal muscle relaxation.

ONSET/DURATION: Onset: 30 seconds (IV/IO), 3-4 minutes (IN/IM)
Duration: 5-10 minutes (IV/IO), 12-25 minutes (IN/IM)

USE IN FIELD/ INDICATIONS:

- Excited Delirium/ Behavioral Emergencies – Sedation Dosing
- Procedural Sedation (Cardioversion) – Sedation Dosing
- Analgesia (severe pain) for isolated extremity injuries – Sub-dissociative Pain Dosing

***** Contact Medical Control before being used in head injury or multi-system trauma, or other medical settings (ROSC, advanced airway/ventilator sedation, etc.) due to mental status concerns.**

CONTRAINDICATIONS: Hypersensitivity to Ketamine

RELATIVE CONTRAINDICATIONS: Pregnancy; hypothyroidism; cardiovascular disease; gastroesophageal reflux; hepatic dysfunction; history of alcohol abuse.

SIDE EFFECTS: Hallucinations; hypertension; increased cardiac output; tachycardia; hypotension; bradycardia; increased oral secretion; nausea and vomiting.

DRUG INTERACTIONS: Use with barbiturates or opioid analgesics may result in prolonged recovery time. Concurrent administration with benzodiazepine may decrease incidence of emergence reaction.

ROUTE: IV / IO / IM / IN

Sedation Dosing for Excited Delirium/Behavioral Emergencies

Contact Medical Control before being used in head injury or multi-system trauma, or other medical settings (ROSC, advanced airway/ventilator sedation, etc.) due to mental status concerns.

	ADULT	PEDIATRIC (<45 kg)
SEDATION DOSAGE:	<p>IV/IO: 1-2 mg/kg every 5 minutes to a maximum of 3 doses.</p> <p>IM/IN: 2-4 mg/kg every 10 minutes to a maximum of 3 doses.</p>	<p>For Combative Pts. >10 Yrs. old (must be a danger to self or others)</p> <p>IV/IO: 1-2 mg/kg every 5 minutes to a maximum of 3 doses.</p> <p>IM/IN: 2-4 mg/kg every 10 minutes to a maximum of 3 doses.</p>

Analgesia Dosing for Severe Pain

Contact Medical Control before being used in head injury or multi-system trauma, or other medical settings (ROSC, advanced airway/ventilator sedation, etc.) due to mental status concerns.

	ADULT	PEDIATRIC (<45 kg)
SEVERE PAIN DOSAGE: (Sub-Dissociative)	<p>IV/IO: Initial dose of 10 mg to determine effect, additional dosing can be increased to 0.1-0.3 mg/kg every 5-15 minutes.</p> <p>Titrate to Pain and Nystagmus</p> <p>IM/IN: 0.5-1 mg/kg every 10 minutes.</p>	<p>IV/IO: Initial dose of 0.1 mg/kg (max 10 mg) to determine effect, additional dosing can be increased to 0.1-0.3 mg/kg every 5-15 minutes.</p> <p>Titrate to Pain and Nystagmus</p> <p>IM/IN: 0.5-1 mg/kg every 10 minutes.</p>
PREGNANCY SAFETY:	Category N- Not Classified	
COMMENTS:	<p><u>SCHEDULE III NARCOTIC:</u> Security protocol is the responsibility of Jackson Hole Fire/EMS.</p> <p>DEA Schedule III drug with potential for abuse.</p>	

Assess level of consciousness frequently- patient will experience a dissociative state and may emerge from this agitated, anxious and/or hallucinating.

Consider using Ketamine as an adjunct in combination with other pain control agents (e.g. fentanyl/Dilaudid).