

KETAMINE HCL [KETALAR]

DRUG CLASSIFICATION	Cyclohexanone Derivative Rapid-Acting Nonbarbiturate Dissociative Anesthetic N-Methyl-D-Aspartate (NMDA) Receptor Antagonist Glutamate Receptor Antagonist
MECHANISM OF ACTION	Noncompetitive NMDA receptor antagonist that blocks ionotropic glutamate and HCN1 receptors, producing a cataleptic-like state causing dissociation from surrounding environment by direct action on the cortex and limbic systems. Low, subanesthetic doses produce analgesia and modulate central sensitization, hyperalgesia, and opioid tolerance.
CLINICAL INDICATIONS	Moderate-to-Severe Pain Behavioral Hyperactive Delirium with Severe Agitation
STANDARD CONTRAINDICATIONS	Known Hypersensitivity to Ketamine or Relative Components Pediatric Patient Population [UNION EMS DOES NOT USE KETAMINE FOR PEDIATRIC PATIENTS]
POTENTIAL ADVERSE EFFECTS	Confusion / Delirium / Bradycardia / Tachycardia / Arrhythmias / Hypotension / Hypertension / Laryngospasm / Respiratory Depression
GENERAL RISKS & PRECAUTION	1) Use caution in patients with pulmonary infection or disease as use of ketamine increases the risk of laryngospasm. 2) Use caution in patients with increased intracranial pressure as ketamine can exacerbate these conditions. 3) Use caution in patients with thyroid disorders due to enhanced sympathomimetic effect produced by ketamine. 4) Use caution in patients with cardiovascular disease as ketamine may exacerbate underlying myocardial dysfunction. 5) Use caution in pregnant patients as ketamine may produce dose-dependent increases in uterine contractions, neonatal depression, and decreased Apgar scores.
PROTOCOL INDEX	Pain Control (UP-11) Behavioral Hyperactive Delirium with Severe Agitation (UP-19)

MEDICATION ADMINISTRATION

ADULT

PEDIATRIC

Moderate-to-Severe Pain Control

USE **LOWER CONCENTRATION "KETAMINE 2"**

0.3 mg / kg [IV/IO]; Infuse over 10 minutes; (MAX Single Dose: 30 mg)

May repeat every 20 minutes if needed; (MAX Total # of Dosages: 3)

–OR–

USE **HIGHER CONCENTRATION "KETAMINE 5"**

1 mg / kg [IN] (MAX Total # of Dosages: 1)

Behavioral Hyperactive Delirium with Severe Agitation (BARS: 7)

USE **HIGHER CONCENTRATION "KETAMINE 5"**

4 mg / kg [IM]; (MAX Single Dose: 400 mg) – See UP-19 Note Section

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FOR PEDIATRIC PATIENTS**