

# Southern Illinois Regional EMS System

## JJ-20 MORPHINE SULFATE

### Class:

- Opioid analgesic

### Description:

- Morphine sulfate is a natural opium alkaloid that has a primary effect of analgesia. It also increases peripheral venous capacitance and decreases venous return. Morphine sulfate causes euphoria and respiratory and central nervous depression. Secondary pharmacological effects of morphine include depressed responsiveness of alpha-adrenergic receptors (producing peripheral vasodilation) and baroreceptor inhibition. In addition, because morphine decreases preload and afterload, it may decrease myocardial oxygen demand. Morphine sulfate is a Schedule II controlled substance.

### Onset and Duration:

- Onset: 1-2 minutes after administration.
- Duration: 2-7 hours.

### Indications:

- Chest pain associated with myocardial infarction (not right sided MI).
- Pulmonary edema, with or without associated pain.
- Moderate to severe acute and chronic pain.

### Contraindications:

- Hypersensitivity to narcotics
- Hypovolemia
- Hypotension
- Head injury or undiagnosed abdominal pain
- Increased intracranial pressure
- Severe respiratory depression.
- Patients who have taken MAO inhibitors within 14 days.
- Confirmed right ventricular myocardial infarction.

### Adverse Reactions:

- Hypotension
- Tachycardia
- Bradycardia
- Palpitations
- Syncope
- Facial flushing, diaphoresis, itching
- Respiratory depression
- Euphoria
- Bronchospasm
- Dry mouth
- Allergic reaction

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## JJ-18 MORPHINE SULFATE (continued)

### Drug Interactions:

- Central nervous system depressants may potentiate effects of morphine (respiratory depression, hypotension, sedation).
- Phenothiazines may potentiate analgesia.
- MAO inhibitors may cause paradoxical excitation.

### How Supplied:

- Morphine is supplied in varied concentrations via carpject syringe.
  - Common for EMS 2mg, 5mg, or 10mg concentrations solutions.

### Dosage and Administration:

- Adult:
  - 2-4mg slow IV/IO/IM over 1 minute, titrate to effect.
- Pediatrics:
  - 0.05 - 0.2mg/kg IV/IO/IM

### Special Considerations:

- Pregnancy Category B:
- If not used for prolonged periods or in high doses at term.
- Narcotics rapidly cross the placenta.
- Safety in neonates has not been established.
- Use with caution in the elderly, those with asthma, and those susceptible to central nervous system depression.
- Morphine should be used with caution in chronic pain syndromes.
- Morphine may worsen bradycardia or heart block in inferior and/or right ventricular MI.
- Naloxone should be readily available.