

**Pharmacologic properties:**

Fentanyl is a synthetic opioid analgesic that suppresses pain by agonizing opioid receptors in the central nervous system. Fentanyl has fewer vasoactive effects than morphine and does not induce significant histamine release. As a result, the drug does not cause significant hypotension in proper doses.

**Indications:**

- Chest pain associated with suspected myocardial ischemia
- Thermal burns
- Frostbite
- Isolated extremity injury
- Pain from suspected kidney stone

**Contraindications:**

- Pain due to multisystem trauma or suspected acute abdomen
- Hypotension, (SBP <100 mmHg) or volume depletion
- Head trauma
- Acute alcohol intoxication
- Acute respiratory distress
- Known hypersensitivity

**Precautions:**

- Use with caution in elderly patients
- Fentanyl is metabolized by the liver, use caution in patients with known liver disease
- Sedative effects are potentiated by alcohol, antihistamines, barbiturates, benzodiazepines, phenothiazines, and other sedatives

**Adverse Reactions:**

- |                              |                     |
|------------------------------|---------------------|
| • Euphoria                   | Drowsiness          |
| • Pupillary constriction     | Respiratory arrest  |
| • Decreases gastric motility | Nausea and vomiting |
| • Bradycardia                | Chest wall rigidity |

**Dosage and administration:**

- Adult
  - Intravenous - 1-2 mcg/kg (max individual dose 50 mcg) slow IV push (max total dose 100 mcg)
  - Intranasal - via mucosal atomization device (MAD) – single 100 mcg dose (divide dose between nostrils) for all patients
- Pediatric
  - Intravenous - 0.5 mcg/kg (max individual dose 25 mcg) slow IV push (max total dose 50 mcg)
  - Intranasal (via MAD) – single 1.5 mcg/kg dose (maximum 100 mcg, divide dose between nostrils)