

Class

Opioid Analgesic

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 [Protocol 10](#), [Protocol 11](#).
- Thermal burns [Protocol 18](#), [Protocol 18P](#), [Protocol 21](#), [Protocol 21P](#).
- Pain management for frostbite [Protocol 18](#), [Protocol 18P](#).
- Isolated extremity injury [Protocol 21](#), [Protocol 21P](#).
- Pain management from suspected kidney stone [Protocol 18](#), [Protocol 18P](#).

Contraindications

- Hypotension (SBP < 100 mmHg) or volume depletion
- 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
- A dose of 100 mcg of Fentanyl Citrate is equivalent to 10 mg of Morphine

Side Effects/Adverse Reactions

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



Dosage and Administration

Adult

- 1-2 mcg/kg (MAX single dose of 50 mcg) slow IV/IO bolus or IM (Max total dose of 100 mcg).
 - May be repeated once if pain relief is not attained.
- 100 mcg (single dose) Intranasal – via mucosal atomization device (MAD) – dose divided between nostrils (MAX 1 mL/nostril).

Pediatric

- 0.5 mcg/kg (MAX single dose of 25 mcg) slow IV/IO bolus or IM (Max total dose 50 mcg).
 - May be repeated once if pain relief is not attained.
- 1.5 mcg/kg single dose (Max total dose of 100 mcg) Intranasal – via mucosal atomization device (MAD) - dose divided between nostrils (MAX 0.5 mL/nostril).