



## 17. FENTANYL

*(Required unless Morphine OSP approved)*

### Pharmacology

- (1) Synthetic opioid binds with opiate receptors in the CNS, altering both perception and emotional response to pain.
- (2) Fentanyl is significantly more potent than morphine. 100 mcg of fentanyl is equivalent to 10 mg of morphine.

#### a) Pharmacokinetics

Onset of action is 2–3 minutes after IV dose and effects last 30 minutes to 1 hour.

#### b) Indications

- (1) The patient reports moderate to severe pain.
- (2) In the provider's judgment the patient will benefit from treatment with an opioid analgesic, including patients who are MOLST and/or EMS/DNR patients or being pre-medicated for a procedure.

#### c) Contraindications

- (1) Hypersensitivity or known allergy to fentanyl
- (2) Uncorrected respiratory distress or hypoxemia refractory to supplemental oxygen
- (3) Uncorrected hypotension, defined as a persistent systolic pressure less than 90 mmHg.

#### d) Adverse Effects

- (1) Respiratory depression/arrest
- (2) Altered mental status
- (3) Increased vagal tone due to suppression of sympathetic pathways (slowed heart rate)
- (4) Constricted pupils (pinpoint)
- (5) Increased cerebral blood flow

#### e) Precautions


- (1) Naloxone reverses all effects.
- (2) To reduce the risk of chest wall rigidity (especially in children), fentanyl should be administered slowly and titrated to effect.
- (3) Vital signs should be monitored frequently.
- (4) Hypotension is a greater possibility in volume-depleted patients.
- (5) Elderly patients and those with impaired renal function may be more sensitive to the medication's effects.

#### f) Dosage (NEW '19)

- (1) Adult: Fentanyl IN preferred IV/IO/IM
  - (a) Administer 1 mcg/kg to a maximum initial dose of 200 mcg (For IN route, dosing may be limited due to volume limitations - administration of max 1mL per nare).
  - (b) Reassess in 5–10 minutes. If pain remains moderate to severe, then administer a second dose of fentanyl 1 mcg/kg to a maximum dose of 200 mcg.

- (c)  Obtain on-line medical direction for additional doses, if required.



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- (2) Pediatric: Fentanyl IN. If IN route not accessible, IV/IO/IM
    - (a) Administer 1 mcg/kg to a maximum initial dose of 200 mcg (For IN route, dosing may be limited due to volume limitations - administration of max 1mL per nare).
    - (b) Reassess in 5–10 minutes. If pain remains moderate to severe, then administer a second dose of fentanyl 1 mcg/kg to a maximum dose of 200 mcg.
    - (c)  Obtain on-line medical direction for additional doses, if required.