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## Fentanyl Citrate (fentanyl citrate) - Drug Summary

Baxter Healthcare Corporation

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### Fentanyl Injection (fentanyl citrate)

#### COMMON BRAND NAMES

Sublimaze, Fentanyl Injection

#### THERAPEUTIC CLASS

Opioid analgesic

#### DEA CLASS

CII

#### ADULT DOSAGE & INDICATIONS

##### Anesthesia

**Premedication:**  
50-100mcg (1-2mL) IM 30-60 min prior to surgery

**General Anesthesia:**  
50-100mcg/kg (1-2mL/kg) w/ oxygen and a muscle relaxant  
**Max:** 150mcg/kg (3mL/kg)

**Adjunct to General Anesthesia:**  
**Low Dose:** 2mcg/kg (0.04mL/kg)  
**Moderate Dose:** 2-20mcg/kg (0.04-0.4mL/kg)  
**High-Dose:** 20-50mcg/kg (0.4-1mL/kg)

**Adjunct to Regional Anesthesia:**  
50-100mcg (1-2mL) IM or slow IV over 1-2 min

**Postoperatively (Recovery Room):**  
50-100mcg (1-2mL); repeat dose in 1-2 hrs prn

Administer w/ a neuroleptic (eg, droperidol inj) for the induction of anesthesia and as an adjunct in the maint of general and regional anesthesia

Use w/ oxygen in selected high-risk patients (eg, those undergoing open-heart surgery or certain complicated neurological or orthopedic procedures)

#### PEDIATRIC DOSAGE & INDICATIONS

##### Anesthesia

**2-12 Years:**  
**Induction/Maint:** 2-3mcg/kg

#### DOSING CONSIDERATIONS

**Elderly**  
Reduce initial dose

**Other Important Considerations**  
**Debilited Patients:** Reduce initial dose

#### ADMINISTRATION

IM/IV route



## HOW SUPPLIED

Inj: 50mcg/mL [5mL]

## WARNINGS/PRECAUTIONS

Administer only if specifically trained in the use of IV anesthetics and management of the respiratory effects of potent opioids. An opioid antagonist, resuscitative and intubation equipment, and oxygen should be readily available. Fluids and other countermeasures to manage hypotension should be available when used w/ tranquilizers. Initial dose reduction recommended w/ narcotic analgesia for recovery. May cause muscle rigidity, particularly w/ muscles used for respiration. Adequate facilities should be available for postoperative monitoring and ventilation. May cause euphoria, miosis, bradycardia, and bronchoconstriction. Caution in respiratory depression-susceptible patients (eg, comatose patients w/ head injury or brain tumor); may obscure the clinical course of patients w/ head injury. Caution w/ COPD, decreased respiratory reserve, potentially compromised respiration, liver/kidney dysfunction, and cardiac bradyarrhythmias. Monitor vital signs routinely.

## ADVERSE REACTIONS

Respiratory depression, apnea, rigidity, bradycardia.

## DRUG INTERACTIONS

Severe and unpredictable potentiation w/ MAOIs; appropriate monitoring and availability of vasodilators and  $\beta$ -blockers for HTN treatment is indicated. Additive or potentiating effects w/ other CNS depressants (eg, barbiturates, tranquilizers, narcotics, general anesthetics); reduce dose of other CNS depressants. Reports of cardiovascular (CV) depression w/ nitrous oxide. Alteration of respiration w/ certain forms of conduction anesthesia (eg, spinal anesthesia, some peridural anesthetics). Decreased pulmonary arterial pressure and hypotension w/ tranquilizers (eg, droperidol). May increase BP in patients w/ or w/o HTN w/ droperidol. May cause CV depression w/ diazepam.

## PREGNANCY AND LACTATION

Category C, caution in nursing.

## MECHANISM OF ACTION

Narcotic analgesic; produces analgesic and sedative effects. Alters respiratory rate and alveolar ventilation, which may last longer than analgesic effects.

## PHARMACOKINETICS

**Distribution:**  $V_d=4L/kg$ . **Metabolism:** Liver. **Elimination:** Urine (75%, <10% unchanged), feces (9%);  $T_{1/2}=219$  min.

## ASSESSMENT

Assess level of pain intensity, patient's general condition and medical status, or any other conditions where treatment is contraindicated or cautioned. Assess for history of hypersensitivity, pregnancy/nursing status, renal/hepatic function, and possible drug interactions. Assess use in elderly and debilitated patients.

## MONITORING

Monitor for signs/symptoms of respiratory depression, muscle rigidity, medication abuse, and drug dependence. If given w/ nitrous oxide, monitor for CV depression. If administered w/ a tranquilizer, monitor for hypotension and hypovolemia. If combined w/ droperidol, monitor for increases in BP; perform ECG monitoring. Perform routine monitoring of vital signs.

## PATIENT COUNSELING

Advise patient about the benefits and risks of the medication. Instruct to notify physician if any adverse reactions occur.

## STORAGE

20-25°C (68-77°F); excursions permitted to 15-30°C (59-86°F). Protect from light.

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