Fentanyl Intravenous for Adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- Stored in **CD press, MDA** regulations apply (storage and recording requirements)
- To avoid excess dosage in **obese** patients dose may need to be calculated on the basis of ideal body weight (patient is obese if BMI > 30kg/m^2)[ref 1,3]
- **Should ONLY BE GIVEN in an environment where the airway can be controlled by qualified personnel**
- **Doses in excess of 200micrograms:** recommended for use in **anaesthesia only,** ensure **airway protected**
- For Y-site compatibility see below

Available preparations

Sublimaze 100 micrograms per 2mL ampoule

Sublimaze 500 micrograms per 10mL ampoule

Fentanyl 100 micrograms per 2mL ampoule (Kalceks, Mercury)

Fentanyl 500 micrograms per 10mL ampoule (Kalceks, Mercury)

Fentanyl 2,500 micrograms per 50mL vial (Hameln) (unlicensed)

Reconstitution

Already in solution

- **Draw up using a 5micron filter needle**
- **Use gloves when opening ampoules**

Infusion fluids

- Sodium chloride 0.9% or Glucose 5% [ref 1]
- May also be administered undiluted

Methods of intravenous administration

Slow intravenous injection

- Administer undiluted over at least 30 seconds [ref 1]

Continuous intravenous infusion (administer using an electronically controlled infusion device)

- Using a concentration of 2.5mg (2500micrograms) per 50mL, infuse at a suitable rate - see under dose
- May also use injection solution undiluted [ref 1]

PCA (Patient Controlled Analgesia) for Difficult to Manage Patients

- This is at the discretion of the Pain Team only.

Dose in adults

- To avoid excess dosage in obese patients dose may need to be calculated on the basis of **ideal body weight** - see under Further information
- It is recommended that **ONLY AN ANAESTHETIST** should give doses greater than 200microgram

Route	Respiratory status	Dose
Slow intravenous injection	With spontaneous respiration	Initially 50 to 200 micrograms, then 50 micrograms as required
	With assisted ventilation (anaesthetist use only)	Initially 300 to 3500 micrograms, then 100 to 200 micrograms as required. **Caution, doses in excess of 200 micrograms may produce respiratory depression.**
Continuous intravenous infusion (ANAESTHETIST ONLY)	With spontaneous respiration	3 to 4.8 microgram/kg/**hour** (0.05 to 0.08microgram/kg/minute), adjusted according to response
	With assisted ventilation	Initially 10micrograms/kg which **MUST** be given over **10 minutes**, then up to 6microgram/kg/**hour** (=0.1microgram/kg/minute). Adjust according to response
	Assisted ventilation in **cardiac surgery**	See SPC Alternatively, the **loading dose** may be given by IV bolus

Monitoring

- Monitor blood pressure
- Monitor for respiratory depression
- Resuscitation equipment and opioid antagonists should be readily available

Further information

The patient is obese if BMI > 30kg/m^2 so use ideal body weight (see calculations below)

Male (IBW) (kg) = 50 + (2.3 x (inches over 5 foot) **or** 50 + (0.9 x cm over 152cm)

Female (IBW) (kg) = 45.5 + (2.3 x (inches over 5 foot) **or** 45.5 + (0.9 x cm over 152cm)

Storage

Store below 25^0C

References

SPC April 2024 (Mercury)

SPC May 2024 (Kalceks)

SPC (UK) (Hameln) March 2024

1. Injectable Medicines Guide, Medusa, accessed online 02/04/2026

2. Uptodate- accessed online 02/04/2026

3. BNF accessed online 23/04/2026

Therapeutic classification

Opioid analgesia