

Adrenaline (Epinephrine)

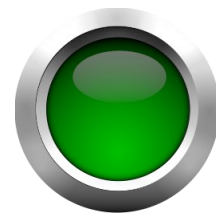
Further reading

<https://bnf.nice.org.uk/drug/adrenalineepinephrine.html>

JRCALC clinical practice guidelines 2019

<https://www.resus.org.uk/>

<https://emcrit.org/emcrit/dbp-cpr/>



Indications

- i) Medical cardiac arrest
- ii) Low cardiac output states
- iii) Anaphylaxis
- iv) Stridor (nebulized)

Effects and side-effects

Sympathomimetic effects including tachycardia, hypertension, inotropy, bronchodilation, dysrhythmias. High doses may cause myocardial and cerebral ischaemia.

Presentation

A clear and colourless solution containing 1mg adrenaline, presented as either:

- i) 1:1000 (1mg/ml) in a 1ml ampoule
- ii) 1:10000 (0.1mg/ml) in a 10ml pre-filled syringe

Adrenaline (Epinephrine)

Administration

Medical cardiac arrest

IV/IO rapid bolus and repeat every 3-5mins

- 1mg in adults

-10mcg/kg in children

-20mcg/kg in newborns

In non-shockable rhythms, give first dose as soon as possible

In shockable rhythms, give first dose immediately after 3rd shock

Where invasive arterial pressure monitoring can be established intra-arrest, consider using titrated adrenaline doses aiming to maintain arterial diastolic pressure above 40mmHg

Anaphylaxis (intramuscular)

For IV doses, refer to 'low cardiac output states' below

Adult and ≥12yrs

500mcg IM
(0.5ml 1:1000)

6-11 yrs

300mcg IM
(0.3ml 1:1000)

<6yrs

150mcg IM
(0.15mls 1:1000)

Low cardiac output states

Adults: IV 50 microgram (0.5ml of 1:10000 minijet), repeated as required

Children: IV 0.5 - 1microgram/kg

- * Withdraw the correct age-appropriate cardiac arrest dose from a minijet and dilute up to 10mls with water for injection. Label syringe appropriately.
- * Give 0.5 - 1ml bolus doses of this diluted mixture as required

Stridor (nebulised)

All ages: 4mg (all 4 ampoules of 1:1000) in an oxygen driven nebuliser

Contraindications

No contraindications in life-threatening situations