

ADRENALINE (A)

(Revised: August 2020)



TYPE:	A naturally occurring catecholamine [S3]		
PRESENTATIONS:	1:10,000 – 1mg in 10ml – glass ampoule 1:1,000 – 1mg in 1ml – glass ampoule		
ACTIONS:	1. α effect: peripheral vasoconstriction 2. β_1 effects: a) increased rate of sinus node b) increased myocardial contractility c) increased AV conduction d) increased myocardial irritability 3. β_2 effects: a) bronchodilation b) vasodilation of skeletal muscle Onset: IV = 30 seconds; IM = 30 – 90 seconds Max effect: IV = 3 – 5 min; IM = 4 – 10 mins Endotracheal use: slightly longer times		
USES:	ICP	1. Cardiac arrest: ➤ VF and VT – no output ➤ Asystole ➤ Pulseless electrical activity (PEA)	AP
	ICP	2. Anaphylaxis	AP
	ICP	3. Severe life-threatening asthma	AP
	ICP	4. Bradyarrhythmias resistant to atropine	
	ICP	5. Severe upper airway obstruction due to swelling	AP
	ICP	6. Shock unresponsive to fluid boluses	
ADVERSE EFFECTS:	1. Tachycardia 2. Tachyarrhythmias 3. Hypertension		

continues over

ADRENALINE (A) – cont.



CONTRA-INDICATION:

Known hypersensitivity

PRECAUTIONS:

These apply to patients with cardiac output only:

1. Care with patients with history of hypertension
2. Care with patients with history of ischaemic heart disease
3. Give extremely slowly to patients on MAO Inhibitor antidepressants (e.g. *Nardil, Parnate*) as adrenaline may provoke a greatly exaggerated response. Generally, patients on MAOIs with cardiac output should receive no more than ¼ of the normal dose of adrenaline, titrated to response.

DOSES:

CARDIAC ARREST		
ADULT:		
ICP	1mg IV or IO – fast push No limit on number of doses in cardiac arrest	AP
PAEDIATRIC:		
ICP	IV: 0.01mg/kg – fast push No limit on number of doses in cardiac arrest	AP
ICP	IO: 0.01mg/kg – fast push No limit on number of doses in cardiac arrest	
ICP	ETT: NEWBORN ONLY – if no IV or IO access – 0.02mg/kg	

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ADRENALINE (A) – cont.



ANAPHYLAXIS / SEVERE LIFE-THREATENING ASTHMA

ADULT:

ICP	IM: 0.5mg – repeat 5 minutely (max. three doses)	AP
ICP	If required – IV/IO adrenaline by infusion, titrated to response	

PAEDIATRIC:

ICP	0.01mg/kg IM (up to 50kg) – repeat 5 minutely (max. three doses)	AP
ICP	If required – IV/IO adrenaline by infusion, titrated to response	

BRADYARRHYTHMIAS RESISTANT TO ATROPINE

ADULT and PAEDIATRIC:

ICP	IV/IO adrenaline by infusion – titrated to response.	
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SEVERE UPPER AIRWAY SWELLING

ADULT:

ICP	IM: 0.5mg – repeat 5 minutely (max three doses)	AP
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PAEDIATRIC:

ICP	Weight >10kg – nebulise 5ml adrenaline 1:1,000 Weight <10kg – nebulise 0.5ml/kg adrenaline 1:1,000 (make volume up to 5ml with saline, as required) <i>Single dose only.</i>	AP
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CRITICALLY ILL SHOCKED PATIENTS

unresponsive to fluid bolus/es

ADULT and PAEDIATRIC:

ICP	IV/IO adrenaline by infusion – titrated to response.	
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ADRENALINE INFUSION:

1mg in 500ml normal saline (= 2 mcg/ml)
20 drops/min = 1 ml/min = 2 mcg/min (titrate as required).
Utilising a burette will achieve more accurate dosing
(ALWAYS use a burette with paediatric patients).
Remember to label the flask with a medication label.