



Preparation and Dosing of Push Dose Epinephrine - Pediatric

INDICATIONS:

1. Suspected Septic Shock unresponsive to fluid resuscitation.
2. Distributive (spinal) Shock unresponsive to fluid resuscitation.
3. Cardiogenic Shock unresponsive to initial fluid challenge (20 mL/kg up to maximum dose of 250 mL —normal saline) or presenting with evidence of pulmonary edema (pulmonary basilar rales).
 - ROSC
 - Shock unresponsive to initial fluid bolus
 - Deteriorating patient condition with unknown shock etiology

CONTRAINDICATIONS:

1. Hypovolemic Shock prior to fluid resuscitation and volume replacement
 - a. Examples include hemorrhage or severe vomiting/diarrhea with dehydration
2. Non-shock (perfusing) states
3. Suspected stimulant drug intoxication
 - Hemorrhagic shock

PROCEDURE:

Base Hospital contact and order required.

1. Initiate fluid resuscitation with 20 mL/kg IV or IO bolus up to maximum dose of 250 mL. If no response and it appears that Push Dose Epinephrine (PDE) would be indicated, make Base Hospital contact for PDE order.
2. If patient is experiencing cardiogenic shock with pulmonary edema, do not administer fluids but go directly to Base Hospital contact.
3. Paramedics may prepare PDE dose prior to Base Hospital contact but cannot administer medication without Base Hospital contact and order.

Mixing instructions:

- Take the epinephrine preparation of 1 mg in 10 mL (0.1 mg/mL —cardiac epinephrine) and waste 9 mL of the epinephrine solution.
- Into that syringe, withdraw 9 mL of normal saline from the patient's IV bag. Shake well.
- Mixture now provides 10 mL of epinephrine at a 10 mcg/mL concentration.

Recommended Preparation:

1. Obtain epinephrine 1 mg in 10 mL (0.1 mg / mL; cardiac epinephrine).
2. Waste 9 mL from the syringe, leaving 1 mL (0.1 mg).
3. Withdraw 9 mL of normal saline into syringe.
4. Gently mix.
5. Final concentration: 10 mL total volume at 10 mcg / mL.

Approved:

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Final Date for Implementation: 10/01/2024
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Administration Push Dose:

- Administer 0.1 mL/kg of above solution (0.001 mg/kg) IV/IO (max single dose 1.0 mL).
- ~~Maximum single dose 1.0 ml of above solution (0.01 mg or 10 mcg).~~
- May repeat dose every 3 minutes to titrate to age-based SBP (refer to graph below).
- ~~Titrate to a SBP > 70 + age in years X 2 for age up to 10 years.~~
- ~~For ages of 10 or more, titrate to a SBP > 90.~~

Weight	Volume
3 kg	0.3 mL
4 kg	0.4 mL
5 kg	0.5 mL
6 kg	0.6 mL
7 kg	0.7 mL
8 kg	0.8 mL
9 kg	0.9 mL
≥ 10 kg	1 mL

Pediatric Vital Signs by Age

Age	Pulse	Systolic Blood Pressure	Respiratory Rate
Neonate (0-30 days)	100-180	> 60	30-60
Infant (31 days - < 1 yr)	100-160	> 60	30-60
Toddler (1 yr - < 3 yrs)	90-150	> 70	24-40
Pre-school (3 yrs - < 5 yrs)	80-140	> 75	22-34
School Aged (5 yrs - < 10 yrs)	70-120	> 80	18-30
Teen (≥ 10 yrs)	60-100	> 90	12-16