



NURSE INITIATED ANAPHYLAXIS ALGORITHM – PEDIATRICS

Note: This is a guide for the treatment of anaphylaxis in children. This is not meant to be a comprehensive treatment guide as there is variability based on individual presentation. This is not a substitute for sound clinical decision making.

Anaphylaxis is highly likely when any one of the following three criteria are fulfilled:

1. Acute onset of illness involving skin, mucosal tissue or both **and at least one of:** respiratory compromise or reduced BP.
2. **Two or more of the following** that occur after exposure to a likely allergen: skin/mucosal involvement and/or respiratory compromise and/or reduced BP and/or persistent GI symptoms.
3. Reduced BP after exposure to a known allergen.

EPINEPHRINE 0.01 mg/kg/dose IM* (from 1 mg/mL ampoule)
Maximum dose: 0.5 mg (0.5 mL)

*Never give epinephrine SC due to inconsistent absorption.
Administer IM, anterolateral aspect of the thigh.

Repeat IM EPINEPHRINE every 5-10 minutes if symptoms persist

**ABC's
Monitors
IV Access
Consult Physician**

**Airway compromise or
respiratory failure?**

Manage airway and prepare all necessary equipment.
Assess circulation.
Consult physician immediately.
If persistent arrange Medevac.

Consider Second-line agents:

H1 Antagonist:

OR Diphenhydramine 1 mg/kg/dose IV, max: 50 mg
Cetirizine 6 mos to less than 2 yrs: 2.5 mg PO
2-5 yrs: 2.5-5 mg PO
5 yrs and older: 5-10 mg PO

H2 Antagonist:

OR Famotidine 0.25 mg/kg IV, max: 20 mg*
Ranitidine 1 mg/kg/dose PO, max: 50 mg*

Methylprednisolone 1 mg/kg/dose IV, max: 125 mg*
Salbutamol 5-10 puffs using MDI or 2.5-5 mg by nebulization

*Physician order required

REASSESS Patient

If symptoms persist repeat IM EPINEPHRINE and call physician

If clinical symptoms improve observe in health centre for 6 hours from last IM EPINEPHRINE dose

If asymptomatic after observation, can be discharged with education, follow-up and Epi-Pen®

Any symptoms present again start at top of algorithm

**Hemodynamic
Instability?**

Fluid management:
IV NS bolus 20 mL/kg.

Repeat as needed for hypotension to max of 3 boluses then consider IV EPINEPHRINE.

Consult physician immediately

If persistent arrange Medevac and consider IV EPINEPHRINE on discussion with physician.



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EPINEPHrine Dosing Guides

IM EPINEPHrine Dosage Chart:

(0.01 mg/kg/dose)

| Weight (Kg) | EPINEPHrine Dose (1 mg/mL ampoule) | |
|-------------------|---------------------------------------|-----------|
| 2 kg | 0.02 mg | (0.02 mL) |
| 3 kg | 0.03 mg | (0.03 mL) |
| 4 kg | 0.04 mg | (0.04 mL) |
| 5 kg | 0.05 mg | (0.05 mL) |
| 6 kg | 0.06 mg | (0.06 mL) |
| 7 – 8 kg | 0.08 mg | (0.08 mL) |
| 9 – 10 kg | 0.1 mg | (0.1 mL) |
| 11 – 15 kg | 0.15 mg | (0.15 mL) |
| 16 – 20 kg | 0.2 mg | (0.2 mL) |
| 21 – 25 kg | 0.25 mg | (0.25 mL) |
| 26 – 30 kg | 0.3 mg | (0.3 mL) |
| 31 – 35 kg | 0.35 mg | (0.35 mL) |
| 36 – 40 kg | 0.4 mg | (0.4 mL) |
| 41 – 45 kg | 0.45 mg | (0.45 mL) |
| 46 kg and greater | 0.5 mg | (0.5 mL) |

If unable to determine weight:

| Age | EPINEPHrine Dose (1 mg/mL ampoule) | |
|----------------------|---------------------------------------|-----------|
| 2 – 6 months | 0.07 mg | (0.07 mL) |
| 7 – 12 months | 0.1 mg | (0.1 mL) |
| 13 months – 4 years | 0.15 mg | (0.15 mL) |
| 5 years | 0.2 mg | (0.2 mL) |
| 6 – 9 years | 0.3 mg | (0.3 mL) |
| 10 – 13 years | 0.4 mg | (0.4 mL) |
| 14 years and greater | 0.5 mg | (0.5 mL) |

If using an Epi-Pen®:

(only to be used if EPINEPHrine ampoules not available/accessible)

| Weight | EPINEPHrine Auto-Injector Dose |
|--------------------|--------------------------------------|
| 10 to 25 kg | Epi-Pen® Jr (0.15 mg EPINEPHrine) |
| Greater than 25 kg | Epi-Pen® (0.3 mg EPINEPHrine) |