Basic Management of Post-Immunization Anaphylaxis in Non-Hospital Setting

EARLY RECOGNITION AND TREATMENT IS VITAL

Anaphylaxis is a medical emergency and rapid recognition and management can be life-saving. It generally begins a few minutes after injection and is usually evident within 30 minutes. Faster onset of symptoms may indicate a more serious reaction

1. Promptly administer aqueous epinephrine 1:1000 by intramuscular injection (IM) in the mid-anterolateral aspect of the thigh (CIG, 2016). REFER TO TABLE 1
   a. Record time of dose
   b. Repeat q 5 – 15 min PRN; max. 3 doses - don't use the same site as the vaccination.

   Failure to use Epinephrine promptly is more dangerous than using it improperly.
2. Activate emergency response system (911) or other service as per community protocol
3. Position client:
   a. On back or in a position of comfort
   b. Elevate lower extremities
   c. Place on side if vomiting or unconscious
   d. Pregnancy: place semi-recumbent on left side with legs elevated
4. Monitor airway, skin, HR, BP frequently for change in condition. Establish oral airway if necessary.
5. Stabilize:
   a. Give adjunctive treatment such as diphenhydramine HCL (Benadryl) IM if indicated. REFER TO TABLE 2
   b. Perform CPR if necessary
6. Arrange for transportation to local hospital or other facility as per community protocol

Adapted from Canadian Immunization Guide, Evergreen Edition, Sept 2016 and with permission from FNIHB SK Region

Table 1: Dose of Epinephrine (1:1000, 1 mg/mL solution), by weight or age

The Canadian Immunization Guide (2016) recommends injecting epinephrine intramuscularly in the mid-anterolateral aspect of the thigh. It further states that the deltoid is not as effective as an absorption site as the mid-anterolateral thigh and to avoid the limb used for vaccination.

The dosing regimens included in the tables below are based on most recent CIG and IAC recommendations for weight based dosing, further adapted by and used with permission from FNIHB SK Region.

Use of Autoinjector: If 15- 30 kg, give Junior dose; if > 30 kgs, give Standard dose; *Do not use under 15kg

Weight (recommended at all times)	Age (if weight not known)	Dose (1:1000) (IM) (0.01mg/kg body weight)	Dose by Autoinjector
Under 9 kg (18 lb)	0 - 6 months	0.05 ml (minimum per dose)	Not applicable
9 – 12 kg (18 – 28 lbs)	7 months – 2 yrs	0.1 ml	Not applicable
13 – 17 kg (29 – 39 lbs)	3 – 4 yrs	0.15 ml	*Junior Dose of 0.15mg after 15kg
18 – 22 kg (40 – 50 lbs)	5 – 6 yrs	0.2 ml	Junior Dose of 0.15mg
23 – 27 kg (51 – 61 lbs)	7 – 8 yrs	0.25 ml	Junior Dose of 0.15mg
28 – 32 kg (62 – 72 lbs)	9 - 10 yrs	0.3 ml	Standard Dose 0.30mg
33 – 37 kg (73 – 83 lbs)	11 yrs	0.35 ml	Standard Dose 0.30mg
38 – 45 kg (84 – 99 lbs)	12 yrs	0.4 ml	Standard Dose 0.30mg
46 kg (100 lbs and up)	13 yrs of age and up	0.5ml (maximum per dose)	Standard Dose 0.30mg

Adapted with permission from FNIHB – Saskatchewan Region based on CIG and IAC

Table 2: Dose of Diphenhydramine Hydrochloride, by weight or age

Diphenhydramine hydrochloride (Benadryl®) can be given as an adjunct to epinephrine if:

- The client's symptoms are not controlled by epinephrine; or
- The client cannot be transferred to an acute care facility within 30 minutes.

*Note: IM administration of Benadryl® is recommended during anaphylaxis because it provides more rapid absorption.

Oral treatment is suitable for conscious patients that exhibit non-anaphylactic allergic reactions following immunization. Diphenhydramine is available as oral solutions in 2 strengths:
Benadryl Liquid Children (and generics) 6.25 mg/5 ml or
Benadryl Elixir (and generics) 12.5 mg/5ml.

Diphenhydramine is generally not recommended for infants under 12 months of age, and should be used with caution between 12-23 months because it may cause drowsiness or paradoxical excitement.

Weight	Age	IM Dose (50mg/ml; 1mg/kg to max. dose of 50 mg)	PO Dose (6.25 mg/5ml or 12.5mg/5ml); 2 mg/kg to a max. dose of 50 mg)
7 – 10 kg (15 – 23 lbs)	12-23 months	0.2 ml	2.5 ml/dose or 1.25 ml/dose
11 – 15 kg (24 – 34 lbs)	2-4 years	0.3 ml	5 ml/dose or 2.5 ml/dose
16 – 20 kg (35 – 45 lbs)	5 – 7 yrs	0.4 ml	7.5 ml/dose or 3.75ml/dose
21 – 30 kg (46 – 67 lbs)	8 – 9 yrs	0.6 ml	10 ml/dose or 5 ml/dose
31 – 40 kg (68 – 89 lbs)	10 – 12 yrs	0.8 ml	15 ml/dose or 7.5 ml/dose
41 kg (90 lbs) and up	13 yrs of age and up	1 ml	20 ml/dose or 10 ml/dose

Adapted with permission from FNIHB – Saskatchewan Region based on CIG and IAC