Medical Management of Vaccine Reactions in Children and Teens, and Adults

All vaccines have the potential to cause a reaction. In order to accurately elicit adverse reactions, patients should be screened for precursors and contraindications before vaccination is administered. Even with careful patient selection, adverse reactions may occur. There are several potential precursors to adverse reactions; these should be described in detail in their vaccine information inserts. The table below describes procedures to follow in the management of vaccine reactions.

### Adults

- **Needle Tips**
  - Use a 1” syringe and 25 g needle.
  - Use a 1½” syringe and 25 g needle.
  - Use an extra-large cuff for epinephrine.
  - Use an appropriate size for the patient if available.

- **Hydroxyzine**
  - Oral (12.5 mg/5 mL liquid, 25 or 50 mg tablets, or 25 mg capsules).
  - Diphenhydramine (e.g., Benadryl)
  - Epinephrine, aqueous 1:1000 dilution, and extra-large cuff s

- **Sphygmomanometer**
  - Blood pressure medium, and large

- **Oxygen**
  - If available

- **Psychological support**
  - Offer support and reassurance to the patient.

### Children

- **Anaphylaxis**
  - Sudden or gradual onset of generalized urticaria (hives); angioedema (swelling of the face, mouth, lips, eyes, or throat); severe respiratory distress, stridor, dysphagia; hypotension; syncope (fainting); shock; abdominal cramping; or cardiovascula r collapse

- **Psychological support**
  - Offer support and reassurance to the patient.

### Vaccine Reactions in Children and Teens

- **Stages of anaphylaxis**
  - Immediate: Sudden or gradual onset of generalized urticaria (hives); angioedema; hypotension; syncope (fainting); shock; abdominal cramping; or cardiovascular collapse
  - Delayed: Post-vaccination symptoms: Fright before injection is given; Slight bleeding at the injection site; Soreness, redness, itching, or swelling at the injection site; etc.

- **Management**
  - Use a 1” syringe and 25 g needle.
  - Use a 1½” syringe and 25 g needle.
  - Use an extra-large cuff for epinephrine.

- **Hydroxyzine**
  - Oral (12.5 mg/5 mL liquid, 25 or 50 mg tablets, or 25 mg capsules).
  - Diphenhydramine (e.g., Benadryl)

- **Sphygmomanometer**
  - Blood pressure medium, and large

- **Oxygen**
  - If available

- **Psychological support**
  - Offer support and reassurance to the patient.

### Dosing Chart

<table>
<thead>
<tr>
<th>Age group</th>
<th>Range of weight (kg)</th>
<th>Dose (mg/kg)</th>
<th>Maximum dose (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–4 months</td>
<td>3–6 kg</td>
<td>0.25</td>
<td>1.25</td>
</tr>
<tr>
<td>4–6 months</td>
<td>6–9 kg</td>
<td>0.25</td>
<td>1.25</td>
</tr>
<tr>
<td>6–12 months</td>
<td>9–12 kg</td>
<td>0.25</td>
<td>1.25</td>
</tr>
</tbody>
</table>

### References

- www.immunize.org
- www.vaccineinformation.org

### Chart Descriptions

- **Table**
  - Describes procedures you can follow if various reactions occur.

- **Emergency medical protocol**
  - Protocol for managing anaphylactic reactions in children and teens.

- **Charts**
  - Medication dosages are provided for your convenience.
