

Management of Anaphylaxis

(EXTREMELY RARE REACTION TO IMMUNIZATIONS)

Anaphylaxis, a potentially life-threatening acute systemic allergic reaction to a foreign substance, is extremely uncommon after immunization. Nonetheless, immunization clinic staff should have basic knowledge on how to recognize and initiate "first-aid" treatment of this reaction.

Anaphylaxis must be distinguished from simple fainting (vasovagal syncope) which can occur before, during or shortly after injection. Persons experiencing this reaction may become pale and feel faint, or they may suddenly collapse unconscious but with a steady pulse and normal respiration.

- Persons feeling faint should lie flat or sit in the head-down position for several minutes.
- Person who faint completely should be placed flat with the feet (not the head) somewhat elevated. After they regain consciousness, they should be allowed to rest in a quiet area for 10 minutes.

Anaphylaxis usually begins at least several minutes after injection of an offending substance. Initial symptoms typically include several of the follow: sneezing, coughing, itching, "pins and needles" sensation of the skin, flushing, facial edema, urticaria ("hives"), and anxiety. In severe cases, these symptoms may be followed by progressive dyspnea (with or without audible wheezing or stridor due to lower and/or upper airway narrowing) and/or hypotension which may progress to shock and collapse, with a weak and fast or irregular pulse.

The following is a guideline for IMMEDIATE "first aid" medical treatment of anaphylaxis that should be given in immunization clinics where more sophisticated medical attention and equipment (oxygen, intravenous medication, etc....) are not immediately available.

Nurses can legally initiate these emergency treatment measures (Business and Professions Code 2725d):

1. Call emergency medical / paramedic staff.
2. Apply tourniquet lightly (not so tight as to stop arterial pulse) above injection site, unless this is impossible (as in deltoid or gluteal area injection).
3. Inject intramuscularly into the deltoid (not in the same are as the vaccine injection) **aqueous 1:1000 epinephrine (adrenaline)** according to the following approximate dosage:

< 12 months	0.05 ml
1-4 years old	0.15 ml
5-9 years old	0.3 ml
>10 years old	0.5 ml

If no improvement occurs within 3-4 minutes, repeat this intramuscular dose. Monitor respiration, pulse, and (if a sphygmomanometer is available) blood pressure. The same epinephrine dose can be repeated every 10-15 minutes, if needed.

4. As an adjunct to epinephrine (but not a replacement), **Benadryl (diphenhydramine hydrochloride), 50 mg/ml**, can be given once intramuscularly (at a different site than the epinephrine) in the following approximate dosage:

Under age 2 years	0.25 ml
Ages 2-4 years	0.5 ml
Ages 5-11 years	1.0 ml
>Age 12 years and Adults	2.0 ml

