

Ask the Allergist Webcast

Frequently Asked Questions

Live Broadcast: Monday, July 28, 2008



You asked about....

Epinephrine Auto-Injectors

- **What it is:** Epinephrine – also known as adrenaline – is the drug form of a hormone that the body produces naturally. Epinephrine is the treatment or drug of choice to treat anaphylaxis and as a result is widely prescribed for those at risk of anaphylaxis. Epinephrine helps to reverse symptoms of an allergic reaction by opening the airways, improving blood pressure, and accelerating heart rate.
- **Administering a second dose:** A second dose may be administered within 10 to 15 minutes, or sooner, after the first dose is given IF symptoms have not improved. The second dose should only be given in situations where the allergic reaction is not under adequate control; that is, the reaction is continuing or getting worse.
- **Side effects:** There are no contraindications to using epinephrine for a life-threatening allergic reaction. Simply put, this means that in normally healthy individuals, epinephrine will not cause harm if given unnecessarily. Possible side effects from epinephrine can include: rapid heart rate, flushing or pallor (paleness), dizziness, weakness, tremors and headache. These side effects are generally mild and subside within a few minutes.
- **Complications with epinephrine:** People with heart disease or high blood pressure should consult with their physician since medications such as beta-blockers used to treat these conditions may interfere with the action of epinephrine and worsen the allergic reaction. In addition, medications called ACE inhibitors may also worsen an allergic reaction.
- **Who should administer:** Individuals may not physically be able to self-administer epinephrine when they are suffering from a reaction. They may be anxious about using a needle, may downplay the seriousness of a reaction, or may not want to draw attention to themselves. They may also be too affected by their symptoms to self administer their epinephrine. Assistance from others is crucial in these circumstances.
- **Accidental Injection:** Epinephrine auto-injectors should be injected into the muscle on the outer side of the thigh. Before giving an injection, care should be taken to ensure that the needle end of the auto-injector is administered. Accidental injection into the hands or feet may result in loss of blood flow to the affected area. If there is an accidental injection into these areas, the person should go immediately to the nearest emergency room for treatment.

Anaphylactic Reactions

- **Exercise induced:** Strenuous exercise can trigger anaphylaxis in some sensitized individuals after they eat a certain food that is not normally problematic. In these individuals, anaphylaxis only occurs if ingestion of the food allergen is followed by exercise or vigorous physical activity within a few hours of ingestion.
- **Signs of a worsening reaction:** Signs that the reaction is not under adequate control are that the patient's breathing becomes more labored or there is a decreased level of consciousness. Patients who have been prescribed epinephrine are advised to have at least one epinephrine auto-injector with them at all times. Optimally, patients should also have access to a back-up auto-injector in case a second dose is required.

Disclaimer: The information provided is not intended to give medical or legal advice. Consult with a physician about concerns/questions specific to your situation. References to websites and other organizations are for information only and do not represent an endorsement.

School Issues

- **Reducing exposure:** A school anaphylaxis plan serves to reduce the risk of exposure to allergenic substances and helps school communities prepare for an emergency situation. It should not imply a guarantee (e.g. peanut-free environment) or that there is zero risk. School communities should strive to create an 'allergy-safe' vs. 'allergen-free' environment.
- **Location of epinephrine:** Auto-injectors must be kept in locations which are easily accessible and not in locked cupboards or drawers. These locations should be known to all staff members and caregivers. Individuals who are at risk of anaphylaxis should always carry an auto-injector with them (i.e. on their person) and tell others where they are kept, in case of an emergency. Auto-injector expiry dates should be checked regularly to ensure that devices are current and effective.
- **Back-up auto injectors:** Having a back-up dose of epinephrine (auto-injector) available as a precautionary measure is advisable. In some situations, a second injection may be required to treat an allergic reaction. It is beneficial for schools to have an epinephrine auto-injector as a standard item in their emergency or first-aid kit. (Note that auto-injectors contain one of two specific dosages of epinephrine and are not necessarily interchangeable.)
- **Food Lists:** Many schools provide a list of 'safe foods' to all families to help them comply with a 'no peanut or nut' request. While this is well-intended, schools and food-allergic consumers are encouraged to use them as a guideline only. Many of these lists could be inaccurate or outdated. It's essential that you read the label on all food products each time you purchase them as ingredients may change without notice.

Allergy Testing

- **Age to test:** Allergy skin tests are done to find out what substances have caused an allergic reaction. They can be done safely in children of any age who have had an allergic reaction.
- **When to re-test:** Patients at risk of anaphylaxis should see their allergist regularly. Part of the reassessment will often include repeat skin testing.
- **Allergen exposure:** Upon first exposure, the immune system treats the allergen as something to be rejected and not tolerated. This process is called sensitization. Re-exposure to the same allergen in the now-sensitized individual may result in an allergic reaction which, in its most severe form, is called anaphylaxis.