



The Need for Stock Epinephrine Auto-Injectors and Comprehensive Food Allergy and Anaphylaxis Management Plans in Schools, *an Article Review:*

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Up to 8% of the US pediatric population has a food allergy. This equates to 1 in 13 children who are at risk for anaphylaxis, a rapidly progressing and potentially fatal allergic reaction. Up to 30.4% of food allergic children have multiple food allergies. Nearly 40% of all food allergic children have reported anaphylaxis. It is critical to note, 25% of anaphylactic reactions in the school setting occur to those with no known history of allergies.

The first line of treatment for anaphylaxis is the immediate administration of a weight-based epinephrine auto-injector into the lateral thigh muscle, reducing the odds of hospitalization or death from anaphylaxis. After administering an epinephrine auto-injector, 911 should be called. The person must then be transported to the emergency room for several hours of monitoring because the allergic reaction can return or worsen.

Although anaphylaxis can also be triggered by medications, insect stings, latex or unknown sources, food is the most common cause of anaphylaxis in children and adolescents. **Food allergies result in 30% of all fatal anaphylactic reactions.** Despite this knowledge, anaphylaxis in the United States is underdiagnosed and underrecognized, leaving vulnerable populations at risk.

Students are exposed to food, as well as other allergens, during the school day. Being able to quickly identify the **signs and symptoms of anaphylaxis**, and then promptly treating the reaction with an epinephrine auto-injector can save lives. Mild symptoms can rapidly become life threatening. An epinephrine auto-injector works immediately to stop anaphylaxis by causing vasoconstriction and bronchodilation, thereby reducing edema and preventing hypotension and shock. It is the only medication with such rapid and life-saving actions for the treatment of anaphylaxis. If symptoms worsen, or do not improve, a second dose of epinephrine can be administered while waiting for EMS to arrive. There is no contraindication in administering an epinephrine auto-injector to someone experiencing anaphylaxis.

Recognizing this need, the School Access to Emergency Epinephrine Act was signed into law in 2013. This federal law allowed states to pass their own legislation related to schools stocking undesignated epinephrine auto-injectors for use by trained staff. A stock epinephrine auto-injector is used to treat someone who is experiencing anaphylaxis for the first time, or for when the person's auto-injector is unavailable. Stock epinephrine does not replace the responsibility of those with known allergies from obtaining their own personal epinephrine auto-injectors to keep or carry at school!

Only 12 states mandate stock epinephrine for their schools; however, the remaining states, except for Hawaii, allow for stock epinephrine in their schools. Please note, published data has shown 11% of schools with stock epinephrine reported an anaphylactic reaction and 47.5% of those students with anaphylaxis received the school's stock supply. Also, not all high-risk patients have been prescribed an epinephrine auto-injector, demonstrating the need for schools to be thoroughly prepared in food allergy management and anaphylaxis recognition and response protocols.

By maintaining stock epinephrine in accordance with state laws, collecting and reporting data around its usage, and developing policies and procedures regarding this matter, schools will improve the safety of their students and save lives.

Given the growing prevalence of food allergies and the increasing rates of anaphylaxis, schools need access to this life saving medication. Schools also need consistent, evidence-based education surrounding food allergies and anaphylaxis recognition and response. Therefore, best practice includes, but is not limited to:

- 1. Working with the school board and multidisciplinary team to create a comprehensive food allergy & anaphylaxis management policy.**
- 2. Implementing allergic reaction prevention strategies, as recommended in the CDC's Voluntary Guidelines for Food Allergy Management in the School Setting.**
<https://www.cdc.gov/healthyschools/foodallergies/index.htm>
- 3. Community wide food allergy and anaphylaxis education for all students and staff, including bus drivers, lunchroom staff, coaches, before/after care staff and all school parents.**
- 4. Developing policies and procedures compatible with state laws for maintaining and administering stock epinephrine auto-injectors in the school setting.**
<https://www.aafa.org/epinephrine-stocking-in-schools/>
- 5. Ongoing and continued education for all school staff regarding anaphylaxis recognition and response.**

The school nurse has the leadership qualities needed to effectively advocate, educate, and create policy and procedures in compliance with their state laws surrounding food allergies and anaphylaxis in the school setting. The school nurse understands the advance planning required for anaphylaxis prevention and preparedness. School nurses can lead the way in establishing stock epinephrine auto-injector protocols and develop comprehensive food allergy management plans in their schools. This will improve the safety and inclusion of everyone in the school setting, and improve outcomes in the case of anaphylaxis at school.

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FoodAllergyAwareness.org

