

# Developing Independence with Life Threatening Allergies: KARATE (Kids Acquiring Responsibility for Allergies Treated with Epinephrine) Research and Rationale (Barrington CUSD #220)

## Background

- Anaphylaxis is, “a sudden and severe allergic reaction that may cause death” (CDC, 2018).
- Manufacturer guidelines for EAI’s include having an EAI available at all times. (Pfizer)
- In children, the most common trigger for anaphylaxis is food, followed by insect bites/ stings, and medications (Dinakar, 2012).
- “Fatal food anaphylaxis most commonly occurs during the second and third decades. Delayed epinephrine administration is a risk factor.” (Turner, 2017).
- Evidence-based guidelines support that first-line treatment of anaphylaxis is quick administration of epinephrine (Dinakar, 2012).
- Deaths from food allergy are significantly related to the lack of epinephrine or incorrect administration. (Johnson, 2013)
- Although children spend much of their time in school, research shows that the vast majority of reactions occur outside of school. According to the Wood et al, only 2.9% of anaphylactic reactions occur in schools (2014).
- In a study of anaphylaxis events in schools, most events were experienced by students and food was the predominant trigger. Of 1,120 anaphylactic events reported among 6,574 schools, 32.5% were in grade Pre-K through 5, 18.9% in grades 6-7, and 44.9% in grades 9-12. (EpiPen4Schools Survey Combined Analysis: Prevalence and Triggers of Anaphylactic Events, 2015).
- There is no current evidence that anaphylaxis action plans are effective in long-term management of anaphylaxis. (Clinical and Experimental Allergy 2007).
- A study in which peanut allergic children smelled peanut butter for 10 minutes resulted in zero reactions. With skin contact, there were zero life threatening reactions. Some experienced redness and irritation from peanut butter contact on skin. (Simonte, 2003)
- Research supports it is highly unlikely that casual contact with peanut allergies results in serious allergic reactions, and that simple soap and water cleans surfaces and hands of peanut protein. (Perry, 2004)

## Rationale

- The majority of anaphylactic reactions occur outside of the school setting. It is important that students have their life-saving EAI available somewhere on their person, because immediate epinephrine administration is the most effective treatment for anaphylaxis in the community. Timely and correct administration of epinephrine saves lives.
- We understand that students respectfully vary in their developmental needs and self-responsibilities. The different “belts” were developed with targeted aged ranges/ developmental levels in mind. Students may progress through the four belts at a faster or slower rate.

## Conclusion

- Being prepared for the immediate administration of epinephrine, in the event of an exposure to an allergen, will keep students safe. This program also holistically prepares students to self-manage their severe allergy for life.

- Through KARATE, students, families, and school staff members may support and nurture independence and provide safety for students with severe allergies.

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