

# Severe Reactions to Food More Common than Thought in Young Children

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DENVER — Young children with allergies to milk and egg experience an unexpectedly high number of reactions to these and other foods, according to researchers at National Jewish Health. More than 70 percent of preschool children with documented or suspected food allergies suffered a significant reaction during the three-year period.

[View the epinephrine injection infographic](#)

## How to Use an EpiPen

Researchers also found that caregivers failed to administer the medication epinephrine in 70 percent of the severe and potentially life-threatening reactions. The study, conducted by the NIH-funded [Consortium of Food Allergy Research](#), is published in the June 25, 2012, issue of the journal *Pediatrics*.

“Our findings clearly point to a need for parents and other caregivers to be even more vigilant in avoiding allergenic foods and treating reactions appropriately,” said David Fleischer, MD, lead author and assistant professor of pediatrics at National Jewish Health. “They also suggest several strategies that both caregivers and healthcare workers can pursue to make mealtime safe for food-allergic children.”

## When to Use an EpiPen

The study followed 512 children ages 3-15 months for an average of three years, documenting all allergic reactions to food. Over the three-year period, the children experienced 1,171 allergic reactions to food. Of the 512 children enrolled, 145 (28 percent) had no allergic reactions, 98 (19 percent) had one reaction and 269 (53 percent) had more than one reaction.

Just over 11 percent (134) of the reactions were categorized as severe, and included symptoms such as swelling in the throat, difficulty breathing, a sudden drop in blood pressure, dizziness or fainting. Almost all of the severe reactions were caused by ingestion of the allergen rather than inhalation or skin contact. Only 30 percent of the severe reactions were treated with epinephrine, a medication that caregivers can administer to reduce symptoms while waiting for medical care. Reasons for the under treatment included failure to recognize severity of the reaction, not having epinephrine (EpiPen) available, and fears about epinephrine administration.

## EpiPen: A Parent's Perspective

“It is very important for caregivers of food-allergic children to carry an EpiPen with them at all times, know how to recognize a serious reaction and how to use an EpiPen,” said Dan Atkins, MD, co-author and professor of pediatrics at National

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Jewish Health. “Correctly using an EpiPen at the right time can save a life.”

The vast majority of the reactions (89 percent) were caused by accidental exposure, attributed primarily to unintentional ingestion, label-reading errors and cross-contamination.

Approximately half of the allergenic foods were provided by persons other than parents.

Surprisingly, 11 percent of the reactions followed purposeful exposures to these foods. Researchers are exploring possible reasons for these intentional exposures. They speculate that it could reflect parents’ at-home tests to determine if children have outgrown the food allergy.

The researchers identified several areas for improved education, including the need for constant vigilance, accurate label reading, avoidance of non-accidental exposure, prevention of cross-contamination, appropriate epinephrine administration, and education of all caretakers.

This research was funded by the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health, under grant numbers U19AI066738 and U01AI066560. In addition to National Jewish Health, the research was conducted at the University of Arkansas for Medical Sciences, Johns Hopkins University School of Medicine, Duke University Medical Center and Mount Sinai School of Medicine.

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