How Childhood Food Allergies Impact Public Health

Announcer:

This audio abstract is a special edition of Cracking the Code on Peanut Allergies brought to you through an independent educational grant from Aimmune Therapeutics.

Dr. Ruchi Gupta: Childhood food allergy is a serious, potentially life-threatening condition known to substantially impair quality of life among patients and their caregivers. Because food is central to most social interactions, children with food allergies may be at risk for severe allergic reaction at any time, and childhood food allergy imposes a considerable financial burden on affected families with an estimated annual economic impact of 24.8 billion dollars – about $4,200 per child per year.

I’m Dr. Ruchi Gupta, Professor of Pediatrics at Northwestern University’s Feinberg School of Medicine, and lead author of a recent study published in the journal, Pediatrics, titled “The Public Health Impact of Parent-Reported Childhood Food Allergies in the United States.”

With this study, we aim to describe the public health impact of childhood food allergy by studying a large, nationally-representative sample of US households with children. We collected parent proxy report data on food allergy prevalence, symptomatology, and healthcare use, both overall and for many specific food allergies, including detailed information on individual tree nuts and specific shellfish, as
well as individual foods like sesame. We also assessed rates of epinephrine, autoinjector possession and use as well as food allergy related emergency department visits so as to provide a more comprehensive view of pediatric food allergy severity and population-level burden to date.

We did this by administering a survey to US households between October 2015 and September 2016, obtaining parent proxy responses for over 38,000 children. We found an estimated current food allergy prevalence for children of 7.6%. Overall, 11.6% of parents reported a food allergy in their child; however, we excluded 4% of children with a food allergy whose allergic reaction history was inconsistent with an IgE-mediated food allergy. This underscores the importance of proper diagnosis of food allergy by physicians. The most prevalent allergens were peanut, milk, shellfish, tree nut, egg, finfish, wheat, soy, and #9 now was sesame. Among food-allergic children, about 42% reported one or more severe food allergic reactions, and about 40% reported multiple food allergies. Furthermore, about 1 in 5 children reported a food allergy related emergency department visit in the past year, while 42% reported a lifetime food allergy related emergency department visit. Only 40% of children had a current epinephrine autoinjector prescription. Additionally, we also found that prevalence rates were higher among African-American children and children with atopic comorbidities, and more research is needed to understand the reasons behind these differences in food allergy.

So, clearly, food allergy continues to be a major public health concern affecting about 8% or 1 in 13 US children. However, given that over 11% of children from our study were perceived as food allergic, this suggests that perceived disease burden may be even greater than previously acknowledged. Since many food-related conditions masquerade as food allergy, it is important that physicians properly diagnose these children, so they do not have to unnecessarily avoid the food.

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Aimmune is a clinical-stage biopharmaceutical company developing desensitization treatments to help protect people with food allergies from the potentially life-threatening consequences of accidental exposure. For more information, visit www.aimmune.com.