

40 percent of adolescents with food allergies experience frequent anaphylactic episodes

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Credit: Murdoch Childrens Research Institute

A new study by researchers from the Murdoch Children's Research Institute (MCRI) has shown that 40 percent of Australian adolescents with food allergies are experiencing frequent allergic reactions, including anaphylaxis.

Senior author Professor Katie Allen said that previous research has shown that adolescents are most at risk of experiencing adverse [food](#) reactions and appear to be at higher risk of anaphylaxis fatalities but are an understudied age group in food allergy research. The aim of this study was to determine how frequently adolescents were experiencing food

allergic reactions and anaphylaxis and explore the associated risk factors.

The new findings from MCRI's SchoolNuts study involving 10,000 students aged 10 – 14 found that among the 547 with a food allergy:

- 50 percent had experienced an allergic [reaction](#) in the past year
- almost 10 percent reported potentially life threatening anaphylactic reactions
- reactions occurring most commonly in the home

Lead author Vicki McWilliam said the finding that reactions occur most commonly in the home was quite surprising. "This is in contrast to the assumption that schools and restaurants pose higher risk for accidental allergen exposure and may reflect the compulsory training around food allergy that has been in place in the Victorian educational sector since 2008."

The study published in the *Journal of Allergy and Clinical Immunology* was consistent with other research showing that peanut and tree nuts were the most common trigger foods for reactions and those with nut allergy were most at risk of severe reactions. Having more than two food allergies doubled the risk of a food allergic reaction compared to those with a single food allergy. Ms McWilliam said that in addition to those with [nut allergies](#), adolescents with multiple food allergies may represent a high risk group that has not been sufficiently considered to date.

Co-existing asthma and [food allergy](#) was not found to increase the risk of experiencing severe food reactions.

"Surprisingly, our results showed that asthma was not associated with severe reactions only having nut [allergy](#)," Vicki McWilliam said.

Factors representative such as an adrenalin auto-injector carriage

patterns or higher risk of accidental allergen exposure through knowingly eating the food the student was allergic to or eating foods labelled with precautionary allergen labelling such as "may contain traces of" were not found to be associated with increased risk of reactions.

Those with asthma and more than two food allergies were at greatest risk for adverse food reactions. Those with nut allergies were most at risk of severe reactions.

"This study highlights the alarming frequency of adverse food reactions among adolescents and the need for specific management and education strategies aimed at allergen avoidance in this high-risk age group," Professor Katie Allen said.

School Nuts Study Participant—Saskia's Story

Saskia Day had her first anaphylactic experience when she was just six months old. Her mum, Claudia gave her a taste of hommus and she had an immediate, severe reaction.

"We took her straight to the doctor who gave her a shot of adrenalin, she then went to hospital by ambulance where they gave her another shot of adrenalin. She was then tested for food allergies and they discovered she was allergic to eggs, all nuts and sesame," Claudia said.

Saskia who is now 18 has had several anaphylactic episodes over the years which she has managed largely at home. To date she has luckily only needed to attend hospital on one occasion.

She took part in MCRI's SchoolNuts study and they did discover that she is no longer allergic to some tree nuts – almonds, pine nuts and peanuts – but she still has to avoid anything with egg, sesame or all other nuts. Even cocktails can cause problems. When selecting which drink to have

for her 18th birthday she realised she had to avoid any cocktails that have the word 'fizz' in their name because they contain egg whites.

Saskia has been largely self-managing her allergies since she's been 15 but it hasn't been easy. "It's made me quite anxious about food, especially when it comes to eating out. I also never really know how severe my reaction will be because there are so many variables that can affect it, such as my general health, asthma, how much pollen there is in the air among other things."

Provided by Murdoch Childrens Research Institute

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