

New treatment to overcome peanut allergies in children

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Shehan Nanayakkara has built up a tolerance for peanuts through the new program.

A new study is successfully helping children to overcome peanut allergies by exposing them to peanuts and desensitising them to their allergy.

For the past four years, paediatric allergist Dr Billy Tao has been developing a novel two-step desensitisation process at Flinders Medical Centre (FMC) in South Australia.

The first step involves boiling peanuts for an extended length of time to make them less allergenic.

The boiled peanuts are given to patients to partially desensitise them, and then once the patient shows no signs of allergic reaction, roasted peanuts are given to the children to increase their tolerance in the second step of the process.

Dr Tao said the low-cost and effective two-step process resulted in less adverse events than previously used single-step desensitisation methods – also known as oral immunotherapy.

"With traditional methods, a lot of people ingesting increasing amounts of roasted peanut flour or similar products start to react – so much so that many have to drop out and can't finish the treatment," Dr Tao said.

The FMC trial is carried out over a year or longer and includes patients aged between 10 and 15 years.

Of the 14 participants, 10 have already completed the first step and are now eating varying amounts of roasted peanuts, while four continue to eat boiled peanuts and are progressing well.

"One patient who had to be administered three adrenaline injections after consuming peanuts is now eating several roasted peanuts every day without problems," Dr Tao said.

Studies show the number of children living with peanut allergy appears to have tripled between 1997 and 2008, and as many as one in every 200

children will have severe allergy to nuts.

Allergy symptoms can vary from very mild (including tingling mouth, puffy lips and welts around the mouth) to moderate symptoms (facial swelling, body rash, runny nose and red eyes, abdominal pains and vomiting); while severe reactions include trouble breathing, looking pale and unwell, and anaphylaxis. Very occasionally death may result from a most severe reaction.

Dr Tao's idea for hypo-allergenic (less allergenic) nuts to be consumed first was based on an observation by German researcher Professor Kirsten Beyer, who in 2001 noted that [peanut allergies](#) were less prevalent in China than the western world because the Chinese ate boiled peanuts rather than peanut butter or roasted peanuts. She found that boiling peanuts for 20 minutes made them less allergenic than roasted peanuts.

Dr Tao said that a partnership with Dr Tim Chataway, Head of the Flinders Proteomics Facility, and Professor Kevin Forsyth from the FMC Paediatrics Department, proved that peanuts boiled for at least two hours were less allergenic and the pair designed a study using this immunotherapy approach.

Dr Tao hopes his research could one day be carried out in a doctor's clinic and then at home and avoid the need for hospital-based treatment.

However he strongly warned people against 'do-it-yourself' desensitisation at home and stressed that patients should be seen by an allergist and individual care plans developed.

Among those who have already undergone Dr Tao's new desensitisation method is 16-year-old Shehan Nanayakkara, who was diagnosed with a severe [peanut](#) allergy at the age of three.

"We first realised Shehan had an allergy when friends gave him a [peanut butter](#) sandwich and he had to be rushed to hospital...there have been many accidents since then," father Asanka said.

"During one round of allergy testing he ended up in the Intensive Care Unit – that time I thought I'd lost him.

"I approached Dr Tao to help and at first Shehan ate boiled peanuts, working his way up to consuming 13 a day, and now he eats five normal [roasted peanuts](#) daily, mixed in with his meals.

"It's been a big relief because children and teenagers don't care too much about what they eat and just eat whatever, and there has always been that worry that something might happen - now we can relax a bit because Shehan has some tolerance."

Provided by The Lead

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