

# Health Nuts

Nuts About Health



**Murdoch Childrens  
Research Institute**

*Healthier Kids. Healthier Future.*

The HealthNuts study  
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## Newsletter, 2015

Thank you for participating in the HealthNuts study! Australia has one of the highest rates of food allergy in the world with 1 in 10 children affected. Food allergy is now recognised as a major global health crisis. HealthNuts research is working to understand why some children develop food allergies, and to develop strategies to overcome and prevent allergic reactions.

Currently in its 6<sup>th</sup> year, HealthNuts has already made research breakthroughs in preventing egg allergy, and understanding the link between Vitamin D and allergic reactions. HealthNuts has assessed around 5,300 infants and children. Research began by testing 12-month-old infants, and was followed up by further testing at 4 years. The study is now in the third phase and over 1,500 6-year-old children have so far had an allergy health check. To continue to support our research, please remember to complete and return your child's 6-year-old survey, and we will be in contact to book your child's allergy health check. We need all children to take part, with or without an allergy, so we can look at what is and isn't linked to allergies.

During the recent allergy assessments, HealthNuts has introduced retinal imagery and activity monitors. By taking photographs of the children's retinas (the back of the eye), researchers can observe blood vessel changes. In adults, retinal blood vessel changes are linked to the development of cardiovascular disease. There is evidence that

these changes could begin in childhood. The retinal data collected during the assessment may be used in future population studies to understand the link between retinal blood vessel damage and cardiovascular disease. The activity monitor is called an accelerometer and is worn like a watch on the wrist. It measures the children's active and resting behaviour. It is exciting to expand our research with these additions

Thank you for continuing to support our research.



Professor Katie Allen  
Lead HealthNuts Researcher

## Centre for Food and Allergy Research

The Centre for Food and Allergy Research (CFAR) brings together Australia's most prominent allergy researchers and clinicians. The aim of the centre is to encourage research collaborations to learn more about food allergies, food allergy prevention and allergy management. The MCRI, and therefore results from the HealthNuts and SchoolNuts projects, are proud contributors to the research of CFAR.

On the 9<sup>th</sup> of September 2014, the **CFAR Symposium** was held at The Royal Children's Hospital to discuss their latest research. The Symposium focused on allergy prevention and treatment and in particular, implications and relevance to the wider community.

The two guest speakers were **Associate Professor Kari Nadeu from Stanford University (US)** who spoke about combination therapies to treat food allergy and **Associate Professor Wayne Shreffler from Harvard University (US)** who discussed mechanisms of food allergy.



The next **CFAR Symposium** will be in Sept 2015 at ASCIA (Adelaide).

[www.foodallergyresearch.org.au](http://www.foodallergyresearch.org.au)  
[info@foodallergyresearch.org.au](mailto:info@foodallergyresearch.org.au)

School Nuts  
Nuts About School



**What is SchoolNuts?** SchoolNuts is a similar study to HealthNuts, but is looking at food allergy in school students aged 10-14 years. SchoolNuts has visited over 100 schools all across Melbourne and over 9,000 students in years 5 to 8 have taken part, with children and parents completing a survey on health and allergies.

**Why is SchoolNuts important?** There has not been a great deal of research on food allergy in the adolescent age group and it's hoped that this study will help to identify lifestyle factors that are common among children aged 10-14 who suffer from food allergy and asthma. This could help shape food allergy public health policy and community guidelines.

**Where to next?** School visits have now finished and families are being invited to The Royal Children's Hospital for allergy testing. The results will then be analysed and published. **If you have any questions about SchoolNuts, please email: [school.nuts@mcri.edu.au](mailto:school.nuts@mcri.edu.au)**

## New Study 2015 - Vitamin D & Food Allergy

The **VITALITY Study** will assess whether vitamin D supplements prevent food allergies in an infant's first year of life. Earlier research has suggested a link between vitamin D deficiency and food allergy. Vitamin D is currently used to treat and stop rickets, and for healthy bone development. It is not used to prevent food allergy. The trial will involve 3,000 infants aged between 6-8 weeks.

For further information email: [vitality@mcri.edu.au](mailto:vitality@mcri.edu.au)

**Professor Katie Allen recently appeared on the SBS program 'Insight', where she talked about allergy research and common misconceptions. Congratulations Katie!**

## HealthNuts True or False Quiz

1. Introducing allergenic foods such as egg around 6 months of age is safe and may even be protective against food allergens.
2. Infants with a pet dog inside the home, are less likely to be egg allergic at 1 year of age.
3. Gut microflora play no part in the development of tolerance to foods.
4. Manufacturers can use precautionary labels even if they don't test their products for allergen contamination.

Answers: 1. True, 2. True, 3. False, 4. True

## A Fresh Start for Darcey

Due to the consequences of a nasty bacterial gut infection called *Clostridium Difficile*, Darcey spent the first 2 years of his life in and out of hospital on a special formula unable to eat solid foods and allergic to a range of foods such as soy and cow's milk. His condition was made worse by the unavoidable overuse of antibiotics. He also had daily incidents (up to 10 times per day) of diarrhoea. As you can imagine, this meant Darcey was in extreme discomfort and his parents were constantly in a state of concern.

Last year, Professor Katie Allen performed an Australian-first gut microbe transplant on Darcey. She replaced the "bad" gut microbes with "good" microbes from his father. Now Darcey no longer has any severe symptoms or food allergies; he eats normally and is a happy and healthy 3 year old!



To further support MCRI work, please give today: Email: donate.mcri.edu.au Ph: (03) 8341 6362

### We asked staff 'What's the best thing about working on HealthNuts?'

- **Leone:** 'It combines working with families, and making a difference for them with the knowledge that the information is being used to learn and make changes for the future.'
- **Helen:** 'I love it that we have such wonderful families that keep coming back and we get to know the children and families as they grow.'
- **Holly:** 'I love the diversity of my work in the HealthNuts study, it is a real privilege to work with families, and the HealthNuts children never fail to make me smile!'
- **Nicola:** 'Being new to the HealthNuts team I am finding the commitment of everyone involved in this study, the families and children, staff and volunteers very impressive. There is so much to learn and the HealthNuts kids are very fun (and sometimes funny) to work with.'
- **Carley:** 'I love that my work for the HealthNuts study is contributing to improving the health of children and more specifically, aiming to make a difference in the lives of children with allergies.'
- **Giovanni:** 'It's a privilege to work with such wonderful families who are willing to contribute to the community to not only help to improve their own quality of life, but also of those worldwide.'
- **Michaela:** 'Besides the diverse nature of the job, I appreciate the ongoing motivation that families have to contribute to research that extends to so many other children and their families.'

## HealthNuts PhD Profiles

### Vicki McWilliam

I am a dietitian specialising in food allergies in the Department of Allergy and Immunology at The Royal Children's Hospital. I have recently commenced a part time PhD at MCRI alongside my clinical role with the Centre for Food and Allergy Research (CFAR).



My research will explore some of the questions related to tree nut allergies, including: **How common are they? Which tree nuts most commonly cause allergy in Australian children? What types of allergic reactions do children have to tree nuts?** This research will be done with the HealthNuts and SchoolNuts studies.

### Rosita Zakariaeeabkoo

I obtained my masters of biomedical science in the diagnostic laboratory field in immunology and clinical biochemistry. I am currently pursuing my PhD at MCRI and RMIT University under leading paediatric experts.



My research will explore **the role of vitamin D and A in the development of allergic diseases**. Considering Melbourne has a leading reported incidence in these conditions, I will investigate **whether vitamin D and A insufficiencies at birth is predictive of a higher risk of allergic diseases in early childhood**.



It's a very important trial as peanut allergies have increased by 350% in the past two decades.

### Allergic children eat peanuts after clinical trial

In a clinical setting under medical supervision, giving increasing amounts of peanut to try to train the immune system not to react, while using a probiotic found in yogurt at the same time, has been found to have the ability to induce peanut tolerance in 4 out of 5 allergic children.

The MCRI study, led by Professor Mimi Tang, was the first-ever study to combine the probiotic '*Lactobacillus rhamnosus*' and increasing doses of peanut protein. Dr Tang chose this specific probiotic because her previous research suggested that it could help switch off the allergic reaction.

The findings showed that in 80% of children, the immune system produced a positive response rather than a harmful response to the peanuts, and this lasted up to 18 months.

"These findings provide the vital first step towards developing a cure for peanut allergy, and possibly for all food allergies," Dr Tang said. "However, it will be at least 5 to 10 years before the therapies can be offered to allergy patients."

Next Dr Tang will look at whether the desensitisation has only a short-term effect, or whether it produces a long-lasting tolerance.

### Have your details changed since we last contacted you?

If you've moved houses, are planning to move, or if you have changed your home/mobile phone number or email address, please let us know so we can keep in touch:

Phone: (03) 8341 6266  
Email: health.nuts@mcri.edu.au

### Free allergy health check:

We look forward to seeing you and your child as they turn 6 years old for their free allergy health check! **Feel free to contact us, or we will contact you when your child turns 6.** Please also complete your questionnaire. **We'd like everyone to take part, with or without an allergy.**



Become our friend on Facebook (HealthNuts Study) to receive the latest updates and news from HealthNuts, including information about our latest research.

The Children's

Excellence in clinical care, research and education



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HealthNuts is run by researchers at the Murdoch Childrens Research Institute at The Royal Children's Hospital and researchers at the University of Melbourne. HealthNuts is funded by the National Health and Medical Research Council, Ilhan Food Allergy Foundation and AnaphylaxiStop.