



Healthier Kids. Healthier Future.



Nuts About Health

## Newsletter, 2016-17

The HealthNuts study  
Murdoch Childrens Research Institute, The Royal Children's Hospital  
Flemington Rd, Parkville VIC 3052  
phone: (03) 8341 6266 email: health.nuts@mcri.edu.au  
www.mcri.edu.au/healthnuts

**Welcome!** We are pleased to present you with an update on HealthNuts, and other leading allergy studies our researchers are involved in. The rise in food allergy in developed countries has attracted international scientific attention with Australia reporting the highest rate of both food allergy and food-induced anaphylaxis. The HealthNuts study of 5,300 children is the world's first comprehensive population-based study of food allergy with objective measurement of true food allergy. HealthNuts research is working to understand why some children develop food allergies, how food allergies are related to other allergic diseases (asthma, hay fever, eczema), and to develop strategies to overcome and prevent allergic reactions.



You will recall that the research began by testing 12-month old infants to common food allergens, and then further testing at 4 years of age for children with allergies or for those without allergies, parents completed a questionnaire. At 6 years of age, all children (with

or without known allergies) were tested and parents again completed a questionnaire. Over 3,000 children were seen at age 6 years.

So far, HealthNuts has found that up to 10% of 1 year olds have a food allergy – much higher than previously thought; Infants given egg at 4-6 months were less likely to have an egg allergy than those not given egg until after 6 months – this has changed infant feeding guidelines; Having older siblings and having an inside dog reduces the likelihood of infants developing egg allergy; Low Vitamin D is associated with food allergy at 1 year of age.

We now look ahead with much excitement, as HealthNuts has received National Health and Medical Research Council (NHMRC) funding to see children again as they turn 10 years of age. By seeing 10 year olds, HealthNuts will be able to examine food allergy in the development of asthma, with this chronic allergic disease often arising at this age. We will be the world's first study to accurately describe food allergy throughout childhood (e.g. why do some children grow out of their food allergy) and the role food allergy plays in the development of asthma.

Thank you for continuing to support our research.

Professor Katie Allen, **Lead HealthNuts Researcher**

### Meet our Lead HealthNuts Researcher, Professor Katie Allen

Professor Katie Allen is :

- Theme Director of Population Health and Group Leader of Gastro and Food Allergy at MCRI.
- A paediatric gastroenterologist and allergist.
- An inaugural Fellow of the Australian Academy of Health and Medical Science and Chief Investigator on five National Health and Medical Research Council (NHMRC) funded studies.
- Director of the NHMRC funded Australian Centre of Food & Allergy Research.



Also, like many of her patients, Katie has a food allergy and carries an EpiPen. But unlike her patients, Katie developed the condition as an adult. After the birth of her first child, she noticed that her throat would swell after eating peanut butter sandwiches. "This started getting worse every time I ate it. I'd eat some, then have this really swollen throat, then I would start to drool," she says. "I went to get some tests and they said I had adult-onset peanut allergy, which I didn't even know existed."

Having an allergy herself, Katie has observed mixed reactions from people about allergies. "It's very complex and people have very strong views one way or the other. It doesn't exist, or it does exist, or they're hyper anxious. My view is that we should empower people to be able to eat what they need to eat, that's safe for them. That doesn't matter if it is coeliac disease, an intolerance, or an allergy."

Pictured above, with Katie, is HealthNuts participant Jenson Park. When younger, Jenson tested positive to allergies for egg and some tree nuts. While he still has these allergies, the regular testing by the HealthNuts team determined he can now tolerate baked egg (foods like cakes, biscuits and muffins).



Like HealthNuts, the SchoolNuts study is trying to get to the bottom of why Australia has the highest rates of food allergy in the world, however, SchoolNuts is focussing specifically on 10- to 14-year-old children. Over the past 4 years, SchoolNuts has visited over 100 schools across Melbourne to deliver

questionnaires to over 9,000 students in years 5-8.

Now that the important task of collecting data is complete, our researchers have begun work to identify patterns of lifestyle factors that are common among adolescents with food allergy. In particular, our researchers are focussing on the relationship between food allergy and asthma as well as looking at how food allergies can impact the life of an adolescent. Stay tuned for the results from SchoolNuts in the near future.



For further information, email [school.nuts@mcri.edu.au](mailto:school.nuts@mcri.edu.au)

### Vitality - Vitamin D and Allergy Trial

A new study called Vitality will assess the relationship between food allergy and vitamin D. It has long been known that vitamin D is important for maintaining strong bones, however, scientists are now investigating whether vitamin D plays a role in food allergy. Vitality is visiting local council immunisation sessions across Melbourne and aims to have 2,330 infants aged 6-8 weeks old participate in the study. Specifically, this trial will examine whether vitamin D supplementation given in the first 12 months of life can prevent the development of food allergy and reduce lower respiratory infections.

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

### Allergy Friendly Self-saucing Chocolate Pudding These are made without nuts, eggs, dairy, soy, fish and sesame seeds.

**Ingredients:** • Nuttelex or dairy free margarine, for greasing

- 1 cup self-raising flour
- 1/2 cup cocoa powder
- 1/2 cup white sugar
- 2 tablespoons Nuttelex or dairy free margarine, melted
- 3/4 cup rice milk
- 1/2 cup raw sugar
- 1/2 cup boiling water

- Method:**
1. Preheat the oven to 180°C. Grease a 20cm round ovenproof dish with margarine.
  2. Place the flour, half the cocoa, the sugar, margarine and milk in a bowl. Mix thoroughly and pour into the prepared dish.
  3. Combine the raw sugar with the remaining 1/4 cup cocoa and sprinkle them over the mixture, then carefully pour on the boiling water.
  4. Bake for 45-60 mins. When the pudding is cooked, it will be firm to the touch and have a crust around the edges. Serve hot.

Reproduced with permission from Suzanna Paxton, author of 'Allergy Safe Family Food'.

## Meet our PhD Students



**NOOR SUAINI** - I started on HealthNuts/SchoolNuts in 2012 as part of my Bachelor of Science (Honours) degree. Upon completion, I worked as a research assistant for 2 years, processing and managing all the bloods that were collected from the participants (Many thanks to all who have kindly donated their blood!). We have found that Australian-born infants to East Asian parents were more likely to be peanut allergic compared to Australian-born infants of Australian parents. Using the same study groups as the above finding, my current PhD project will explore possible interactions between genetic and environmental risk factors in the development of food allergy.



**YICHAO WANG** - I finished my Bachelor and Master degrees in the field of population health in China. I have recently been a PhD student at MCRI and The University of Melbourne. I will explore the distribution and determinants of food allergy and other allergic diseases in order to provide more preventive measures to vulnerable populations. My research questions include: 1. What is the frequency of peanut allergy and food-induced anaphylaxis? 2. Are there differences in frequency in different geographic areas? 3. What factors contribute to these discrepancies? 4. How can food allergy be prevented effectively? The research will be based on the HealthNuts and SchoolNuts studies.

## Peanut Allergy Trial helping allergic kids to tolerate peanuts

In our last newsletter, we updated you on some exciting results from the "Probiotic and Peanut Oral Immunotherapy for treatment of peanut allergy Trial (PPOIT)." This study combined a probiotic with peanut protein oral immunotherapy, a world first, and amazing results were found. Eighty two percent of children with peanut allergy who underwent the therapy were able to tolerate peanut, compared to four per cent in the placebo group.



These results generated much interest from researchers and allergy sufferers alike. As a result, another trial began in 2016 - a \$2.8 million multi-centre trial across Perth, Adelaide and Melbourne involving 200 children. It is hoped that this trial will 1. Prove that adding the probiotic does give a benefit over and above oral immunotherapy alone, 2. To see if the combination therapy can give allergy sufferers longer-lasting tolerance.

So why might a probiotic hold the key? Lead Investigator Professor Mimi Tang says "I thought if we presented a probiotic, together with the allergen, that probiotic may be able to provide the right environment to encourage the immune system in a different direction to its current default."

For further information on PPOIT, email [peanut.study@mcri.edu.au](mailto:peanut.study@mcri.edu.au)



The Centre for Food & Allergy Research (CFAR), directed by Professor Katie Allen, is a collaboration of experts in children's food allergy and food-related immune disorders. It uses the latest approaches in epidemiology, immunology, paediatrics, nutrition, gastroenterology and biostatistics to investigate factors that cause, prevent and improve food allergies.

CFAR had some exciting overseas allergy experts visit MCRI in 2016 including **Dr David Fleischer**, **Dr Pamela Guerrero**, and **Dr Matthew Greenhawt**, all from the US.

The CFAR Australian Infant Feeding Guidelines Summit was hosted by MCRI on the 13th May 2016, and along with Dr Guerreiro and Dr Greenhawt, attendees included a broad range of experts in the field.

The Summit meeting resulted in a consensus agreement to change the Australian infant feeding guidelines across all of the partner participants, to the following recommendations:

1. When your infant is ready, at around six months, but not before four months, start to introduce a variety of solid foods, starting with iron rich foods, while continuing breastfeeding.
2. All infants should be given allergenic solid foods including peanut butter, cooked egg, dairy and wheat products in the first year of life. This includes infants at high risk of allergy.
3. Hydrolysed (partially or extensively) infant formula are not recommended for prevention of allergic disease.

For further information on CFAR, email [info@foodallergyresearch.org.au](mailto:info@foodallergyresearch.org.au)

## We asked staff 'What has been your best experience so far on HealthNuts?'

**Michaela (Researcher)** - *The opportunity to provide a voice for the findings from HealthNuts. Most parents and participants are intrigued about how the data and samples collected have contributed to the current findings from HealthNuts. I enjoy observing the sense of pride that the children get when they realise that something that they have contributed to, has helped us better understand the aetiology of allergies in children.*

**Laura (Researcher)** - *I have undertaken a number of assessments at our HealthNuts participant's homes. So many of the families and children I've seen are really enthusiastic about this project. It is wonderful talking to parents who have a great interest in how the study is progressing, and their enthusiasm rubs off on their children. One family were so lovely and baked me the recipe included on one of our HealthNuts newsletters, the mum said it was to enjoy while I was on the road travelling between home visits!*

**Megan (Project Manager)** - *I love hearing from staff members about how much they enjoy seeing all the families, and the positive feedback that the parents give about the study and even hearing about some participants taking the time to draw some lovely pictures or writing a little thank you letter for our staff.*

### Free allergy health check:

We look forward to seeing you and your child as they turn 10 years old for their free allergy health check! **Feel free to contact us, or we will contact you when your child turns 10.** Please also complete your questionnaire. **We'd like everyone to take part, with or without an allergy.**



Find us on:  
**facebook**

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

### 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](mailto:health.nuts@mcri.edu.au)

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Newsletter contributor: Megan Mathers

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.