

Can children with egg allergy tolerate pasteurised raw egg?

March 30 2015

New research from the University of Adelaide shows pasteurised (heated) raw egg contains the same main allergens as non-pasteurised (fresh) raw egg, and is not likely to be tolerated in children with egg allergy.

Researchers have compared the properties of pasteurised with non-pasteurised raw egg in order to better understand if pasteurised egg could be tolerated by allergic [children](#).

Pasteurised raw egg, in which the egg is heated just enough to kill bacteria, is used in allergy testing with children because of the risk of salmonella or avian influenza from fresh raw egg. But for some time, researchers have been concerned that the two forms of egg couldn't be accurately compared, because the pasteurisation and drying process was likely to change the structure of the egg protein.

"Heating of any kind has the potential to affect the allergenic properties of egg protein, which is why we needed to understand the differences between these two types of raw egg," says University of Adelaide PhD student Merryn Netting from the University's Women's and Children's Health Research Institute.

"In our laboratory tests, we discovered that in fact the pasteurised raw egg contains all of the main allergens and is similar to unpasteurised raw egg. The way it is digested also appears to be the same," says Ms Netting, who is a Paediatric Dietitian based at the Women's and

Children's Hospital.

"This finding means that we can be rest assured our studies into [egg allergies](#) and tolerance in children are as accurate as they can be, which will greatly benefit our understanding of this growing condition. It also means that no matter which form of raw egg is used, the main allergens are there – so from an allergic child's point of view, no form of raw egg is necessarily 'safe'," she says.

Associate Professor Michael Gold, research leader in Allergy and Vaccine Safety with the University's Robinson Research Institute, says egg allergy is the most common food allergy in Australia, affecting 9% of young children.

"All egg proteins have the potential to induce an allergic reaction. The main form of egg that children with allergy can often tolerate is heated at very high temperatures, such as through the baking process," says Associate Professor Gold, who is also based at the Women's and Children's Hospital.

"Oral food challenges under strict medical supervision are important for diagnosis and management of egg allergy in children. This discovery means that pasteurised whole raw egg powder is now confirmed as a suitable substitute for raw egg, and we can continue to use it in clinical practice."

The results of this study are published in the journal *Pediatric Allergy and Immunology*.

More information: "Allergenicity of Pasteurized Whole Raw Hen's Egg compared with Fresh Whole Raw Hen's Egg."
DOI: 10.1111/pai.12365

Provided by University of Adelaide

Citation: Can children with egg allergy tolerate pasteurised raw egg? (2015, March 30) retrieved 20 April 2024 from

<https://medicalxpress.com/news/2015-03-children-egg-allergy-tolerate-pasteurised.html>

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