Feeding babies egg and peanut may prevent food allergy

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Feeding babies egg and peanut may reduce their risk of developing an allergy to the foods, finds a new study.

In the research, which is the largest analysis of evidence on the effect of feeding allergenic foods to babies, scientists from Imperial College London analysed data from 146 studies. In total the studies involved

more than 200,000 children.

The results suggest feeding children egg between the ages of four and six months may reduce their risk of developing egg allergy.

The study, which was commissioned by the UK Food Standards Agency, also found feeding children peanut, between the ages of four and eleven months, may reduce risk of developing peanut allergy.

In addition, the team analysed milk, fish (including shellfish), tree nuts (such as almonds) and wheat, but didn't find enough evidence to show introducing these foods at a young age reduces allergy risk.

The research is published today in the *Journal of the American Medical Association*.

Although previous studies have found feeding children peanut and egg may reduce allergy risk, other studies have found no effect.

Dr Robert Boyle, lead author of the research from the Department of Medicine at Imperial, said: "This new analysis pools all existing data, and suggests introducing egg and peanut at an early age may prevent the development of egg and peanut allergy, the two most common childhood food allergies.

"Until now we have not been advising parents to give these foods to young babies, and have even advised parents to delay giving allergenic foods such as egg, peanut, fish and wheat to their infant."

Allergies to foods, such as nuts, egg, milk or wheat, affect around one in 20 children in the UK. They are caused by the immune system malfunctioning and over-reacting to these harmless foods. This triggers symptoms such as rashes, swelling, vomiting and wheezing.

"The number of children diagnosed with food allergies is thought to be on the rise", added Dr Vanessa Garcia-Larsen, a co-author on the study from the National Heart and Lung Institute at Imperial. "There are indications that food allergies in children have become much more common over the last 30 years.

The number of patients coming into our clinics has increased year-on-year, and allergy clinics across the country have seen the same pattern."

She added that the reasons behind this rise are still unclear - doctors may be better at recognising food allergy, or there may be environmental factors involved.

In the new study, called a meta-analysis, the team initially analysed 16,289 research papers on allergies and other immune system problems. Out of these, 146 were used for data analysis of when to feed babies allergenic foods such as egg, peanut, wheat and fish.

The results showed that children who started eating egg between the ages of four and six months had a 40 per cent reduced risk of egg allergy compared to children who tried egg later in life.

Children who ate peanut between the ages of four and eleven months had a 70 per cent reduced peanut allergy risk compared to children who ate the food at a later stage. However, the authors cautioned that these percentages are estimates based on a small number of studies.

Five studies (involving 1915 children) were used to estimate reduced risk of egg allergy, and two studies (involving 1550 children) were used to estimate reduced risk of peanut allergy. Therefore these figures may change when more studies are completed.

The team also calculated absolute risk reduction. They found that in a

population where 5.4 per cent of people have egg allergy (the UK prevalence rate from one recent study), introducing egg between four and six months of age could prevent 24 cases of egg allergy per 1,000 people.

For peanut, in a population where 2.5 per cent of people have peanut allergy, introducing the food between four and eleven months could prevent 18 cases per 1,000 people.

The authors cautioned that the analysis didn't assess safety, or how many of the babies suffered allergic reactions from the early introduction.

Dr Boyle cautioned against introducing egg and peanut to a baby who already has a food allergy, or has another allergic condition such as eczema. "If your child falls into these categories, talk to your GP before introducing these foods." He also noted that whole nuts should not be given to babies or toddlers due to the choking hazard. "Whole nuts should be avoided in young children - if you decide to feed peanut to your baby, give it as smooth peanut butter."

The team also analysed whether introducing peanut, egg, milk, fish or wheat early into a baby's diet affected their risk of autoimmune diseases such as coeliac disease. The team found no effect on risk.

Commenting on the findings, the UK Food Standards Agency said: "Imperial College London has produced a high quality review. The Government is considering these important findings as part of its review of complementary feeding for infants to ensure its advice reflects the best available evidence.

Families should continue to follow the Government's current long-standing advice to exclusively breastfeed for around the first six months of age because of the health benefits to mothers and babies."

More information: *JAMA*. 2016;316(11):1181-1192. DOI: 10.1001/jama.2016.12623