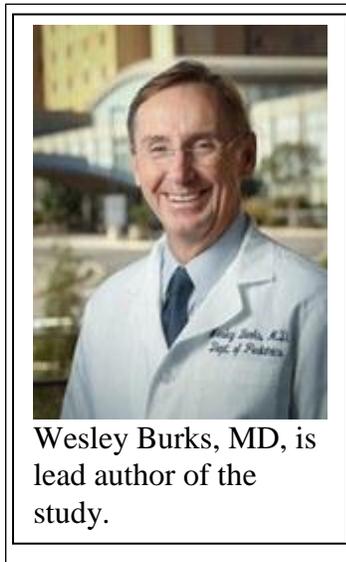


UNC researchers discover promising new treatment for egg allergy

Giving egg-allergic children small amounts of egg over many months found to reduce severe reactions, help some shed the allergy entirely.

CHAPEL HILL, N.C. – Doctors currently have only one recommendation for people allergic to eggs: avoid eggs completely. But researchers at the [University of North Carolina School of Medicine](#) recently found promise in doing just the opposite. Eating small amounts of egg every day for many months lowered the threshold for allergic reactions in 75 percent of egg-allergic children; 28 percent were able to incorporate egg into their regular diets after two years on the treatment.

“It’s just what we had hoped for,” said [Wesley Burks, MD](#), Curnen Distinguished Professor and Chair of the [UNC Department of Pediatrics](#) and the study’s lead author. “It’s what we anticipated based on earlier studies, but we weren’t sure it would happen. Almost a third of the children had a permanent change and were no longer egg-allergic.”



[The study](#) is published in the July 19, 2012 issue of the [New England Journal of Medicine](#).

Burks cautioned that the treatment is not yet ready for widespread adoption, however. “There are too many side effects that we don’t really understand, and it could be dangerous if it was done by a family in a home,” said Burks. “More studies are needed to understand the safety aspects better.”

Egg allergy is one of the most common food allergies and occurs most frequently in children. Although many children outgrow it by age 5, the allergy can persist into adulthood. Total egg avoidance is difficult when eggs lurk everywhere from baked goods to pastas and sauces; allergic reactions to accidental egg ingestion can be mild to severe and include skin, respiratory, and gastrointestinal symptoms.

“The intent of this study was to develop a new treatment for egg allergy because we really have no treatment now, other than avoidance,” said Burks. “This study gives us hope that we’re closer to developing a treatment.” Burks added that the results may also have implications for treating other food allergies, such as allergies to milk or nuts.

The study enrolled 55 children and adolescents aged 5-18 with egg allergies that were considered unlikely to resolve on their own. Participants’ families were given either small amounts of powdered egg (building up to the equivalent of 1/3 of an egg daily) or a placebo to mix into the child’s food. Although children on the treatment experienced allergic reactions to the egg powder during the first few months of the study, none experienced a severe reaction.

After 10 months, researchers administered an “oral food challenge” to test participants’ reactions to eating 5 grams of egg powder, equivalent to nearly a whole egg. Fifty-five percent of those on the treatment passed the challenge without significant allergic symptoms. None of the 15 participants who had been given a placebo passed the challenge.

After 22 total months, researchers performed another challenge during which participants on the treatment were given 10 grams of egg powder, equivalent to nearly two whole eggs. This time, 75 percent passed the challenge. Those who passed discontinued the treatment.

At month 24, those who had passed the second challenge and discontinued treatment were given a final test of 10 grams of egg powder plus a whole cooked egg. Twenty-eight percent of the original treatment group passed and were subsequently able to integrate egg into their regular diets.

Burks said the study demonstrates that there is hope for treating egg and other allergies, but further research is needed to determine how the treatment can be performed safely. Studies involving more patients would also help researchers determine which patients are most likely to benefit from the treatment.

The study was organized by the [Consortium of Food Allergy Research \(CoFAR\)](#). Co-authors include Brian P. Vickery of UNC; Stacie M. Jones and Amy M. Scurlock of the University of Arkansas for Medical Sciences and Arkansas Children’s Hospital; Robert A. Wood of the Johns Hopkins University Medical Center; David M. Fleischer and Andrew H. Liu of National Jewish Health; Hugh A. Sampson and Scott H. Sicherer of the Mount Sinai School of Medicine; Robert W. Lindblad, Donald Stablein and Alice K. Henning of The EMMES Corporation; Wayne G. Shreffler of Massachusetts General Hospital, Harvard Medical School; and Marshall Plaut of the National Institutes of Health.

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