

## NUTRITION HORIZON

### Studies Show Children Can Complete Treatment for Peanut Allergies and Achieve Long-Term Tolerance

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**Summary:** *About four million Americans have food allergies, and allergies to tree nuts and peanuts are the most common. Life-threatening reactions can occur from exposure to even a trace amount of peanuts, and nearly half of the 150 deaths attributed to food allergies each year are caused by peanut allergies.*

16/03/09 A carefully administered daily dose of peanuts has been so successful as a therapy for peanut allergies that a select group of children is now off treatment and eating peanuts daily, report doctors at Duke University Medical Center and Arkansas Children's Hospital.

"It appears these children have lost their allergies," says Wesley Burks, MD, Chief of the Division of Pediatric Allergy and Immunology at Duke. "This gives other parents and children hope that we'll soon have a safe, effective treatment that will halt allergies to certain foods."

Long-term tolerance in children with peanut allergies was documented for the first time by the presence of key immunologic changes, according to researchers at Duke and Arkansas Children's Hospital who presented their findings at the American Academy of Asthma and Immunology meeting in Washington, DC.

Tests of several immunologic indicators suggest the body builds tolerance quickly.

"At the start of the study, these participants couldn't tolerate one-sixth of a peanut," Burks said. "Six months into it, they were ingesting 13 to 15 peanuts before they had a reaction."

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Duke and Arkansas Children's Hospital began enrolling patients in studies five years ago to determine if incremental doses of peanut protein could change how the body's immune system responds to its presence. The doses start as small as 1/1000 of a peanut. Eight to 10 months later, the children are ingesting the equivalent of up to 15 peanuts per day. The children stay on that daily therapy for several years and are monitored closely.

Nine of the 33 children participating in the study have been on maintenance therapy for more than 2.5 years. After a series of food challenges, four of those children were taken off the treatment and continue to eat peanuts. Some have been off treatment for more than a year. Doctors keep tabs on any potential changes in their immune system via skin, blood and immune studies.

One of the tests used in the study looks at immunoglobulin E (IgE), a protein the body makes in response to peanut allergens. "If you have it, you're likely allergic, if you don't, you aren't," explained Burks. Children in this study generally started with IgE levels greater than 25. "At the end of the study, their peanut IgEs were less than 2 and have remained that way since we stopped the treatment," he said.

Because the pool of children now off treatment is so small, Burks says it's hard to say whether these children simply outgrew their allergies or if the therapy did something to enhance that outcome. The next step is a blinded study in which children on treatment are compared to a control group. First year results were presented at the meeting by Stacie M. Jones, MD, a pediatric allergist at Arkansas Children's Hospital. So far, the oral immune therapy appears to be working.

"We see initial desensitization effects of the treatment are real," Burks says. "Those children are now able to eat up to 15 peanuts with no reaction, but the children not on treatment have symptoms early on in the study."

Despite the news, Burks insists this research is still ongoing and cautions parents and professionals against trying any version on their own. "In my clinic, I would do the same things I've always done. Once diagnosed with a food allergy, I would recommend they avoid the food. We have to wait for the studies to show the treatment is safe, and to see desensitization start to work. We also want to know the therapy works long term."

Burks also cautions that some people are too sensitive to peanut allergens to be able to undergo the therapy.

