Treatments for kids with food allergies allow safe eating in Stanford Medicine-led trial

By Erin Digitale | July 27, 2026

Stanford Medicine researchers have found that medication, oral immunotherapy or both allow children to safely eat foods — such as nuts, wheat, dairy and eggs — that once triggered an allergic reaction.

Children with several food allergies have a variety of treatment options, including the medication omalizumab and oral immunotherapy, a new clinical trial led by Stanford Medicine has found.

About a third of children with multiple food allergies gained the ability to safely eat full servings of foods that trigger their allergies in a new Stanford Medicine-led clinical trial.

The results were published July 27 in *JAMA Pediatrics*.

The finding comes from the second stage of a nationwide clinical trial of omalizumab, a drug that binds and inactivates the antibodies responsible for many kinds of allergic disease. In February 2024, based on the first stage of the same trial, the medication received U.S. Food and Drug Administration approval for its ability to protect people from allergic reactions caused by accidental exposure to small amounts of allergy-triggering foods.

The latest research went further. It looked at whether omalizumab — alone or in combination with a second allergy treatment, oral immunotherapy — enables people with life-threatening food allergies to eat these foods regularly.

“We have demonstrated that there are multiple paths to living a safe life with food allergies,” said the study’s senior author, Sharon Chinthrajah, MD, professor of medicine and of pediatrics, and co-director of the Sean N. Parker Center for Allergy and Asthma Research at Stanford Medicine. The new study’s goal for tolerance was rigorous: Participants were considered successful if they could eat full servings of three different foods that triggered their allergies by the conclusion of the study.

Sharon Chinthrajah

The findings will help physicians tailor allergy treatment to individuals’ varied goals for living with their allergies, Chinthrajah said, noting that some patients want to eat these foods as a regular part of their diets, while others want protection from accidental exposures.

“This study is very encouraging because it shows that we have treatment choices for our patients that are safe and not too burdensome,” said Sayantani Sindher, MD, clinical associate professor of medicine, who was a coauthor on the study.

Preventing dangerous reactions

Food allergies are common, affecting 8% of U.S. children and 10% of adults. To prevent allergic reactions and anaphylactic shock, patients have had to avoid foods that triggered their allergies. For children, this is especially tricky, given that the most common allergy triggers — wheat, milk, eggs, peanuts and tree nuts — are found throughout the food supply, and about 40% of kids with allergies react to more than one food. Social occasions such as birthday parties, school events and restaurant meals can be fraught with worry about life-threatening allergic reactions.

About 16 years ago, Stanford Medicine research teams began testing oral immunotherapy, a treatment in which patients build tolerance to foods that trigger their allergies by eating tiny, gradually increasing daily doses of these foods. The method works but has drawbacks: The process is slow and requires regular doctor's office visits; it can cause allergic reactions or have unpleasant gastrointestinal side effects; and patients must reduce their physical activity levels for an hour after each dose of food proteins, which can be difficult for active children. In addition, to maintain tolerance to the foods, patients must keep eating them regularly, even if they dislike them.

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In 2011, a Stanford Medicine team found that the combination of omalizumab, an injectable medication, and oral immunotherapy had advantages over oral immunotherapy alone, speeding the treatment and reducing side effects. Stanford Medicine researchers continued to lead the field, including by designing the trial that led to 2024's FDA approval of omalizumab for keeping kids safe from accidental exposure to small amounts of allergens.

Bringing allergens into the daily diet

The new stage 2 clinical trial, conducted in 117 children with food allergies, compared a year of treatment with omalizumab against eight weeks of omalizumab followed by oral immunotherapy for multiple foods for the rest of the year. The median age of children participating in the trial was 7 years. All participants had a peanut allergy and at least two other food allergies; the study tested whether they could consume 2,000-mg servings of each of three allergy-triggering foods, including peanuts, at the end of the trial.

Sayantani Sindher

Children in the omalizumab-only group were more likely to complete the study than those in the oral immunotherapy group. In the medication-only group, 36% of the original participants successfully tolerated full servings of three foods, whereas in the oral immunotherapy group, that number stood at 19% after a year of treatment. More participants in the oral immunotherapy group dropped out of the trial before the end, which largely explained the gap in outcomes between the groups. Subjects in the oral immunotherapy group had more side effects that led them to discontinue the treatment, the study found.

“For people who could comply with the combined treatment approach, they were as successful as the patients using omalizumab alone,” Chinthrajah said. Side effects may not be the only reason participants in the oral immunotherapy group discontinued their participation in the study, she said, noting that the treatment also requires more of a time investment. “It will be important for our team to better understand the reasons people discontinued treatment so we can tailor each approach,” she said.

Enabling tailored treatments

The findings will inform patients’ real-world treatments, Chinthrajah said, noting that food allergy therapy is not one-size-fits-all.

When she first consults with a new food allergy patient and their family, she asks many questions to learn which treatment will be best for that child.

“I’m wondering, Are you allergic to one food or multiple foods? What are your goals: Do you want to be able to eat the food, or just be protected from accidental exposures? How many accidental exposures have you had, and what is your fear level about them? Do you have a needle phobia, since omalizumab is injected? Do you have other allergic diseases, such as allergic asthma or eczema, which can also benefit from omalizumab treatment?”

Individual patients’ goals and feelings about allergy treatment may evolve, she noted, and the new findings will help doctors adapt treatment to these changes. “Initially, families often want protection from accidental exposure,” she said. “Then, as they see that the maintenance is feasible, their goals might change.”

The research team included scientists from the Johns Hopkins University School of Medicine, the National Institutes of Allergy and Infectious Diseases, the Icahn School of Medicine at Mount Sinai, Massachusetts General Hospital, the University of North Carolina School of Medicine, the University of Arkansas for Medical Sciences and Arkansas Children’s Hospital, Emory University School of Medicine and Children’s Healthcare of Atlanta, University of Texas Southwestern Medical Center, Perelman School of Medicine at the University of Pennsylvania, National Jewish Health, Genentech/Roche, Novartis Pharmaceuticals Corporation, and Rho, Inc.

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