

Skin patch could help ease peanut allergy in toddlers

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A "peanut patch" worn on the skin may help protect toddlers who have

potentially life-threatening peanut allergies, a new clinical trial shows.

The [patch](#) is a form of immunotherapy, which means it exposes peanut-allergic children to tiny bits of [peanut protein](#) over time—with the goal of training the immune system to better tolerate it.

In the trial, researchers found that of toddlers who wore the peanut patch every day for a year, two-thirds showed a significant reduction in their sensitivity to peanut protein: They were able to eat the equivalent of one to four peanuts without suffering an allergic reaction.

While that might sound like peanuts, experts said that level of tolerance is important.

The goal of immunotherapy is to prevent a severe reaction should a child accidentally ingest a small amount of peanut, said [Dr. Alkis Togias](#), of the U.S. National Institute of Allergy and Infectious Diseases.

"This is a positive study," said Togias, who wrote an editorial published with the findings on May 10 in the *New England Journal of Medicine*.

The patch tested in the trial, called Viaskin, is being developed by French biotech company DVB Technologies, which funded the research. It is not yet approved by the U.S. Food and Drug Administration.

If it does win approval, Togias said, "I think that would only be a good thing."

An estimated 2% of U.S. children are allergic to peanuts, and for most the [allergy](#) continues into adulthood. That makes it the most common food allergy among kids, and the third-most common among adults, according to the nonprofit Food Allergy Research and Education (FARE).

People with peanut allergy can suffer reactions, sometimes severe, from ingesting even a small amount of the food—the quantities that are commonly lurking in processed or prepared foods. So they (or their parents) have to studiously read food labels and take other precautions to avoid peanut exposure.

But that's not easy, Togias said, and accidents happen.

As far as treatment, there is an oral form of immunotherapy approved by the U.S. Food and Drug Administration for peanut allergy, called Palforzia. It's a peanut flour product that can be mixed into food, like applesauce. But it's only approved for children ages 4 and older.

"There are currently no FDA-approved treatment options for toddlers under 4 years old," said [Dr. Matthew Greenhawt](#), the lead researcher on the new trial.

Oral immunotherapy is under study for toddlers with peanut allergy. But Greenhawt said it's always good to have multiple options on the table.

"What works for one family may not work for another," he said.

Plus, the patch approach may have fewer side effects, according to Greenhawt, a professor of pediatrics at Children's Hospital Colorado/University of Colorado School of Medicine.

The patch, he said, "takes advantage" of the fact that the skin is the body's largest immune system organ. That means a smaller dose of peanut protein can be used, helping to skirt the systemic side effects sometimes caused by oral immunotherapy—such as upset stomach, throat irritation and shortness of breath.

Those types of problems rarely arise with the patch, said Greenhawt,

who also serves as a medical advisor to DBV Technologies.

The trial involved 362 toddlers, ages 1 to 3, who were randomly assigned to wear either the peanut patch or a placebo (inactive) patch every day for a year. Overall, 67% of children on the real treatment met the trial's end goal: Their immune tolerance was built up to the point that they could ingest the equivalent of one to four peanuts without an allergic reaction.

That compared with 33% of children in the placebo group.

Skin rash was the most common side effect with the peanut patch, while just under 2% of toddlers developed systemic symptoms that were judged "mild to moderate."

How would that stack up against peanut powder?

It's hard to judge, Togias said, because no trial has compared the approaches head to head.

But he pointed to a trial published last year that tested oral immunotherapy for 1- to 3-year-olds with peanut allergy. The findings, Togias said, suggest that the oral approach may have stronger effects in desensitizing the immune system.

On the other hand, he added, the skin patch may be safer.

One bigger-picture question around immunotherapy for peanut allergy, Togias said, is whether there is a point at which it can be stopped. Palforzia is taken every day indefinitely, to maintain the [immune system](#)'s tolerance for peanut.

Greenhawt said the peanut patch is also designed for daily use, and trials

so far (including one of [older children](#)) have followed patients for up to three years of use.

[Jennifer Bufford](#), vice president of clinical operations at FARE, agreed that having multiple types of immunotherapy would be good for families.

Bufford also noted that many people with [peanut allergy](#) are allergic to other foods, too. "It will be interesting to see if epicutaneous [via the skin] desensitization can be achieved for other common [food](#) allergens," she said.

While there is positive news on the treatment front, Togias stressed another point: Peanut allergies can also be prevented, by introducing [peanut](#) products into babies' diets once they start on solid foods.

More information: Matthew Greenhawt et al, Phase 3 Trial of Epicutaneous Immunotherapy in Toddlers with Peanut Allergy, *New England Journal of Medicine* (2023). [DOI: 10.1056/NEJMoa2212895](https://doi.org/10.1056/NEJMoa2212895)

Alkis Togias, Good News for Toddlers with Peanut Allergy, *New England Journal of Medicine* (2023). [DOI: 10.1056/NEJMe2301157](https://doi.org/10.1056/NEJMe2301157)

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