

Sublingual immunotherapy shows promise as treatment for peanut allergy

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Peanuts are one of the most common triggers of severe food-induced allergic reactions, which can be fatal, and the prevalence of peanut allergy is increasing. However, there is currently no clinical treatment available for peanut allergy other than strict dietary elimination and, in cases of accidental ingestion, injections of epinephrine.

But a new multicenter clinical trial shows promise for sublingual immunotherapy (SLIT), a treatment in which patients are given daily doses, in gradually increasing amounts, of a liquid containing peanut powder. The patients first hold the liquid under the tongue for 2 minutes and then swallow it.

The two lead authors of the study, published in the January 2013 issue of the [Journal of Allergy and Clinical Immunology](#), are David M. Fleischer, MD, of National Jewish Health in Denver, Colo., and Wesley Burks, MD, Curnen Distinguished Professor and Chair of the Department of Pediatrics in the University of North Carolina School of Medicine.

"These results are encouraging," Burks said. "The [immune response](#) was stronger than we thought it might be, and the side effects of this treatment were relatively small. However, the magnitude of the [therapeutic effect](#) was somewhat less than we had anticipated. That's an issue we plan to address in future studies."

In the study, 40 people with [peanut allergy](#), ages 12 to 37 years, were randomized to receive daily peanut or placebo SLIT. All were given a

baseline oral food challenge of up to 2 grams of peanut powder to test how much peanut powder they could consume without symptoms.

After 44 weeks, all were given a second oral [food challenge](#). Those who were able to consume either 5 grams, or at least 10-fold more peanut powder than their baseline amount, were considered to be responders (i.e., desensitized to peanut). At 44 weeks, 70 percent of those who received peanut SLIT were responders, compared to 15 percent of those receiving placebo. Among the peanut-SLIT responders, the median amount of peanut powder they could successfully consume increased from 3.5 to 496 milligrams. After 68 weeks, that amount increased significantly, to 996 milligrams.

Of 10,855 peanut doses given through week 44 of the study, 63.1 percent were symptom-free. When oral/pharyngeal symptoms were excluded from the analysis, 95.2 percent of doses were symptom-free.

The study concluded that peanut SLIT safely induced desensitization in a majority of participants compared to placebo, and that longer duration of therapy led to significant increases in the amount of [peanut](#) powder people could safely consume.

However, Burks cautions, this is not a treatment that people should try on their own. For now it's a treatment that should only be given by medical professionals in a carefully monitored clinical trial, he said.

More information: DM Fleischer et al. Sublingual immunotherapy for peanut allergy: a randomized, double-blind, placebo-controlled multicenter trial. *Journal of Allergy and Clinical Immunology* DOI: 10.1016/j.jaci.2012.11.011 (2013).

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