

Immunotherapy for peanut allergy provides protection but not a cure

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Researchers from King's have found that a potential treatment for peanut allergy provides some degree of protection but does not cure an allergic patient and this could explain why allergic reactions are still observed during treatment.

In the study, published today in the *Journal of Allergy and Clinical Immunology*, researchers tested samples from patients who suffer from [peanut allergy](#) with [peanut](#) oral [immunotherapy](#) (POIT) and found that it does not stop them being allergic just suppresses the reaction.

POIT works by reducing a patient's sensitivity to peanut so they can tolerate small amounts and therefore are less at risk of accidental reactions to peanut contamination of other foods. POIT works by making the immune system produce antibodies that reduce the [allergic response](#) to peanut. However, a recent review has found that patients taking POIT have more allergic reactions to peanut compared to allergic patients who simply avoid peanut.

In this study, the researchers tested samples from peanut-allergic patients who underwent POIT and found that although POIT does suppress [allergic reactions](#) when the protective antibodies were removed, the allergic cells are still as reactive as before treatment. These findings support the concept that while POIT can provide some protection it does not 'cure' the allergies.

The authors used a test known as mast cell activation test (MAT) to confirm whether the patients are still allergic after POIT and need to continue taking peanut as per POIT regimen or are no longer allergic and can eat peanuts freely.

The next steps in the research are to validate these findings in other cohorts of peanut-allergic patients treated with POIT and confirm that the MAT is useful to monitor a patient's response to this treatment.

Dr. Alexandra Santos commented: "Definitive treatments for peanut and other food allergies are highly needed. Currently, immunotherapy is the only treatment option we can offer peanut-allergic patients, mostly through clinical trials as this is not yet available on the NHS.

Immunotherapy can be delivered by ingestion (oral immunotherapy), under the tongue (sublingual) and applied to the skin as a patch (epicutaneous immunotherapy). To a greater or lesser extent, the different forms of peanut immunotherapy can make allergic patients less sensitive, which can protect them from accidental exposure, but patients remain allergic".

Peanut allergy is a potentially life-threatening condition, which has doubled over the last two decades and affects around one in 50 children in the UK. Peanut allergy is rarely outgrown and is the most common cause of food allergy deaths.

There is currently no cure for peanut allergy. Standard management of peanut [allergy](#) involves strict peanut avoidance, which has been shown to severely affect quality of life.

More information: Alexandra F. Santos et al. Peanut oral immunotherapy induces blocking antibodies but does not change the functional characteristics of peanut-specific IgE, *Journal of Allergy and Clinical Immunology* (2019). [DOI: 10.1016/j.jaci.2019.09.005](https://doi.org/10.1016/j.jaci.2019.09.005)

Provided by King's College London

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