

Food allergy development linked to skin exposure

3 November 2014

Food allergies are on the rise in the U.S. and other developed countries. In patients, food allergies appear as a variety of symptoms, ranging from mild skin inflammation to severe asthma. Recent studies suggest that contact between inflamed skin and food proteins may trigger food allergy development.

A new study in the *Journal of Clinical Investigation* provides a link between skin sensitization, [gastrointestinal inflammation](#), and food allergy.

Using a [mouse model](#), Steven Ziegler and colleagues at the Benaroya Research Institute found that skin exposure to a combination of food antigen (peanut or egg proteins) and the pro-inflammatory molecule thymic stromal lymphopoietin (TSLP) results in food allergy.

Dermal application of TSLP and antigen resulted in a severe allergic reaction, including diarrhea and anaphylaxis, when mice ingested the antigen. Skin sensitization to antigen required TSLP.

However, development of allergic responses in the gut required IL-25, a protein that regulates the intestinal immune response. Interestingly, mice given antigen orally prior to [skin sensitization](#) did not develop an allergic response.

The results from this study provide a mouse model for skin-induced [food allergy](#) development that could be used to test potential therapeutic interventions.

More information: Thymic stromal lymphopoietin-mediated epicutaneous inflammation promotes acute diarrhea and anaphylaxis, *J Clin Invest*. [DOI: 10.1172/JCI77798](https://doi.org/10.1172/JCI77798)

Provided by Journal of Clinical Investigation

APA citation: Food allergy development linked to skin exposure (2014, November 3) retrieved 17 June

2022 from <https://medicalxpress.com/news/2014-11-food-allergy-linked-skin-exposure.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.