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Thermographic imaging during nasal peanut challenge may be useful in the diagnosis of peanut allergy.

[Clark A](#), [Mangat J](#), [King Y](#), [Islam S](#), [Anagnostou K](#), [Foley L](#), [Deighton J](#), [Ewan P](#).

Source

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Abstract

BACKGROUND:

Double-blinded challenges are widely used for diagnosing food allergy but are time-consuming and cause severe reactions. Outcome relies on subjective interpretation of symptoms, which leads to variations in outcome between observers. Facial thermography combined with nasal peanut challenge was evaluated as a novel objective indicator of clinical allergy.

METHODS:

Sixteen children with positive blinded peanut challenge underwent nasal challenge with 10 µg peanut protein or placebo. Mean skin temperatures were recorded from the mouth and nose using infrared thermography over 18 min.

RESULTS:

The area under curve of nasal skin temperature was significantly elevated after peanut vs placebo (18.2 vs 4.8°Cmin). The maximum increase in temperature was also significantly greater after peanut: mean difference +0.9°C.

CONCLUSION:

This feasibility study shows thermography can detect inflammation caused by nasal challenges whilst employing one thousand-fold less peanut than an oral challenge. This novel technique could be developed to provide a rapid, safe and objective clinical allergy test.

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