

## ARTICLE

# Novel therapies in the management of food allergy: Oral immunotherapy and anti-IgE

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The process of oral immunotherapy (OIT) consists of a series of dose escalations with the immediate goal of inducing desensitisation and ultimately achieving a state of tolerance.

Owing to the limitations of OIT, including side-effects and lack of proven efficacy in long-term tolerance induction, it is not yet recommended in routine clinical practice and should be restricted to the research setting.

Studies using anti-immunoglobulin E (IgE) antibody in food allergy management are limited, but show promising results. The possible applications are for increasing the sensitivity threshold to certain foods such as peanut, and also for use in combination with OIT to enhance safety and rapidity of the OIT process; however, anti-IgE is not yet licensed for use in food allergy.

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## Oral immunotherapy

Oral immunotherapy (OIT) is the only strategy that aims to achieve a 'cure' for the food allergic patient.<sup>[1]</sup>

In most OIT protocols, small amounts of allergen are administered to patients in gradually increasing amounts, with the immediate goal of inducing desensitisation, and ultimately of achieving a state of tolerance.<sup>[2-4]</sup> With *desensitisation*, the treated patient manifests a decreased response to the ingested food allergens, but must continue to take daily food doses to maintain non-reactivity. In a state of *tolerance*, patients with food allergy may safely consume food without following a daily oral food regimen to maintain clinical non-reactivity.

OIT is a lengthy process (months - years) and consists of a series of dose escalations (usually in a controlled setting), with intervening maintenance periods (usually daily doses at home).<sup>[5]</sup>

The safety of OIT is problematic, with allergic reactions, including mild and severe reactions, developing in most patients. Long-term tolerance has not yet been adequately assessed.<sup>[6]</sup>

Owing to the many limitations of OIT, it is not yet recommended in routine clinical practice and should be restricted to the research setting.

## Anti-IgE antibody

Currently, the most widely used anti-immunoglobulin E (IgE) antibody is omalizumab.<sup>[6]</sup> It is approved for treating aeroallergen-sensitised children and adults ( $\geq 12$  years of age in the USA,  $\geq 6$  years

in Europe) with moderate-to-severe persistent asthma inadequately controlled with inhaled corticosteroids.

Studies using anti-IgE antibody in food allergy management are limited, but show promising results. Possible applications are for increasing the threshold of sensitivity to certain foods such as peanut,<sup>[7,8]</sup> and combined with OIT to enhance safety and rapidity of the OIT process.<sup>[9,10]</sup> Anti-IgE is however not yet licensed for use in food allergy.

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