Chest & Allergy Centre
Specialist Paediatric Care

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Food Oral Immunotherapy

What is food oral immunotherapy or OIT?

OIT is a method of re-training the immune system to tolerate food proteins to which it is currently sensitized. The process involves introducing incrementally increasing amounts of a particular food, on a regular basis, over an extended period of time.

This gradually induces an increase in IgG4 blocking antibody and a decrease in IgE antibody, shifting the balance in the body from allergy to tolerance. OIT treats food allergies which are IgE-mediated, but is not effective in the treatment of other types of food allergy, coeliac disease, or food intolerances.

As yet, we cannot yet differentiate “cure” versus successful treatment, so for now, most patients should anticipate that this will be a lifelong.

OIT should only be conducted in the presence of a certified allergist and personnel with extensive experience in food challenges as well as recognizing and managing food allergy reactions.

Who performs OIT?

OIT carries similar risks to subcutaneous immunotherapy (or “allergy shots”). A physician experienced in the recognition and management of food allergy reactions and anaphylaxis should always be present during the procedure. Emergency medications must be immediately available and the clinic should have an emergency action plan for managing severe reactions. Hospital support for the management of severe reactions must be immediately available.

What is the goal of treatment?

The goal of treatment is to be able to consume a full serving of the allergen without experiencing any adverse reaction. Many patients are able to successfully incorporate the food allergen into their diets following completion of the course. In some cases, the patient will choose to shorten the therapy, and bring the protection only up to protect against accidental exposures (so-called “bite-proof”).

Who is eligible for OIT?

Patients should have a confirmed food allergy and a quality of life that is impaired by the fear of accidental food ingestion.

How do I know if OIT is the right choice for my child?

The decision to begin OIT is based on a variety of factors. These include risk of reaction to accidental ingestion, difficulty in avoiding the allergen, and a number of quality of life issues (anxiety, ability to participate fully in school, sports and family/social activities, etc.).

It is important to consider the likelihood of your child outgrowing their allergy without OIT. If your allergist feels that your child is in the process of outgrowing a food allergy, it is advisable to wait rather than embarking on OIT.

Are there any age or other restrictions?

OIT can begin when your child has the ability to follow directions, ability to maintain quiet activity for 2 hours after dosing and the ability to articulate symptoms to a responsible adult.

Studies seem to show that the younger the child, the greater the chance of success.

Patients with active bowel diseases such as eosinophilic esophagitis or unstable asthma are generally advised not to attempt OIT.

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Food challenges:

Ideally, the diagnosis of food allergy will be based on a recent history of a reaction supported by allergy testing, or a food challenge, and not by allergy testing alone.

If your child tests positive on blood or skin testing, but has never had an allergic reaction to that food, an oral food challenge may be required before attempting OIT.

This is because we often see children who have been advised to avoid a particular food on the basis of a positive skin or blood test, but who are actually able to tolerate that food without experiencing an allergic reaction. These patients do not require OIT.

What other options for food allergy treatment are available for my child?

OIT is only one method of treating food allergies. It is one of the best studied and most accessible forms of treatment. Other methods include desensitization through the skin (via a patch), and immunotherapy with attenuated food proteins or peptides (rather than the whole food). These methods have not yet come to market but should be available in the next few years.

Parental involvement: If the patient is a child, the primary caretakers must agree on the decision to begin OIT and agree to actively participate in the process of OIT. All family members need to be adherent and careful with all of the OIT procedures.

Source of the food: It is best to maintain a consistent source of the food during the buildup course of therapy. Do not substitute apparently equivalent foods without consultation.

Dosing protocols: Protocols vary from food to food. Day 1 involves a full day in the clinic or hospital ward, taking gradually increasing doses every 20 minutes. The last dose tolerated is then taken daily at home.

Each subsequent visit ("updosing") involves giving a single, higher dose in the clinic, which, if tolerated, is then taken daily at home. Updose appointments take 1-2 hours. Updoses continue until a maintenance dose is reached.

In general, the maintenance dose is a meal equivalent of the food. However, the maintenance dose is usually decided upon according to each patient's individual circumstances and preferences. Maintenance is taken indefinitely, with an annual allergy re-evaluation.

How often do we dose?

Both once and twice daily dosing are used and both are effective. For simplicity, we use once daily dosing.

How often do we increase a dose?

We give at least 7-14 daily doses before updosing. A longer interval may be necessary for convenience or in the event of an interceding infection or a food reaction.

What are the risk factors for having a reaction?

Risk factors that increase the likelihood of a reaction include exercise, fever, menstruation, upper respiratory tract infection, gastroenteritis, dental extraction, tonsillectomy, increased total allergic exposure (e.g. pollen season or animal exposure), and unstable asthma or allergic rhinitis.

Downward dose adjustments may be made when the patient is travelling on an aeroplane or on an active vacation or when supervision by an experienced person is not possible.

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What type of reactions may occur?

Immediate IgE-mediated allergic reactions can and will occur. Most patients will experience symptoms, usually mild, on the first day of therapy. Identifying an avoidable risk factor and reducing the next dose, should then allow us to resume dosing.

Gastrointestinal problems can slow down the process considerably. In the event of GI problems, the dose will be reduced and maintained at that lower level until symptoms resolve. A slower dose escalation from this point forward may be necessary to allow completion of the OIT course.

Severe reactions including anaphylaxis range from 1-10%. There is also a potential risk of eosinophilic esophagitis (EE) (estimated about 1-2%). It is uncertain if these patients may have had EE prior to starting OIT or whether it was induced by ingesting the allergen.

Can we do OIT for multiple foods?

Usually one food is done at a time until reaching maintenance but studies have been published on multiple food OIT and it is being done more frequently.

How does the consent process work?

Informed consent is a process, not merely a signed document. We will continue to discuss in detail the potential benefits and risks involved. You are free to withdraw, or change your goals, at any point.

Please be aware that the current standard of care is food avoidance and treatment of reactions with adrenaline.

Important considerations:

1) Is the risk associated with OIT less or equal than the risk of not doing OIT?
2) Is there a potential to improve quality of life?
3) OIT is a journey, not a race to the finish line.

I encourage you to join the OIT patient Facebook groups:

www.facebook.com/groups/OIT101/

www.facebook.com/PrivatePracticeOIT/

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