

Patient information

Allergen immunotherapy

This information sheet is a brief guide on allergen immunotherapy to help you with any discussion you may have with your allergy doctor about this treatment.

What is immunotherapy and how does it work?

Immunotherapy is a medicine that we prescribe to be taken together with your child's regular allergy medicines (like antihistamines and nasal steroid sprays) to treat persistent symptoms caused by a particular allergen (like grass, trees or dust mites for example). Immunotherapy is made from modified (or changed) allergens which we call extracts. When we treat a child with say grass allergy, we prescribe the grass extract. We also call it desensitisation.

Allergic reactions occur when allergens (like grass or tree pollens, house dust mites or animal danders) come into contact with antibodies (called IgE) in allergic individuals. The reaction between the allergen and the antibody causes the allergy cell, the mast cell, to release chemicals like histamines. These chemicals then cause the symptoms of allergies such as itching, sneezing, swelling, wheezing etc.

Regular allergy medicines work by controlling or calming the symptoms of allergy after the allergic reaction has occurred. In most individuals who are allergic, they are enough to control their symptoms. However in some, the allergy to a certain allergen is so severe that despite regular allergy medicines, symptoms are not controlled. Immunotherapy can be tried in these circumstances as it acts by trying to alter the way the immune system reacts to allergens. One way this is achieved is making blocking antibodies called IgG. These can block the reaction between the allergen and IgE and therefore block the allergic reaction before it happens.

Immunotherapy is available for grass and tree pollen hay fever, house dust mite allergic rhinitis and severe allergies to horses, cats and dogs. There are many studies (together with many years of experience) that have confirmed that

immunotherapy can be used to reduce the troublesome symptoms (resistant to regular allergy medicines) of allergic rhinitis (hay fever) caused by grass pollen, tree pollen and house dust mites. Most children receiving treatment also report needing to use less regular allergy medicines. There are fewer studies on animal allergies, but experience has shown these treatments to be effective as well.

The treatment programme for immunotherapy is usually 3 years. As it acts on the immune system, the benefits of treatment continue after the treatment is stopped. There is also evidence that it can reduce the development of new allergies and asthma.

Types of immunotherapy

There are two types of immunotherapy, sublingual tablets/drops and injections.

- **Sublingual Immunotherapy (SLIT)** is tablets or drops. They are placed under the tongue and the medicine is absorbed from there into the immune system. They are not swallowed. The medicine is taken daily at home after the first dose is given in hospital under doctor supervision.
- **Subcutaneous Immunotherapy (SCIT)** is a course of injections. The programme involves a course of 4 injections given over 3 weeks before the pollen season each year, for 3 years. These injections are given in hospital under doctor supervision. Each injection is followed by an hour observation period.

Comparisons between SLIT and SCIT

Type of Immunotherapy	Sublingual	Subcutaneous
Advantages	<p>After the first dose, treatment is taken at home.</p> <p>Lower risk of severe allergic reactions.</p>	<p>No need to remember to take daily treatment.</p> <p>Full course of treatment guaranteed.</p>
Disadvantages	<p>Need to remember to take medicines every day for 3 years.</p> <p>Some individuals do not like the taste.</p> <p>A full course of treatment is</p>	<p>Many hospital visits (up to 2 hour each).</p> <p>Small risk of a serious allergic reaction.</p> <p>Need to avoid vigorous exercise for the rest of the day</p>

	only as good as your ability to remember to take it.	after each injection
Side-effects	Itchy and swollen lips, tongue, mouth and throat. Stomach ache (uncommon) Wheezing or anaphylaxis (very low risk)	Swelling at injection site. Aches and pains in injected arm. Wheezing, dizziness and anaphylaxis (low risk)

Your doctor will discuss with you which type of immunotherapy may be best suited for your child. Once a decision has been reached, you will be provided with more detailed information about the particular type of treatment.

Other treatments

While on immunotherapy, you should continue using your regular medications. Although immunotherapy is usually quite effective, some symptoms may remain. These should be treated with regular allergy medicines such as antihistamines and nasal steroid sprays.

Further information

If you would like any further information please contact the Children’s Allergy service at childrensallergy@uhl-tr.nhs.uk.

With thanks to the Children’s Allergy Clinic, University Hospitals of Leicester NHS Trust, for permission to reproduce this information.

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