

Immunotherapy (Allergy Shots)

Immunotherapy is a preventive treatment for allergic reactions to substances such as grass pollens, house dust mites and bee venom. Immunotherapy involves giving gradually increasing doses of the substance, or allergen, to which the person is allergic. The incremental increases of the allergen cause the immune system to become less sensitive to the substance, probably by causing production of a "blocking" antibody, which reduces the symptoms of allergy when the substances is encountered in the future. Immunotherapy also reduces the inflammation that characterizes rhinitis and asthma.

Before starting treatment, the physician and patient identify trigger factors for allergic symptoms. Skin or sometimes blood tests are performed to confirm the specific allergens to which the person has antibodies. Immunotherapy is usually recommended only if the person seems to be selectively sensitive to several allergens.

How immunotherapy is done

An extract of a small amount of the allergen is injected into the skin of the arm. An injection may be given once a week (sometimes more often) for about 30 weeks, after which injections can be administered every two weeks. Eventually, injections can be given every four weeks. The duration of therapy may be three to five years, sometimes longer.

Risks

There is a small danger of anaphylactic shock (a severe allergic reaction) shortly after an injection. Therefore, immunotherapy requires medical supervision.

Immunotherapy for asthma

Immunotherapy is effective in the treatment of allergic asthma. Immunotherapy can help relieve the allergic reactions that trigger asthma episodes, thereby enhancing pulmonary function and decreasing the need for asthma medications.

AAAAI Responds to New England Journal of Medicine Immunotherapy Study

The January 30, 1997 issue of the New England Journal of Medicine contained an article on immunotherapy in children that is receiving local and national attention. Adkinson NF, et al. A Controlled Trial of Immunotherapy for Asthma in Allergic Children. NEJM 1997;336:324-31.

The Executive Committee of the AAAAI comments as follows:

1. This article was carefully done by an excellent group of allergist investigators. There were some conditions applied to the study which may explain why the findings disagree with many other

studies which have demonstrated that immunotherapy in allergic asthma is both effective and beneficial.

2. In this study, children in both the immunotherapy and placebo groups did very well, with remissions experienced by 31% of the subjects. While those children receiving immunotherapy did somewhat better than the control group, the differences were not statistically significant. These data demonstrate that expert asthma care provided by allergists results in gratifying reduction in asthma.
3. Patients were very carefully monitored in this study. In fact, patients were seen by a physician every 2-3 weeks throughout the study with an astounding 90% compliance rate. Thus, this group of patients was provided with continuous, effective, expert care by the allergists. That care, combined with extensive patient education, allergen avoidance techniques, monitoring, and appropriate use of effective medications available for the treatment of asthma, led to improvement in their disease. The further addition of immunotherapy helped, but did not achieve statistical significance.
4. While the patients received adequate doses of allergens, and demonstrated appropriate immunologic responses to those allergens, many critical allergens were not employed. In real life, patients receiving immunotherapy receive a wide variety of perennial and seasonal allergens to which they are allergic, and which were not included in this study.
5. Therefore, we believe that this study confirms that expert asthma care provided by allergists results in excellent improvements in asthma, and in many instances this care can induce a remission in asthma symptoms. This study clearly shows that the excellent medications available today are effective at managing asthma symptoms, when used appropriately by knowledgeable allergists.

Immunotherapy is the only treatment available today that has the potential to suppress the allergic mechanism and to reduce the underlying cause of allergic asthma. Many other studies have unequivocally shown that properly administered immunotherapy reduces both asthma symptoms and the need for concomitant medications. It would be unfortunate if the results of the NEJM study were interpreted to indicate that immunotherapy is not helpful in the management of asthma.

The American Academy of Allergy, Asthma and Immunology believes that proper management of asthma includes identifying the underlying causes for asthma, educating the patient in allergen avoidance techniques and employing pharmacotherapy appropriately. Immunotherapy is appropriate in those patients who have unequivocal allergic disease, cannot adequately avoid the allergens to which they are sensitive, and are not adequately

managed pharmacologically. We believe that this approach to asthma management will result in both short-range and long-range improvement in patients' asthma, and that this approach is consistent with real life situations and today's medical climate.