

## Oral Immunotherapy

We would like our patients to know that there is a new form of treatment for nasal allergies (hay fever, allergic rhinitis). Some people (but not all) suffering from what we refer to as seasonal allergic rhinitis might be helped by a treatment called "**oral immunotherapy**."

In this therapy, the patient takes a pill daily to diminish their symptoms. The pill is actually not a medication, but is the allergen (pollen) that causes their symptoms. For example, if a patient's symptoms are caused by exposure to ragweed in the fall, the pill that they take consists actually of ragweed pollen. At the present time, this treatment is available for grass pollen exposure in the spring and ragweed in the fall.

The treatment by mouth performs like allergy injections in that it "immunizes" the patient to the allergen. It is used along with medications such as antihistamines, and does not replace them. Although studies have shown, like allergy injections, it can reduce, and in some cases eliminate, the need for medications such as antihistamines and nose sprays.

Treatment with oral immunotherapy must begin three months before the pollen season. For ragweed, for example, treatment would begin in June to diminish symptoms occurring to ragweed exposure which begins usually in late August. The patient would take the first dose of the pollen in a physician's office, and the remaining doses would be given daily at home. Since one is being exposed to a substance that causes allergy, patients are required to be trained in the use of a medication necessary to treat an allergic reaction. This medication is epinephrine and is administered by home injection through an automatic epinephrine injector. This is required in all patients receiving this therapy.

Like allergy injections, allergic reactions can occur to this treatment. The most common of these involve the mouth and throat area, but systemic (generalized) reactions can occur as well, and this is why epinephrine must be kept on hand.

There are many factors which determine whether or not a patient is suitable for this form of therapy. For anyone interested, we would be happy to discuss the details and pros/cons of the treatment during an office visit.

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### **Nuts and Bolts of Oral Immunotherapy to Ragweed**

At present, there are two oral immunotherapy preparations on the market made by Merck and one made by Stallergenes. The Merck products are GRASTEK and RAGWITEK. The Stallergenes product is Oralair.

The GRASTEK product contains Timothy grass only. It does, however, crossreact with all Northern grasses. The Oralair contains Timothy grass plus all of the Northern grasses. Neither product contains Bermuda or Johnson, and so therefore the appropriateness of the use in our area is questionable. The ragweed product contains only ragweed.

Each product need to be started three months prior to the season with daily oral intake by sublingual absorption. There is no "dose buildup". The first dose is the same as the last. The first dose of each is administered in the physician's office, and subsequent doses are administered at home. Each product has different age ranges. For example, RAGWITEK only goes down to age 18.

All patients must be given an automatic epinephrine injector to keep at home and they must be trained in the recognition of anaphylactic symptoms. Anaphylaxis has occurred to these products, but most cases have not been severe (some not requiring epinephrine) and the rate of anaphylaxis is far less than for subcutaneous immunotherapy.

Most adverse events are oral consisting of itching and swelling of the oral mucosa, tongue, et cetera. Most occur within the first 14 days of therapy and oftentimes resolve with continued use. Thus the consensus is this form of immunotherapy is safer than subcutaneous immunotherapy.

There are no definitive studies on comparative efficacy of the two treatments, but some metaanalysis have come to the conclusion that subcutaneous immunotherapy is more effective.

There is some evidence that the treatment effect persists at least one year after cessation of oral immunotherapy if it is given daily for three years, and in one study, it persisted two years after cessation. Perennial therapy is approved for Grastek, but not Ragwitek, Therefore there is a hint that this treatment, like injection therapy, may cause immune modulation with long-term beneficial effects.

There are other nuances that I would be glad to discuss...I will be giving a lecture on the topic in September.