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ANNUAL 2015

MISSION STATEMENT

We improve the quality of life for children and adults who suffer from Allergy, Asthma and Immunology related illnesses.



Preventing Food Allergy... *Now's the Time!*

By Jerald W. Koepke, M.D.



The providers at Colorado Allergy and Asthma Centers are very excited about the recent release of a new study in the *New England Journal of Medicine* showing that early introduction of peanut into an infant's diet can significantly decrease the chances of developing peanut allergy. The Learning Early About Peanut (LEAP) study showed that the chances of developing peanut allergy were significantly reduced by introducing peanut into the diet of high-risk infants between the ages of 4-11 months and feeding peanut regularly at least 3 times per week for 5 years. The "high risk" infants were infants who had severe eczema or egg allergy or both. The infants were skin tested with peanut to see if they showed signs of allergy before being fed peanut. Infants with large reactions to peanut were told to avoid peanut and were excluded from the study. Those who had negative or only small skin test reactions had peanut challenges in the office to make sure they could eat peanut without having an allergic reaction before being fed peanut at home. The majority of infants did very well with the challenges and continued in the study.

After 5 years of eating peanut on a regular basis all children underwent a second oral peanut challenge. They were challenged with peanut in a medically supervised setting to see if they had developed peanut allergy. The results showed that early peanut consumption was effective at preventing peanut allergy in infants both with and without mild peanut sensitization at the beginning of the study. The results were very striking. Compared to infants who avoided peanuts for 5 years, the prevalence of peanut allergy was decreased by 86% in the negative skin test group and by 70% even in the group of infants who initially had slightly positive skin tests to peanut.

The results were far more impressive than initially imagined! Timing seems to be important. There is a narrow window of opportunity to act early. Early introduction of peanut, between the ages of 4-11 months, appears to be associated with tolerance compared to introducing peanut at a later age which results in peanut allergy. This study indicates that early consumption of peanut can result in a decreased incidence of peanut allergy. While not yet proven, similar results are anticipated with other high risk allergenic foods as well, such as egg, milk, tree nuts and seeds.

Based on these impressive findings the following high risk infants are recommended for evaluation:

- Any infant with eczema, particularly moderate to severe eczema.
- Any infant with a history of food allergy to egg, cow's milk, tree nuts or seeds.
- Any infant whose parents or siblings have a history of food allergy, especially peanuts.

There are potential risks involved with this procedure. Some patients had respiratory or cardiovascular symptoms requiring intramuscular epinephrine when peanut was introduced into the diet. High risk infants should be skin tested with peanut and undergo a supervised peanut challenge to be absolutely sure they are not sensitized before being fed peanut at home. Parents should consult with a Board Certified Allergist prior to feeding peanut to high-risk infants.

We believe this study offers the beginning of a significant change in our understanding of food allergies and prevention. The Board Certified Allergists at Colorado Allergy and Asthma Centers feel confident that the "allergic march" can be altered in a large percentage of patients at risk for the development of food allergy. **High-risk infants should be skin tested with peanut and pass a peanut challenge in a supervised setting to determine whether it is safe to introduce peanut into the diet.** We have protocols in place for testing, challenging, and treating infants who are at risk for developing food allergy. Please refer to our website for additional information. You are encouraged to discuss these findings with your child's doctor or call any of our offices for more information or to schedule an appointment to see if your child would benefit from this evaluation.

Find additional information on our website: www.coloradoallergy.com

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Over-the-Counter Nasal Steroids in the Treatment of Hay Fever

By Shaila U. Gogate, M.D.



Allergic rhinitis also called hay fever is caused by an allergic immune response (IgE antibody mediated inflammation) of the nasal passages. Hay fever symptoms are sneezing, nasal stuffiness, runny nose and itchiness of the nose, throat, eyes or ears. In some individuals, an inappropriate and overzealous immune response to pollens, dander and mold spore leads to allergy symptoms. The condition can occur seasonally or perennially. In Colorado, pollens typically cause seasonal worsening of allergies. Trees begin pollinating in the early spring and will continue until the summer. An increase in grass pollen is seen in the late spring and summer with the weeds pollinating in the fall until the first frost. Year-round allergens include animal dander and dust mite in more humid climates.

Over 23 million adults and children in the United States had symptoms of hay fever in the last 12 months. There are a number of treatment options for allergic rhinitis including oral and intranasal antihistamines, nasal steroids and specific allergen immunotherapy (allergy shots). Until recently nasal corticosteroids were available only by prescription; however, in the fall of 2013 the Federal Food and Drug Administration approved the over-the-counter (OTC) sale of nasal corticosteroids. The first OTC available steroid was triamcinolone acetate (Nasacort Allergy 24HR[®]), followed recently by fluticasone propionate (Flonase Allergy Relief[®]).

Nasal steroids are beneficial in decreasing nasal inflammation, nasal congestion, runny nose and sneezing. These medications are considered a safe and effective first-line treatment for allergic rhinitis. The over-the-counter accessibility of these medications will lead to more frequent use.

Therefore, it is important to understand the appropriate use and risk of nasal steroids.

- Hay fever symptoms can be similar to other conditions such as sinus or viral infections, chronic sinus inflammation, sinus polyps, or rarely more serious conditions. Initial treatment with OTC nasal steroids may lead to a delay in diagnosis of these other conditions.
- Additionally, proper technique is important in using nasal steroids as these medications can lead to nose bleeds. A rare complication that can occur is a hole, or perforation, in the nasal septum (bone separating each nostril).
- A decrease in growth is a well-known risk of using steroids, although nasal and inhaled steroids sprays are less risky than taking these drugs by mouth.
- Side effects involving the eyes, which include glaucoma and cataracts, are potential yet uncommon risk factors of nasal steroids.
- Over the counter availability will lead to an increased “out of pocket” health costs.
- Symptoms of hay fever particularly in children are often associated with other allergic and respiratory diseases like asthma, eczema and food allergies. There is a potential delay in treatment of these other conditions with unsupervised use of nasal steroids.

The wet winter and the relatively dry spring will lead to a robust allergy season. It is important to understand the tools used to treat hay fever effectively. As with all medications, the benefits and risks should be weighed before determining a treatment plan. When used properly, nasal steroid sprays can be very effective at treating hay fever. These medications have some minor risk therefore; consult with your allergist or medical provider for an individualized treatment plan for your nasal allergies.



Founders’ Award Scholarship

The physicians of Colorado Allergy and Asthma Centers, P.C. offer four \$1,000 scholarships per year to patients. These scholarships are intended to honor our four Founding Fathers, David Pearlman, M.D., Sanford Avner, M.D., Jerome Buckley, M.D., and John Selner, M.D.

These scholarships are given yearly to four patients of Colorado Allergy and Asthma Centers, P.C. The eligibility requirements are: graduating high school seniors, college undergraduate or graduate students who are in good academic standing and have been accepted or are currently enrolled in an accredited U.S. college. Applicants must be a current patient of CAAC, P.C. for a minimum of one year and be a citizen of the United States. Applications and criteria are available on our website at www.coloradoallergy.com.

Through these scholarships CAAC hopes to help the many families seen in our clinics every year. It is one of the ways we give back to our community.

ALL APPLICATIONS MUST BE COMPLETE AND RECEIVED BY JUNE 15TH.

Future Therapies for Food Allergy:

There is good news to report!!

By John M. James, M.D.

Patients often ask, "Are there any new therapies for food allergy available now or in the future besides strict avoidance of relevant food allergens?" This article will address this issue and will provide some hopeful news to patients with food allergies.

Baked forms of cow milk and egg have been shown to promote tolerance to these food allergens. This heating (350-400° F for 30 minutes) denatures the allergens in these foods. Studies have demonstrated that three-fourths of cow milk allergic children tolerate baked cow milk and over half of egg allergic children tolerate heated egg. Diets containing extensively heated (baked) cow milk and egg appear to be an effective form of therapy for patients with these food allergies.

Early introduction of peanut in the diet may actually promote tolerance and reduce the risk of developing peanut allergy. This issue is covered on page one of this newsletter by Dr. Jerry Koepke.

Oral immunotherapy (OIT) involves the use of a food allergen in powder form (mixed with another safe food) that is swallowed directly in gradually increasing doses. Initial doses should always be administered in the physician's office. Daily ingestion of tolerated doses occurs at home. Sublingual immunotherapy (SLIT) includes drops of liquid with the allergen that are placed under the tongue, held there for 1-2 minutes and then spit out or swallowed. Epicutaneous immunotherapy (EPIT) involves the use of a food allergen embedded in a small patch that is placed on the skin for 24-48 hours and is absorbed through the skin.

Initial clinical research studies with OIT in children with peanut allergy have demonstrated that the administration of small but increasing doses of peanut protein has enabled them to eat varying amounts of peanut without allergic reactions. In other words, patients had a significant increase in their ability to tolerate the ingestion of peanut. Adverse reactions were mild and easily treatable.

Oral immunotherapy has been studied in a large group of children with food allergies, mainly egg allergy. Thus far, these studies

have demonstrated a tolerance to egg in the diet while on this therapy. OIT is generally safe under supervision and a promising therapy for future clinical use. On-going studies will help to provide useful information regarding the possibility of promoting oral tolerance to specific food allergens.

Sublingual immunotherapy with food allergens provides an alternative form of immunotherapy. Smaller doses are administered than with OIT. Published results using SLIT in teenagers and adults with peanut allergy have demonstrated that there is an increased tolerance to peanut. Clinical research studies with cow milk and peanut suggest that SLIT is less effective than OIT for

All of these therapies do appear to be safe and convenient for certain food allergic patients.

desensitization (increased tolerance to the food), but there is a better safety profile. The response to treatment has been variable and there are no validated methods of predicting response. Further evidence of the effectiveness of SLIT is needed before this therapy can be considered a routine therapy in the outpatient clinical and home setting.

Comparisons of OIT and SLIT for the treatment of children with cow milk allergy have been conducted. Oral immunotherapy resulted in a more effective desensitization compared to patients treated with SLIT. Overall, successful desensitization seems quite possible, but the potential to induce long-lasting tolerance is unclear. A strict adherence to a regular intake of the food in the diet for an indefinite period of time would likely be needed for non-tolerant patients to ensure safety. Oral immunotherapy will need to be studied further before this becomes a routine clinical procedure.

Research studies are also underway using immunotherapy by a different route such as through the skin. This is known as epicutaneous immunotherapy (EPIT). Patches are applied for several hours a day on the



back on a weekly basis for several months. Initial studies in children with cow milk allergy have been completed. Adverse events were minimal and mainly involved skin irritation. Patients with cow milk allergy undergoing EPIT were able to tolerate significantly more cow milk at the end of the study as compared to the group that was not treated with EPIT. Studies for peanut allergic patients are underway.

All of these therapies do appear to be safe and convenient for certain food allergic patients. They offer hope for treating patients for food allergy where no other treatments exist except for strict avoidance of the offending food allergen. Further research is needed to assess their side effects and to help make these treatments clinically available to patients. Finally, patients will need to balance the possibility of successful desensitization by the end of treatment, which may include some adverse reactions during immunotherapy, with the risk of severe reactions including anaphylaxis that can occur due to accidental ingestion of food allergens.

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FARE Walk for Food Allergy

Washington Park

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For more information visit
our website and select Food Allergy
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