Oral Desensitization to Foods
by John M. James, M.D.
March 2008

Many of you may have read the lead article in Newsweek magazine last fall that focused on food allergies. One of the highlights of this report was a discussion of oral desensitization to food allergens! At first glance, this may seem like a crazy idea, especially to the 12 million Americans and 47,000 Coloradoans who suffer from food allergies. However, take some time to become more familiar with this concept. Traditionally, the only reliable treatment for food allergy has been avoidance of the offending food(s). Wouldn't it be great if there was a safe, reliable way to desensitize a person with allergies to peanuts, cow milk, egg and other foods? Well hang on to your hats; this type of procedure is being investigated and utilized at several universities in the United States and Europe. Based on this knowledge, the Colorado Allergy and Asthma Centers has prepared an oral food desensitization protocol for our patients with allergies to cow milk and egg.

Which food allergic patients are considered the most appropriate for this type of procedure? Since approximately 85% of children outgrow their allergies to cow's milk and egg by age 6, it would be make most sense to wait until then rather than subject very young patients with milk and egg allergy to this procedure. In contrast, fewer than 20% of patients with peanut and tree nut allergy will become tolerant. This means that after age 6, 15% of patients will continue to be allergic to milk and egg and 80% of peanut and tree nut allergic patients. So these types of patients in particular might be interested in considering a desensitization procedure. Patients need to be carefully selected and the risks and benefits discussed with their physician.

The basic design of oral desensitization to food allergens is similar to other procedures that have been used in the past to desensitize patients with allergy to antibiotics (e.g. Amoxicillin) or a non-steroidal anti-inflammatory agent (e.g. ibuprofen). Gradually increasing doses of the medication are given under medical observation until a tolerizing dose can be achieved. This dose must be continued daily to maintain the tolerance. Oral food desensitization is achieved by ingesting very small amounts of a food that has previously caused an allergic reaction. The amount is gradually increased in the build-up phase under close medical observation. The amount of food allergen is gradually increased (i.e. every 1-2 weeks) until the tolerizing dose is reached. Typically, each time the amount of food is increased; it is administered under observation in a clinic setting so that allergic reactions can be treated immediately. Thereafter, the food must then be eaten on a daily basis (i.e. 1-2 times daily) to maintain the oral tolerance. Regularly scheduled follow-up visits in the clinic should be arranged as the patient progresses with this procedure. If a dose is missed for any reason, the dose must be adjusted before continuing. Guidelines are available to determine how to adjust the dose.

What are the specific risks and benefits associated with oral food desensitization procedures? In terms of risks, patients undergoing this procedure might experience allergic reactions as they go through the protocol. Like any desensitization procedure, there is the potential for anaphylaxis to occur. With this in mind, patients with histories of severe anaphylaxis to foods are probably not the best candidates for this procedure at the present time. Great care must be taken to give the proper dose and to make adjustments if doses are missed for any reason. On the other hand, there are many potential benefits with his type of procedure. With successful desensitization, the patient will have fewer concerns about allergic reactions occurring following accidental ingestion of a relevant food allergen. This type of procedure promotes oral tolerance,

but it is not to be considered as an actual cure for food allergy at present. Therefore, patients need to continue to carry self-injectable epinephrine. Finally, oral desensitization to food allergens may substantially increase the quality of life for patients with food allergy, which may ultimately lead to a cure.

After much thought and literature review, Colorado Allergy and Asthma Centers has developed a new procedure for oral desensitization of eligible cow milk and egg allergic patients. Several clinical criteria will need to be met before patients can be scheduled for this procedure. Patients should be at least 6 years old and not have a history of anaphylaxis to these common food allergens. Prior to desensitization, an oral ingestion challenge will be considered to document ongoing food allergy. If you have questions regarding patients who might benefit from oral food desensitization, please contact one of our medical providers.