Allergies on the rise
Asthma, food allergies are increasingly common
Nancy Ott, MD

Allergic disease is an immune system mistake of making a specific antibody (IgE) against common proteins such as pollen, dust mite, mold spores, cockroach, animal dander, and foods. The antibody and allergens link to mast cells and cause a release of histamine and leukotrienes, leading to the symptoms of allergic disease.

Up to 20 percent of the U.S. population of adults and 40 percent of children are affected by allergies of the eye and nose commonly referred to as hay fever. Statewide, the Minnesota Department of Health says 6.6 percent of children have asthma, compared with a national average of 8.1 percent. However, the percentage is reported to be much higher in some inner-city areas in the Twin Cities. Food allergy affects up to 6 percent of the U.S. population, and allergies to peanuts have doubled in incidence in the last decade. Up to a thousand deaths occur annually nationwide from anaphylaxis, the most severe allergic reaction, in which mast cells release chemicals throughout the body, causing multi-organ damage.

Why this increase in allergic diseases? One hypothesis is that the greenhouse effect causes longer, worse pollen and stinging insect seasons. There's also the hygiene hypothesis: Children today have less natural exposure to bacterial particles in early life than they did in prior generations. This leads to an increase in the T helper cells of type two, which favor allergic disease.

Allergists seek answers
Approximately 60 board-certified allergists in the state of Minnesota see a variety of illnesses relating to problems of the nose, eyes, sinuses, ears, lungs, gastrointestinal tract, and skin. The spectrum ranges from mild, intermittent itchy noses to chronic conditions of persistent asthma and life-threatening anaphylaxis. While primary care providers treat mild to moderate allergic conditions, allergists provide care for patients with more severe hay fever and asthma. The evolving science of food allergies, immunodeficiency, and anaphylaxis are also included in the allergist's area of expertise.

Different allergens can trigger allergies at different ages. For instance, almost all milk allergy is developed under the age of 2 years. Common hay fever rarely strikes before the age of 3 or after 50. Hay fever often has a span of 20 to 30 years, which can be decreased by allergy shots. Peanut, tree nut, fish, and shellfish allergy can occur anytime in life.

Individual variation exists, as well, as to when one might lose sensitivity to an allergen. Most children lose their allergy to milk, soy, egg, and wheat. Forty percent of allergic individuals can lose sensitivity to penicillin or bee stings, but only 20 percent of peanut-allergic individuals lose their allergy.

Anaphylaxis caused by asthma, food, insect stings, drug reactions, and exercise also can result in death. The challenge is to figure out which allergic trigger will be dangerous in which person. One person's mild milk allergy can be fatal in another. Certain foods such as peanuts or tree nuts are much more likely to cause a severe reaction and last a lifetime. Seafood also is in this category.

Controlling asthma

While asthma control is attainable with current treatments, it remains an economic burden for patients, insurers, and hospitals alike. Difficulty in asthma treatment adherence crosses socioeconomic lines for a number of reasons: Chronic medication is hard to remember to take, it may be too costly to buy, and many don't understand their medication formulary or how to use inhalers correctly. Misunderstanding or denial of triggers and the stigma of disease also are issues.

Resources

The best resource for an allergy patient is a trusting, open relationship with a health care provider. While education begins in the provider's office, additional resources should be available to all patients. The Internet offers much of this information. National professional societies such as the American College and Academy of Allergy, Asthma, and Immunology have outreach programs funding free asthma screening, Web site information, and names of allergists to contact locally. The American Lung Association (ALA) also sponsors programs for asthma and related conditions. The Minnesota Allergy Society works with the ALA to educate providers and patients.

Not all patients have access to the Internet, read English, or read any language. It is important to have some literature available in the patient's language and to be able to provide oral education for the patient. All Minnesota allergists have access to this information through a variety of resources.

Beyond education, if an insurance issue arises regarding allergic diseases or safety considerations regarding products or tests, one or more of the allergists in the state will volunteer to rectify the situation. We're a small group, but we have more than our share of board-certified physicians willing to help educate, advocate, and participate. Now that's nothing to sneeze at!

***Nancy Ott, MD**, is president of the Minnesota Allergy Society, to which all allergists in the state belong. She is also a University of Minnesota adjunct associate professor in pediatrics and medicine and in private practice as an allergy, asthma, and immunology specialist for children and adults at Southdale Pediatrics in Edina. Ott attended medical school and finished her pediatric residency training program at the University of Minnesota. She teaches medical students and resident physicians at her office. She also volunteers with the American Lung Association of MN and the Anaphylaxis and Food Allergy Association of Minnesota, a food allergy support group.*