

Asthma

Is a Genetic Puzzle

WHEN TO SEE A SPECIALIST

Some patients treat their allergy problems with over-the-counter products, notes Dr. Judge, and others rely on medications prescribed by primary care physicians to treat their allergies and even their asthma. And yet there are times when it is important for physicians and their patients to turn to a specialist such as Dr. Judge, who is double board-certified as an allergist/immunologist and a pediatrician. Among such instances:

- When persistent recurrence of symptoms indicates it's time to discover the cause of the problem, rather than continuing to simply treat symptoms;
- When treatment isn't going well, especially when there are adverse reactions to medication;
- When it's time to consider allergy immunotherapy;
- When it's time for instruction in avoiding allergen triggers;
- When an allergic condition leads to complications such as sinusitis, otitis media, orofacial deformities, recurrent bronchitis, and asthma;
- When systemic corticosteroids are needed to control symptoms;
- When the duration of allergic rhinitis symptoms—runny nose, itching, sneezing, and stuffy nose—persist for longer than three months.

For more information about diagnostic and treatment options for allergies, asthma, and sinus conditions, contact:

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“Asthma and allergies generally remain a genetic puzzle,” comments Dr. Gurdev (Dave) Judge, “but we are clearly moving along the path where almost certainly genomic information will, in time, be of great benefit to both patient and practitioner.”

An allergist-immunologist, he is the founder of the Allergy, Asthma and Sinus Center in Cary, with offices in North Raleigh and Wake Forest.

“Asthma in the U.S. affects about 20 million people—nearly half of them children—and over 300 million people around the world. It is considered a ‘complex heritable disease’—which means a number of different genes contribute to asthma susceptibility, and five different chromosomes have been identified as part of ongoing studies. At this point, there are no genetic tests to help determine susceptibility or predisposition to asthma.”

In addition to age, there are a number of key factors related to causation of asthma, Dr. Judge points out:

Environmental issues—especially for those regularly exposed to allergens, smoke, chemicals, residence in urban areas, or have a history of repeated respiratory infections during childhood

Ethnicity—African-Americans have substantially higher rates of asthma than Americans of European descent.

Gender—before puberty, asthma is more common among boys, but after adolescence, it is more common among females

Genetics—the risk of developing asthma increases three to six-fold in people who have a parent with asthma.



Brothers offer mutual support as they prepare for examination by Dr. Judge.

A MANAGEABLE DISEASE

“There are different types of asthma,” Dr. Judge explains, “and different issues to consider and manage. Management of the problem is a key issue. I often remind my patients that some of our best Olympic athletes had asthma. In fact, in the 1984 Summer Olympics, 67 of the 597 participating US athletes had asthma—and among them, they won a total of 41 medals—15 gold, 20 silver, and 6 bronze. They certainly demonstrated that asthma is a disease that can be managed.”

Asthma is a chronic, lifelong lung disease. People with asthma have airways that are super-sensitive to common substances—that can and do trigger an asthma attack. During an asthma attack, the airways become blocked making breathing difficult—especially exhaling.

Asthma claims 5,000 lives each year. The main symptoms of asthma are shortness of breath, wheezing, tightness in the chest, and a persistent cough that lasts more than a week.

“For a very long time, we concentrated on treating the symptoms of an asthma attack,” said Dr. Judge. “Now there’s greater emphasis on *preventing* asthma attacks, and controlling and managing asthma much as we do other chronic diseases. Medication is a critical component of the treatment plan, and today’s medications are more effective than ever. There are three key elements in the overall prevention plan for people with asthma:

“First, **avoid asthma triggers**. People can avoid asthma attacks by identifying and avoiding the stimuli that set off an episode. We can offer patients many options for dealing effectively with allergens such as pollen, dust mites, and mold spores that may trigger their asthma attacks.

“Second, people with asthma need to **control their environment, at home and at work**. Air filters can make a major contribution to health. Removing pets from the environment may be essential. Hardwood floors instead of carpet, and blinds instead of drapes, may be helpful.

“Finally, people with asthma need to **use peak flow monitors**. Monitoring respiratory function should be second nature. Regular use of a peak flow monitor allows the patient to be aware of an approaching asthma attack well in advance of the event, and to take necessary preventive measures.”

ASTHMA: THERE ARE MANY TRIGGERS

Reaction to an allergy is generally the most common and best known trigger for an asthma attack, Dr. Judge points out. “And there are lesser-known causes that frequently provoke a bout of asthma, such as:

- **Aspirin**. It’s estimated that 10 percent of people who have asthma will provoke an attack if they take aspirin.
- “A small percentage of asthmatics have bad reactions to foods containing **metabisulfite**, a preservative used in dried fruits, fruit juices, beer, wine, salad bars, and vegetables. They need to carefully check food labels.
- “Women with asthma occasionally have increased symptoms **just before menstruation**—for reasons still unknown.
- **Stress or emotional issues** do not cause asthma in themselves, but they may lead to acute attacks in patients with asthma.
- **Bronchiolitis**, a wheezing disease, affects children younger than two years old. More than half the children who get bronchiolitis have asthma until they are at least seven years old.”