

## **Anaphylaxis: understanding and managing the “killer allergy”**

Over 50 million Americans suffer with some form of allergy. For the vast majority of them, symptoms are merely annoying and unpleasant—sneezing; stuffy, runny nose; itchy, watery eyes; etc. But in some instances, allergies can trigger life-threatening anaphylaxis, sometimes referred to as the “killer allergy.” In fact, according to allergist Dr. M. Razi Rafeeq, as many as 1,500 people are at risk of fatal anaphylaxis each year in the US.

### ***Preventable emergency***

“However,” notes Dr. Rafeeq, “most of these deaths can be prevented with proper recognition, awareness, and education along with prompt, appropriate treatment. Most anaphylactic reactions occur somewhere in the community where no healthcare professional is on hand to treat them immediately, so anaphylaxis awareness is vital not just for the person at risk but also for his or her family and caregivers, teachers and other school personnel, daycare workers, coaches and athletic trainers, camp counselors, restaurant workers, airline and mass transit employees, and others.”

### ***Anaphylaxis defined***

Anaphylaxis can be defined as a serious allergic reaction that can affect various organs of the body with life-threatening or potentially fatal consequences. As with any allergic reaction, anaphylaxis occurs because the body’s immune system mistakenly recognizes a harmless substance as a “foreign invader.” Most anaphylactic reactions are caused by foods, and 90 percent of food-related anaphylaxis is associated with eight particular foods—milk, eggs, peanuts, tree nuts, fish, shellfish, wheat, and soy. Other common triggers of anaphylaxis include certain medications (such as penicillin, aspirin, or ibuprofen), insect stings or bites, and latex or rubber. “Believe it or not, some people can experience anaphylaxis after exercise. In some of these individuals, a reaction occurs only when they exercise after eating a particular food—though they may not react to either the food or exercise alone,” Dr. Rafeeq observes.

### ***Symptoms and risk factors***

Symptoms of anaphylaxis are usually rapid in onset and may include itching or welts; flushing; swelling of the lips and tongue; constriction of the airway; asthma-like symptoms; nausea, vomiting, or diarrhea; confusion; drop in blood pressure and loss of consciousness. “Individuals who experience rapid and severe symptoms immediately after exposure to an allergen are more likely to have a life-threatening or fatal episode,” says Dr. Rafeeq. It’s also important to note that an individual’s reactions to a particular trigger can be different at different times. Just because one reaction is mild doesn’t mean the next one won’t be life-threatening.

Those at elevated risk of experiencing anaphylaxis include teens and young adults, older people with heart problems and emphysema, and people taking certain medications such as beta blockers. Asthma, particularly when severe or uncontrolled, greatly increases the risk of life-threatening or fatal anaphylaxis.

### ***Responding to anaphylaxis***

In the event of an anaphylactic reaction, a prompt response can be the difference between life and death. If the victim is aware of the allergy, he or she should be carrying self-injectable epinephrine (e.g., Adrenaclick, EpiPen, or Twinject). The injection should be administered immediately in the side of the thigh and 911 should be called. Remember, most life-threatening episodes occur because epinephrine treatment is delayed. “Seeking immediate medical attention is also critical, even if the injection has already been given, because you can’t predict the course of the reaction and the epinephrine may not completely alleviate all the symptoms. Also, while you’re waiting for

help to arrive, have the person lie down flat and elevate his or her legs, if possible, to promote circulation to the heart and brain,” advises Dr. Rafeeq.

Although antihistamines (such as Benadryl) are commonly used in the community for anaphylaxis, antihistamines alone should not be considered appropriate treatment for an anaphylactic episode. Antihistamines do not have all the same life-saving effects as epinephrine, and they don’t begin to work immediately. Whereas epinephrine works within seconds, antihistamines can take as long as one to three hours to be effective.

### ***Epinephrine and medical ID***

It’s impossible to overstate the importance of carrying self-injectable epinephrine at all times if you know you are at risk of experiencing anaphylaxis. “It’s the cornerstone of anaphylaxis treatment. I tell all my at-risk patients that they should never leave home without it,” says Dr. Rafeeq. In fact, Dr. Rafeeq recommends that patients carry two units of epinephrine in case the first unit malfunctions or is not completely effective. It’s also crucial that patients and families are properly trained and coached on its use and that they understand how to take care of the units properly. For example, temperature extremes can destroy the medicine and it does have an expiration date. “Patients must update the epinephrine regularly or it may not be effective when they need it most,” Dr. Rafeeq says.

In addition to carrying self-injectable epinephrine, those at risk of anaphylaxis are encouraged to carry some form of medical alert identification—whether a bracelet, necklace, or card—that clearly indicates their particular allergy. This accessory will help bystanders, EMTs, and doctors take appropriate steps if the individual should become unconscious or is unable to verbalize his or her condition.

### ***Identifying triggers***

Effective long-term management of anaphylaxis depends on knowing exactly what trigger (or triggers) to avoid—and that requires follow-up with an allergist for testing, education, and ongoing treatment. In addition to confirming your diagnosis, identifying your triggers, and assessing related risk factors, an allergist can provide other invaluable information, such as specific allergen avoidance, how to read food labels, how to avoid insect stings and bites, and how to avoid cross-reactions.

### ***The role of immunotherapy***

Allergy immunotherapy—better known as allergy shots—is effective in building tolerance to certain allergy triggers, such as pollen, dust mites, and cats and dogs. Unfortunately, allergy immunotherapy does not work for food allergies, though research in this area is ongoing. For people who react to certain foods, the only effective treatment is strict avoidance. Many children eventually outgrow their food allergies, but some do not. “If a food allergy develops in an adult, it is unlikely to go away,” says Dr. Rafeeq. “However, immunotherapy is very effective for insect allergies and can reduce the risk of a severe reaction to less than three percent.”

### ***Spreading the message***

The American College of Asthma, Allergy & Immunology and the Allergy & Asthma Network Mothers of Asthmatics have joined forces to help spread the word about anaphylaxis to communities across the country. As part of this initiative, these organizations are working to establish an allergy specialist in each community who can help raise awareness about anaphylaxis. In Toledo and Northwest Ohio, that position is fulfilled by Dr. Rafeeq.

**Dr. M. Razi Rafeeq**

**Toledo allergy Society**

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