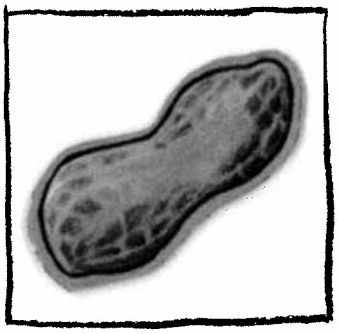
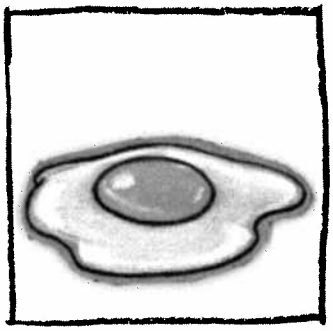
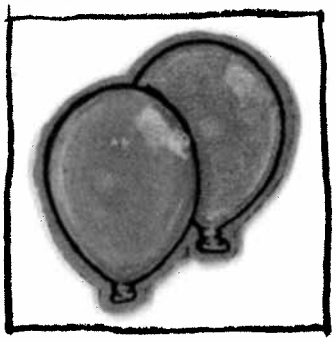
Allergy & Asthma Network
Mothers of Asthmatics

Allergy & Asthma Today

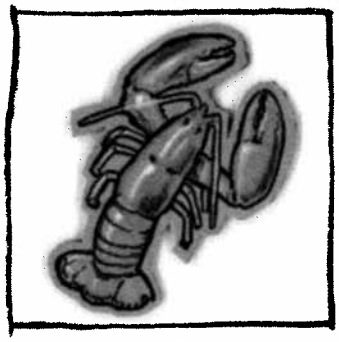
2013 Special Edition

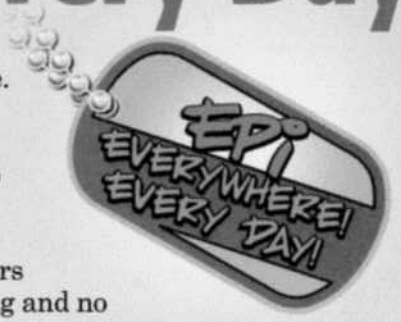


Anaphylaxis

a guide for all of us



Epi Everywhere! Every Day!™



Jake's a Superhero. He fights for freedom, truth and justice. Nothing stops Jake – except bees.

Bee stings make Jake's throat swell and his skin itchy. It's called anaphylaxis. The first time it happened, he had to go to the hospital. He was scared.

He didn't feel like a Superhero anymore.

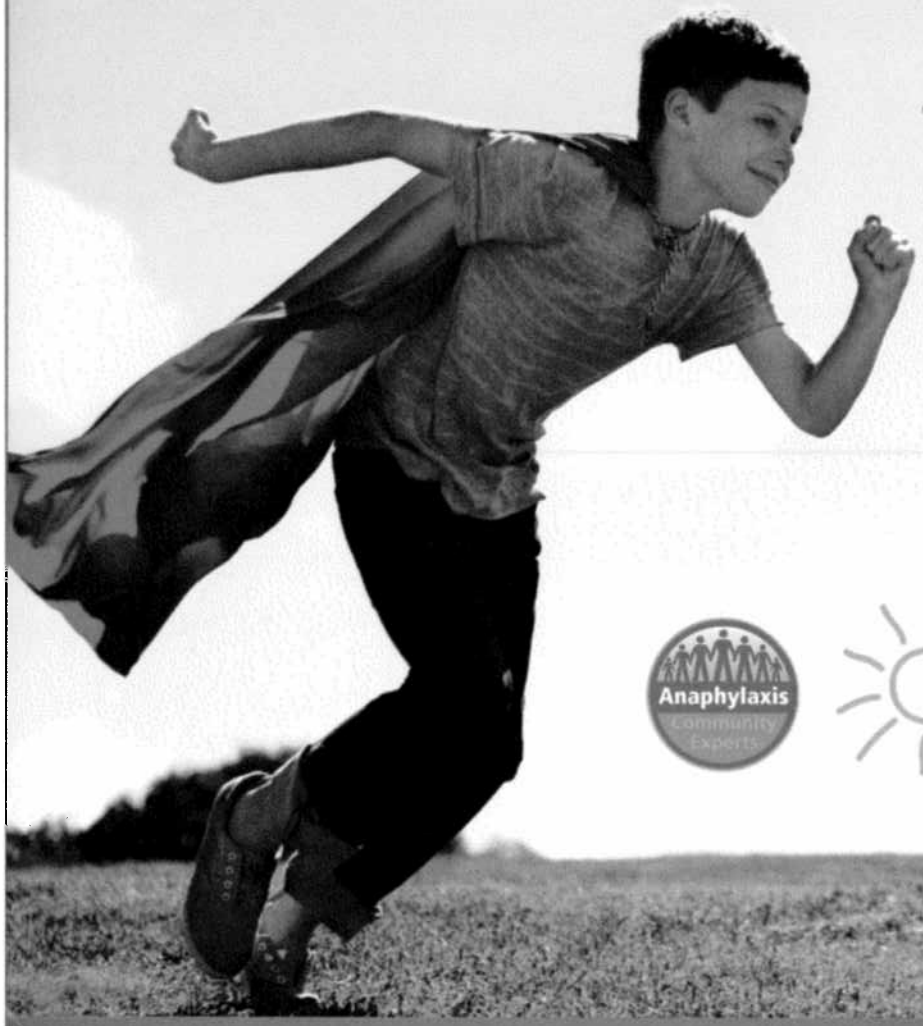
Jake learned where bees live, how epinephrine auto-injectors fight off the effects of bee venom, and what to do if he got stung and no one was there to help.

One day, Jake's mom tucked a pouch with two epinephrine auto-injectors and his anaphylaxis action plan into his backpack.

"Superheroes are always prepared," she said and clipped an AANMA Epi Everywhere! Every Day! Bag Tag on the zipper. "You are going to be fine. The Epi Everywhere! Every Day! bag tag shows you know what to do and if needed, what people can do to help."

"I'll keep my backpack nearby whenever I leave home," promised Jake. "Just like the doctor and school nurse said."

That afternoon, Jake dug his Superhero cape out from the back of his closet, slipped it over his head and then charged to the top of the hill in his back yard a stronger, smarter and happier Superhero than ever!



Calling All Kids

What's your Superhero Story?
Tell us at *www.aanma.org/Superhero*
and we'll send you a free
Epi Everywhere! Every Day!™
tag and sticker!

Select stories will be featured in
Allergy & Asthma Today!
Superheroes must have parent
permission to participate!

Allergy & Asthma Network
Mothers of Asthmatics

should spell out your child's food allergies, the signs and symptoms of a reaction, the appropriate responses, how to administer medicines and who to contact in emergency situations. Share this written plan with teachers, school principals, school nurses and staff in any other settings where your child spends time. Deliver the plan in person, and sit down and go through it with your child's caregivers.

If your state doesn't have a statewide anaphylaxis plan, you may also want to ask the school to work with you on a 504 plan or an Individualized Education Plan that spells out what your child needs at school.

Read the Signs

Some kids tell parents exactly what's on their minds. Others aren't so open, so you may have to investigate if you think your child has anxiety about his or her food allergies, says Dr. Swanson. The best time to do that is at night before bedtime. That's when children are winding down and are more vulnerable to stress. Keep it brief, and don't ask leading questions. Instead of, "How are you feeling about your food allergy?" or "Are you feeling sad because of your food allergy?" ask, "So how did it go today?" or "What went well today?" and "What do you wish had gone better?"

According to Dr. Klinnert, children who are anxious about food allergies may engage in lengthy questioning before activities and seem afraid or hesitant. Parents may see an "unexplained reluctance to do something your child likes," says Dr. Klinnert, such as going to a friend's birthday party or a soccer game. They may also talk about death and dying or limits on their future – what they can or can't be when they grow up because of their food allergies. That's another indication that "they're really working on this [fear]."

Doing your best to protect your child is good enough, says Dr. Swanson. "You have to work on accepting that life is uncontrollable."

MaryKay Hill has talked with parents whose children show other signs of anxiety, like repeatedly washing their hands out of fear that they've come into contact with an allergen. Children with food allergies may also act out and suffer from headaches, insomnia, weight loss or vomiting. All of these can be caused by anxiety about food allergies.

Reassure and Repeat

Young children need reassurance that they're safe, says Dr. Swanson. Having a plan in place makes it possible for parents to confidently assure kids they'll be protected and cared for whether at home, school, Little League, church or scouting sleepovers. Let your child know that "there are a lot of things we can eat and enjoy" other than the foods that make them sick. Remind them that "we carry Epi Everywhere! Every Day! we are prepared." Both are good ways to communicate to children that they're safe.

Jordan and MaryKay Hill have a team approach to tackling food allergies.

As children mature, parents can begin teaching them how to control anxious feelings on their own. When Jordan feels a panic attack coming on, she now knows to think of a serene place and control her breathing. She tells herself the feeling of panic won't hurt her – and that it won't last long. MaryKay also bought her a journal to write down her feelings to help her work through them.

Don't Let 'em See You Sweat

No matter how anxious you feel, it's important to appear calm. "Parents' reactions can put a lot of pressure on kids," says Dr. Swanson. "A lot of times parents can overdo it when telling a child to avoid certain foods," even though they're trying to help. Instead of peppering a child with reminders before each play date, soccer game or party, call the parents or coach and explain your child's needs to them.

That's just what MaryKay Hill did when Jordan joined a soccer league. The coach sent a letter to other parents letting them know about Jordan's food allergies. Now when MaryKay drops Jordan off at practice, armed with her epinephrine auto-injector, both of them have a lot less anxiety. "It was scary because parents would hand out cookies all the time, but Jordan and I both had to learn we can

control certain situations. Accidents do happen, but we can do our best to make plans and reduce the chances."

Doing your best to protect your child is good enough, says Dr. Swanson. "You have to work on accepting that life is uncontrollable." Sound, thorough planning and preparation are key, especially when educating yourself and your child (in age-appropriate terms) about allergen exposure, hidden ingredients, cross-contamination, eating out and managing reactions. Then comes accepting that you're doing what you can, he says. "Parents always feel like there's more they can do, but that's not always true."

Think Outside the Box

Lori Sandler, whose 9-year-old son Benjamin has multiple, severe food allergies, knows firsthand where knowledge – and a dash of creativity – can lead. Sandler's experimentation with allergen-free recipes for Benjamin led to the start of a successful family business. Divvies (*www.divvies.com*), a New York bakery and online store, specializes in baked goods, gourmet popcorn and candies that are free of peanuts, tree nuts, egg and dairy. The company's philosophy is spelled out on their packaging: Made To Share.

MaryKay Hill works with schools and families to find creative alternatives to food for children's celebrations. Given the rising rates of childhood obesity, diabetes and other health issues, food-free parties benefit everyone. Instead of bringing sweets to your child's class for a party, volunteer to tell a story or bring in supplies for a craft project. Or surprise your child with a bouquet of Mylar balloons.

MaryKay also suggests making specific signup sheets for parties that do involve food. "My daughter's class has four kids with food allergies, so we make signup sheets of foods that everyone can enjoy – strawberries, blueberries, carrots, celery – and the usual drinks and paper products. If someone brings in a food that's not on the list, they don't serve it."

Great communication among his parents, teachers and other class parents lets Benjamin Sandler be part of all school activities – like this gingerbread house project. This spirit of inclusion is part of the Sandler family's lives and their bakery, Divvies.

Seek Help Through Rough Patches

As parents and children learn to manage food allergies, anxiety should begin to lessen. If your child still shows signs of anxiety – or you're feeling anxious much of the time yourself – seek help from a mental health professional.

When Benjamin Sandler was younger, Lori noticed he seemed scared to try new things and take risks. He didn't want to learn to ride a bike, although he was strong, athletic and outgoing. "[His avoidance] didn't make any sense," she says. "It seemed out of character for him."

Lori took Benjamin to see a psychologist to find out what was behind the bicycle issue. They discovered that the constant fear of getting sick from eating the wrong food had colored Benjamin's outlook on trying new things. Benjamin was able to work through the issue with the psychologist's help and soon got on his bike and started to ride. Now he checks in with the psychologist a few times a year or if a particular issue arises.

Empower and Build Confidence

When parents hand over some responsibility for managing food allergies, "it helps kids feel stronger and more confident and hopefully overcome any anxiety," says MaryKay Hill. She now asks daughter Jordan to read labels and lets her choose foods at the grocery store. "It's like teaching kids to wear a bike helmet. It's about learning to keep safe and take care of themselves."

Recipe for Success

Food allergies don't have to define your child – or your family. The Hills go out to eat every Sunday, and Jordan is learning what questions to ask the server when ordering. "She's learning that she can have food allergies and still go out and have a good time," says MaryKay. "It's also a way not to let her food allergies keep us from doing the things we want to do as a family."

Benjamin Sandler, who loves animals and plays a mean third base, summed it up well during a recent appearance on The Martha Stewart Show. While helping his mom show Martha how to make cupcakes without milk or eggs, Benjamin explained that food allergies "are just one little piece of me. Think of a huge puzzle. [They're] just a little piece."

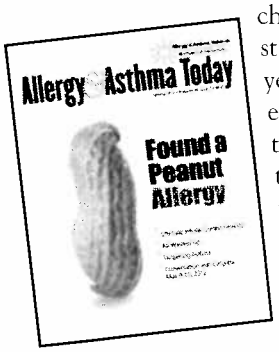
Kimberlee Roth is a freelance writer and columnist. She specializes in health and wellness and is the author of Surviving A Borderline Parent, *published by New Harbinger Publications.*

Found a Peanut ... At My House, Too

I want to applaud you for focusing on a family's adjustment to peanut allergy in the Spring 2012 issue of *Allergy & Asthma Today*.

My daughter had her first reaction at 9 months of age, when her unsuspecting grandmother gave her peanut butter on the end of her finger to taste. The second reaction had me taking her to the emergency room barefoot when she struggled to breathe after a minor exposure.

We've learned a lot over the years, and I was a worried mother when she was small and could not make food choices for herself. I still worry, but 14 years and experience have eased the fear. We had to educate our family, friends, church and schoolteachers about the danger of peanuts. We changed where we ate out and how we shopped. We obsessed over food labels.



We still keep the peanut butter on the highest shelf. We use only plastic spoons to scoop out a serving – and the spoon is immediately thrown in the trash afterwards. I don't want utensils in dishwater contaminating other items.

She doesn't eat food prepared by others, takes her lunch to school regularly and sits through many birthday parties without enjoying the treats. We read labels religiously. Thankfully, she hasn't had an episode in several years.

When my niece came along, our other grandmother gave her a cashew and it all started again. I'm glad we had already learned and implemented strategies for coping with nut allergies as it made the transition for a new child easier in our family.

I am continually amazed at people who don't understand or simply won't acknowledge this is a life-threatening issue. For those of us living with food allergy, your article really hit home. Keep up the good work!

– *Kathy J. Kunkel*

Laughed And Cried When I Watched

Thank you for the "Chef 2 Go: Food Allergy Intervention" Internet program. I laughed and cried when I watched – I'm so happy you did this! When the couple on the show pulled out their forbidden foods list, I had a flashback to the early days when we thought my infant son was allergic to everything and I ate nothing but water and white rice while I nursed him.

My son outgrew some food allergies, and while our must-avoid foods list is still long and we've had some very scary emergencies along the way, it's a lot easier these days to be living with food allergies. Getting information like this to the public makes my son's life and our lives just a little easier.

– *Jill Stiffler*

Watch "Chef 2 Go: Food Allergy Intervention" with Chef Ryan Hutmacher of The Centered Chef and other informative programs from the Anaphylaxis Community Experts at www.youtube.com/breatherville.

Peanut Advice For Schools

I recently looked over the Fall 2011 copy of *Allergy & Asthma Today*, given to me by our school nurse. My interest is in this age-old question of, "What is the best advice for schools when it comes to foods and true food allergies, especially anaphylaxis?"

When I was principal of an independent school in Oregon, I met with a local immunology expert affiliated with a hospital there. I had him visit the school in order to give direct information to parents, since his advice was NOT to go the banning route with foods. He explained that the current thinking, following the lead of Canada's Sabrina Rule, was to be cautious, attentive and vigilant, but that trying to ban foods like peanuts from schools was not the best approach to helping anaphylactic children. Use of epinephrine auto-injectors was the best route.

Oregon passed a "Good Samaritan" law that allows schools to administer epinephrine if an anaphylactic reaction is noticed and the child does not have a personal auto-injector on hand. I know that Illinois has passed a similar law.

– *Mark W. Berger*

As of October 2012, 49 states have laws protecting students' right to carry and use anaphylaxis medications. (New York is the lone exception.) For specifics on your state's laws, visit www.aanma.org/advocacy/meds-at-school.

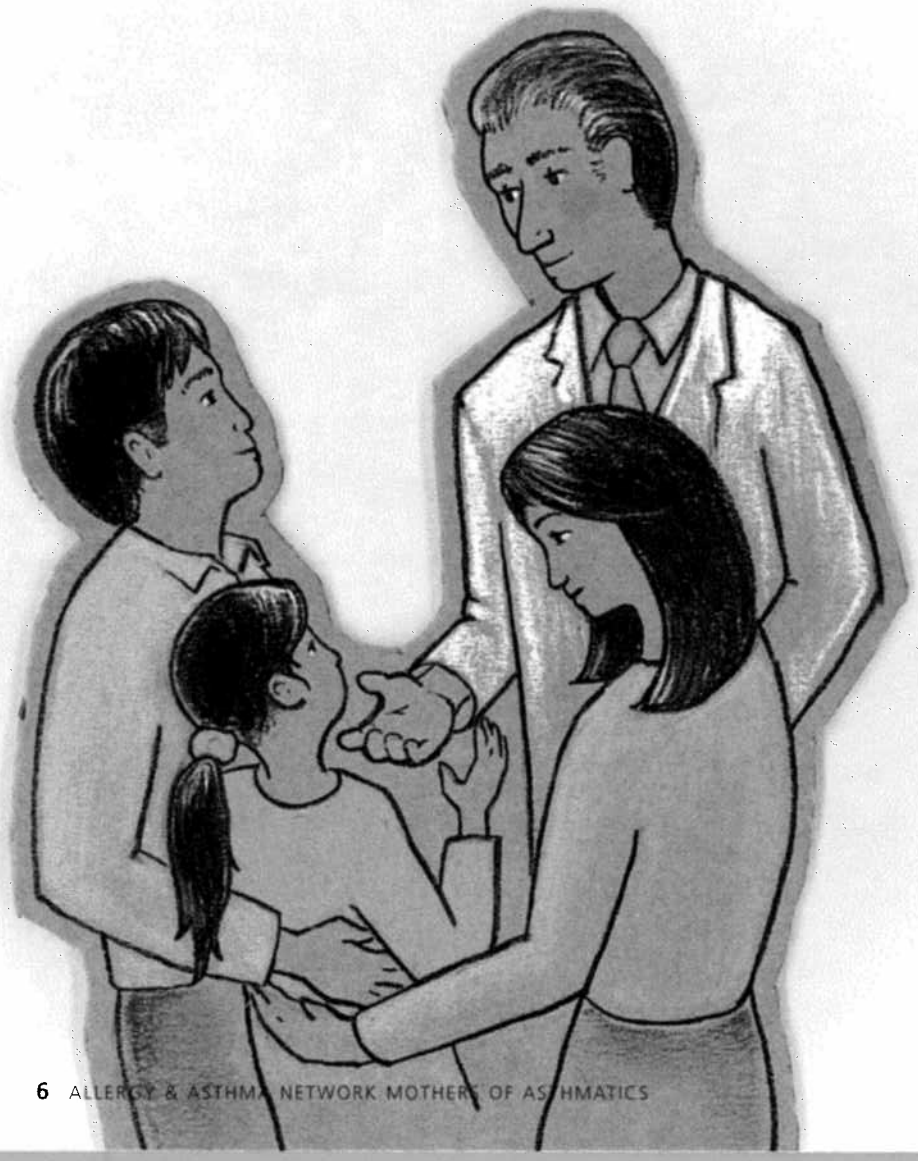
Anaphylaxis: It's New to Me

As if the trauma of the attack wasn't enough, the diagnosis – anaphylaxis – came with a warning. It is likely to happen again when least expected.

The emergency department physician said, "Be ready. Here's a prescription for two epinephrine auto-injectors. Here's how you use it. Always carry two with you. If symptoms start, use one and get to a hospital even though symptoms will start to improve. Here's a referral to an allergist. Get to the root cause of symptoms. You'll be okay."

"Okay." "Anaphylaxis." The two words which feel worlds apart.

The potential for another anaphylactic reaction exists for your child (or you) and it will happen again. You question, "Again? What just happened? How can I make this feeling stop?"



After Effects

During any traumatic event, the body produces adrenaline and other chemicals necessary for heightened attention and response. Once the episode is over, It is common to feel a bit overwhelmed, confused, relieved and grateful – all at the same time.

The best medicine is to drink plenty of water, fill the epinephrine auto-injector prescriptions and get some rest. Schedule the appointment with the allergist, but also call your family physician or pediatrician's practice to let them know of your experience. Most importantly, get rest!

Rest gives you time to reflect that you are safe, you made good choices and will make even better ones in the future. It allows your body chemistry to return to normal before tackling next steps…day-to-day life with the potential for anaphylaxis to return.

Craving Clarity

But that's probably not what happened, right? Immediately after the diagnosis, you consult Google and encountered the top 5 million websites in 0.012 seconds. While still in a state of shock and disbelief, you learn there was no single definition. You see pictures and read stories you wish you could forget. You find articles that are helpful, at least they seemed that way, but there is no way to judge.

It's easy to get drawn into the stress and drama of poorly managed food allergy and anaphylaxis stories. You find them in any life threatening condition.

There is no Internet police and anyone can claim to be a food allergy or anaphylaxis expert just by starting a blog or selling a product.

Some groups look like nonprofit organizations but are for profit. Some groups appeal to your fears to help influence policies that have no research or evidence to support it.

Watch your internal stress meter while surfing through websites. Stick to the facts, stay away from the fear-based rhetoric. Ask your nurse educator for a list of websites they recommend. Just remember, that links change, content changes and it is ultimately up to you to accept or reject the information based on your circumstances.

The Root of the Problem

Real clarity begins when you get to the root cause or causes of symptoms. Why did your or your child's immune system get whacky all of a sudden? What can you do to reduce the risk it will happen again?

Getting answers doesn't always spell immediate relief. You don't walk into the office, get a blood test or skin tests, and presto facto get your answers. You and your allergist are unraveling the mysteries of your or your child's immune system and how it interacts with daily life. This takes time, communication and information processing.

Most of the first appointment with the allergist is spent talking. Like a detective, the allergist asks questions. There are numerous tests, including skin and blood tests, and food challenge testing. Some tests are completed and results are ready that day. Other test results will be discussed at the next appointment.

About the time you begin to feel overwhelmed, the doctor reviews and hands you a plan of action. A nurse educator gives you a small bag of patient education materials. A magazine, a newsletter, a brochure and an invitation to a free Anaphylaxis Community Expert seminar on food allergies hosted by the allergist and the local middle school are all included.

She is reassuring. She tells you that once you learn your routine, you will be fine. She sends a copy of your records to your family physician and reminds you to always carry both doses of epinephrine everywhere every day.

You learn:

- Anaphylaxis is serious. It's a life threatening allergic reaction. You now know the signs and symptoms and have a plan to handle emergencies. You are prepared.
- Epi Everywhere! Every Day!tm – You always carry two doses of epinephrine, the only drug with the potential to reverse life-threatening symptoms. You will use it at the first sign of anaphylaxis and go directly to the hospital even if symptoms start to improve.
- The world is not a dangerous place to live. You know what to do to be safe, happy and healthy.

If you are newly diagnosed or searching for answers, help is in your neighborhood and as close as your phone. Start with your personal medical care providers.

Allergy & Asthma Network Mothers of Asthmatics, American College of Allergy, Asthma & Immunology and National Association of School Nurses invites you to access local resources offered through the Anaphylaxis Community Experts (ACE) program and online:

Allergy & Asthma Network
Mothers of Asthmatics
800-878-4403
www.aanma.org

American College of Allergy,
Asthma & Immunology
847-427-1200
www.acaai.org

National Association of School
Nurses
866-627-6767
www.nasn.org

Symptoms That Signal Anaphylaxis

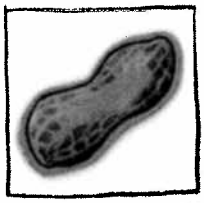
There is no simple rule but here is a general guide to follow.

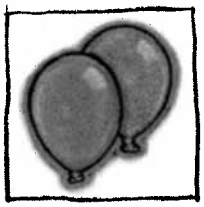
There are nonlife-threatening allergic reactions such as itchy rashes and hives or local swelling. Antihistamines will relieve these symptoms within an hour or so.

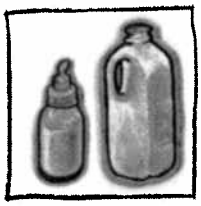
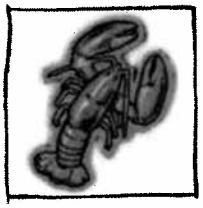
But when symptoms start to build and involve breathing, heart, or digestive system symptoms or cause profuse sweating, dizziness, confusion or feelings that something bad is about to happen – think anaphylaxis.

- Refer to your anaphylaxis action plan.
- Use your first epinephrine auto-injector.
- Seek emergency medial treatment or call 911.

Epinephrine is the only medication that can reverse the life threatening symptoms and protect vital organs. The average time to respiratory or cardiac arrest due to food allergy is 30 minutes, venom allergy is 15 minutes and for drug allergy is 5 minutes.





What Is Anaphylaxis?

Anaphylaxis is a sudden and severe allergic reaction that may affect your whole body.

Symptoms can include

- Hives (red, itchy bumps on your skin)
- Lip, tongue and throat swelling
- Nausea, vomiting, diarrhea, cramping
- Shortness of breath, wheezing, coughing
- Drop in blood pressure
- Loss of consciousness

When diagnosing anaphylaxis, healthcare providers usually look for skin symptoms like hives plus problems in one other organ system. However, 10-20 percent of cases have no skin symptoms.

Anaphylaxis symptoms can start within seconds of exposure to allergens, such as an insect sting or eating a peanut. On the other hand, you may not have any symptoms until hours later, which can make identifying the cause of anaphylaxis a little tricky.

Symptoms also can be different each time a person experiences anaphylaxis – and vary in severity each time – but once they start they usually progress quickly. Although uncommon, any anaphylactic reaction can turn deadly and therefore providers recommend that at-risk patients carry auto-injectable epinephrine with them at all times, use it at the first sign of symptoms and seek follow-up medical assistance right away. As many as 30 percent of people who have an anaphylactic reaction will need more than one dose of epinephrine, so your provider will tell you to carry two auto-injectors.

Food Allergy Factoids:

- In 2007 approximately 3 million children under age 18 years (3.9 %) were reported to have a food or digestive allergy in the past 12 months.
- Eight foods account for 90% of all food-allergy reactions: cow's milk, egg, peanut, tree nuts (for example, walnuts, pecans, almonds, and cashews), fish, shellfish, soy and wheat
- Combined, food allergies cause 30,000 cases of anaphylaxis and 150 deaths annually.

Guidelines for the Diagnosis and Management of Food Allergy in the United States 2010
CDC National Health Interview Survey June 2009 last updated 2011
*Pumphrey, RS. Clin Exp Allergy. 2000; 30(8):1144-50

The Allergy Shot Waiting Game

Immunotherapy – a.k.a. "allergy shots" – can provide long-lasting relief for people with allergic asthma, allergic rhinitis and stinging insect allergy. But allergy shots can also lead to an anaphylactic reaction.

That's why your allergist requires patients to wait in the office 20-30 minutes after each shot – to be sure that if you have a reaction, it can be treated safely and quickly. Your allergist may also give you a prescription for auto-injectable epinephrine in case you have a reaction after your office visit. Allergists recommend avoiding strenuous exercising for several hours after an allergy shot because exercise speeds your body's absorption of the allergens in the shot, which increases your risk for anaphylaxis.

Is It Food Allergies?

Approximately 12 million Americans have a food allergy, including 3 million children.(1)

Eight foods account for 90 percent of all reactions in the United States: cow's milk, hen's eggs, peanuts, tree nuts, wheat, soy, fish and shellfish. Other food allergies range from avocados to yams.

Most food allergy symptoms are mild, but in the United States there are approximately 30,000 episodes of food-induced anaphylaxis, associated with 100 to 200 deaths annually.(2) The only way to prevent an allergic reaction is to avoid foods you are allergic to, so an accurate diagnosis is essential.

Studies show however, that more than half of presumed food allergies are not actually allergies.

It's an important distinction. "You don't want to avoid food that you are not allergic to," says Jay Portnoy, MD, "but you do want to avoid foods that you are allergic to. Board-certified allergists can be helpful in determining this because they have special training and experience in interpreting the results."

Guidelines for the Diagnosis and Management of Food Allergy (National Institutes for Allergy and Infectious Diseases, December 2010) provide in-depth information on what works and doesn't work when it comes to food allergy.

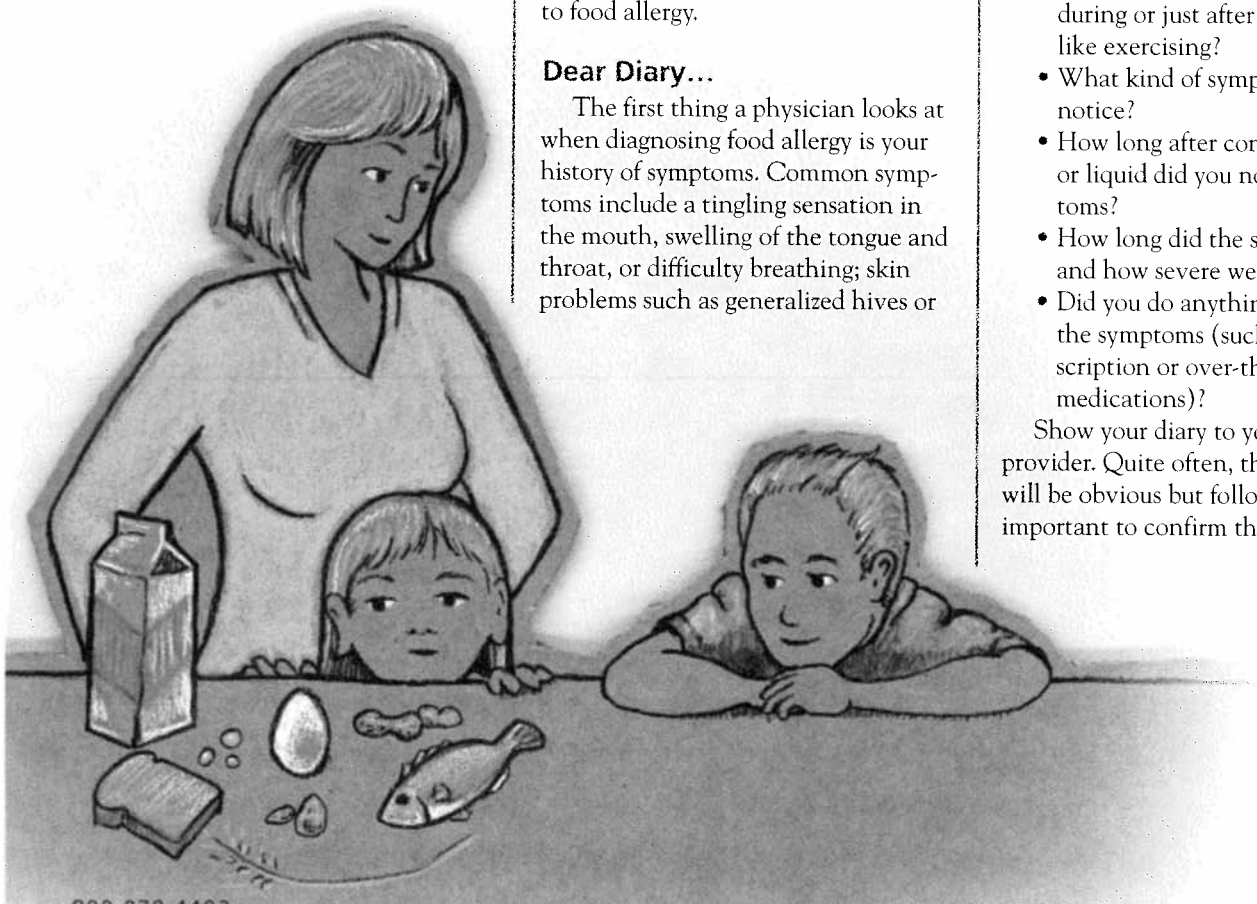
Dear Diary...

The first thing a physician looks at when diagnosing food allergy is your history of symptoms. Common symptoms include a tingling sensation in the mouth, swelling of the tongue and throat, or difficulty breathing; skin problems such as generalized hives or itching and flushing; stomach discomfort such as abdominal cramps; diarrhea, or vomiting; or a drop in blood pressure, dizziness or loss of consciousness. They usually appear within minutes of eating the food, though they can sometimes appear hours later.

If you think you might have a food allergy, keep a written diary with the following information:

- What exactly did you eat and how much?
- Where and how was the food processed? Was it at home? A restaurant?
- How was the food prepared: raw? boiled? roasted?
- Were you doing anything else during or just after your meal, like exercising?
- What kind of symptoms did you notice?
- How long after consuming a food or liquid did you notice symptoms?
- How long did the symptoms last and how severe were they?
- Did you do anything to help ease the symptoms (such as take prescription or over-the-counter medications)?

Show your diary to your healthcare provider. Quite often, the food allergy will be obvious but follow-up testing is important to confirm the diagnosis.



Food Allergy Testing-

The food allergy tests performed most often by allergists are skin prick tests. A diluted extract of the food is placed on the patient's skin, then the skin is scratched with a needle. If you develop a raised skin reaction (called a wheal) at the place of the needle prick, that indicates possible allergy. If there is no reaction, you are unlikely to be allergic to the food.

Skin prick tests are quite accurate for foods with stable proteins, including peanut, milk, egg, tree nuts, fish and shellfish – some of the most common food allergens in the United States. They are less reliable for fruits and vegetables, which have proteins that break down quickly.

Blood tests that look for IgE antibodies (particles in the blood that indicate allergy) are also useful for identifying food allergies. There are particularly helpful for people whose allergy history puts them at high risk of serious reaction to a skin prick test; whose skin problems make skin-prick uncomfortable or dangerous; or who take certain medications that interfere with skin prick test results.

No tests is perfect, however. A positive skin or blood test response does not necessarily mean that you would have an allergic reaction from eating the food. "Just because you have a positive test to a food doesn't mean you are allergic to it," explains Dr. Portnoy. "Personally, I'm still seeing a lot of patients who have been told not to eat foods because of positive test results, when in fact they have never had a problem with the food."

Food allergy guidelines say the diagnostic tests to evaluate food allergy should be based on the patient's medical history and not be comprised of general large panels of food allergens. Patients who test allergic to numerous foods might choose to eat very restrictive diets, which can be unhealthy and difficult to follow. That's why seeing an allergist trained to put all the evident together for a diagnosis is important.

NIH Food Allergy Guidelines recommend your healthcare provider may use an oral food challenge test to diagnose food allergy. Because an oral food challenge test always carries a risk, it ***must*** be performed by a healthcare provider trained in how to conduct this test and at a medical facility that has appropriate medicines and devices to treat potentially severe allergic reactions.

Be Prepared

If you or your child has been diagnosed with a food allergy, talk with your healthcare provider about how to avoid reactions. Ask for a written anaphylaxis action plan. For children with food allergies, give a copy of the action plan to the school and all caregivers.

Early recognition and treatment of symptoms is critical.

Most often, you will need to completely avoid eating the food you are allergic to. If you have a life-threatening food allergy, your healthcare provider will prescribe auto-injectable epinephrine to use in anaphylactic emergency situations. Be sure you know how to use it and carry it with you always. Make sure school, family, friends and other caregivers are also trained on how and when to use epinephrine. Consider wearing a medical alert bracelet that lists foods you are allergic to and has instructions to give you epinephrine if you are unable to do so yourself.

Many children will outgrow their food allergies over time, particularly if they are allergic to milk, egg or wheat. It is less common to outgrow an allergy to peanuts or tree nuts, although it is still possible. So it is important to maintain a close relationship with your allergist who can help you to determine whether the food allergy is still problematic. ■

Allergy Testing Simplified

- Allergy testing is not for do-it-yourselfers! The Internet, some health food stores and gyms offer various types of allergy tests, which may or may not be FDA-approved, accurate or necessary. Your treatment plan is only as good as the information you put into it.
- The uKnow™ Peanut ImmonoCAP Molecular Allergy Test indicates the specific peanut proteins responsible for the reaction. Some physicians are finding it helps patients and caregivers understand risk factors and the importance of rapid response. It helps differentiate between oral allergy syndrome and life-threatening types of reactions. It is a tool best used in the context of the patient's entire history and cannot be used as a diagnostic tool alone. The person ordering the test is responsible for interpretation of the results.
- There's no "one-size-fits-all" allergy testing method. Because the immune system changes throughout our lives, allergy testing may need to be repeated. When moving from one location to another, you may discover new symptoms and new allergens, and need testing again.

1. *Food Allergy Among U.S. Children: Trends in Prevalence and Hospitalizations; NCHS Data Brief #10, October 2010, Centers for Disease Control and Prevention*

2. *Quick Facts, National Institute of Allergy & Infectious Diseases, http://www.niaid.nih.gov/topics/foodAllergy/understanding/Pages/quickFacts.aspx*

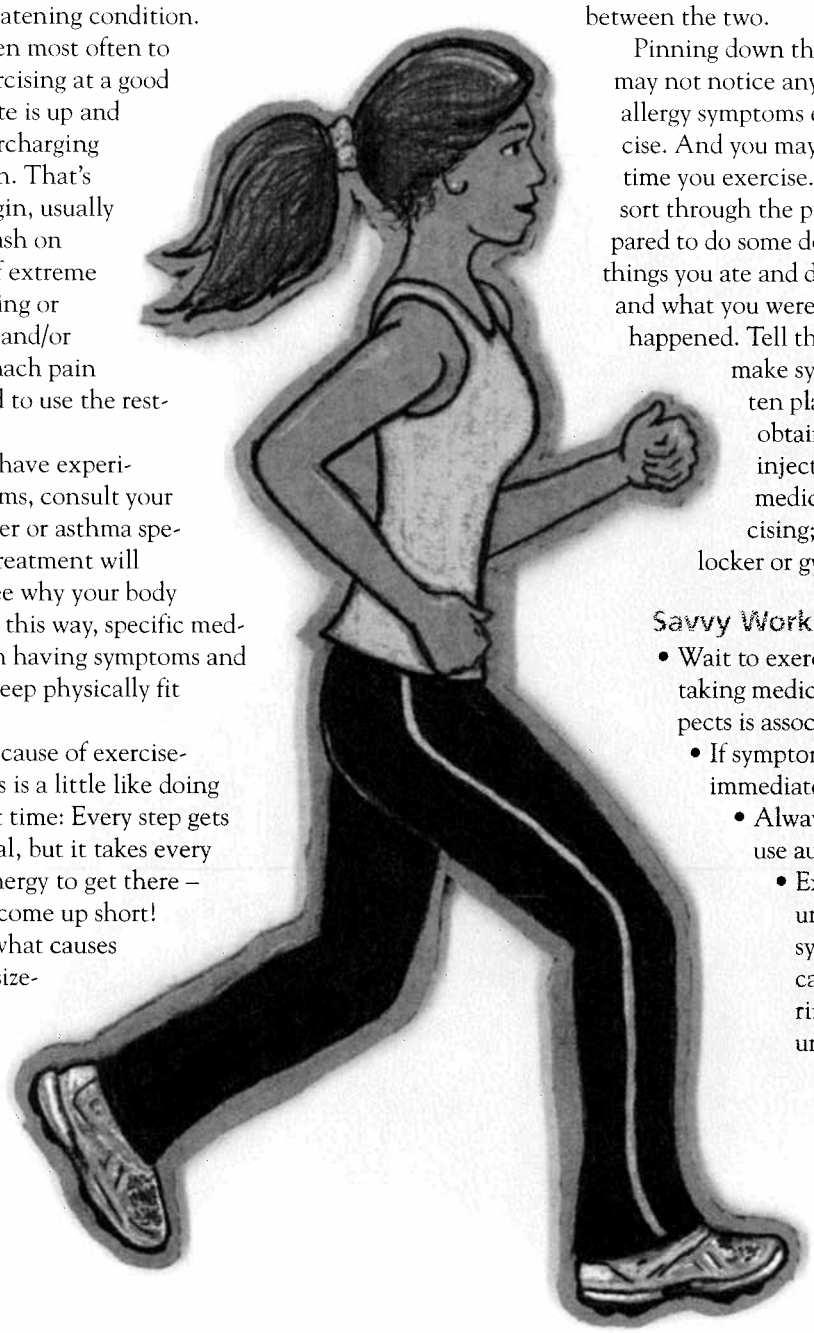
Allergic To Exercise

Exercise-induced anaphylaxis – it's a diagnosis only a couch potato could love! But the truth is that although it is quite rare, exercise-induced anaphylaxis is a serious, potentially life-threatening condition.

Symptoms happen most often to people who are exercising at a good clip – their heart rate is up and their lungs are supercharging muscles with oxygen. That's when symptoms begin, usually with flushing or a rash on the body, feelings of extreme fatigue, then wheezing or difficulty breathing and/or gut-wrenching stomach pain and the urgent need to use the restroom.

If you think you have experienced these symptoms, consult your medical care provider or asthma specialist right away. Treatment will include testing to see why your body reacts to exercise in this way, specific medications to use when having symptoms and a plan to help you keep physically fit safely!

Finding the root cause of exercise-induced anaphylaxis is a little like doing a triathalon the first time: Every step gets you closer to the goal, but it takes every ounce of will and energy to get there – and sometimes you come up short! Experts aren't sure what causes it. There is no one-size-fits-all answer. But some see an association between eating food or taking medicines such as aspirin or other non-steroidal anti-inflammatory drugs (NSAIDs) and exercising, even with several hours between the two.



Pinning down the culprit can be tricky; you may not notice any food- or medication-related allergy symptoms except on days that you exercise. And you may not have symptoms every time you exercise. An allergist will help you sort through the possible causes, but be prepared to do some detective work. Report the things you ate and drank, medication you took and what you were doing the day symptoms happened. Tell the doctor what you did to make symptoms go away. Get a written plan of action and be sure to obtain a prescription for auto-injectable epinephrine. Keep your medication with you while exercising; do not leave it in your locker or gym bag.

Savvy Workouts

- Wait to exercise 4-6 hours after eating or taking medication your physician suspects is associated with the anaphylaxis.
- If symptoms occur, stop the activity immediately.
- Always carry and know how to use auto-injectable epinephrine.
- Exercise with a friend who understands and can recognize symptoms of anaphylaxis and can help administer epinephrine in the event you are unable to do it yourself.

Venom Allergies

THWACK! Too late! First one sting and then another. And another. Lawn chairs toppled over, sodas went flying and the dog landed in the picnic basket!

Onlookers laughed as the man lunged away from the bees until they suddenly realized something was very wrong.

The young man suddenly dropped, then reached for his backpack, his eyes wide and his lips and face growing more swollen by the moment.

A friend knew what was wrong. She reached inside the bag and took out a device. She removed a cap and pressed it to his thigh and held it there as it delivered lifesaving medication into his body.

"Call 911 NOW!" she yelled and pointed to two onlookers. She placed the man's knees and feet on the cooler and put his head on the blanket. She checked his breathing. Checked the stings. No stingers remained. All three stings were on his face — the bees must have been in his soda can. She got the second dose of epinephrine ready.

A nurse that happened to be nearby offered to help. She could hear the sirens. Things were happening so fast but her friend would be okay because they were prepared.

What to do if stung

- Flick the insect away from your skin.
- Walk (don't run) away from the area. Some bees will be threatened by quick movements and running may increase your body's absorption of the venom.
- If a stinger is left in the skin (the telltale mark of a honey bee), scrape it off with a flat surface, like a credit card; do not use tweezers or your fingertips, as that could squeeze more venom into the sting area.
- Apply ice to reduce swelling.
- Expect local redness and swelling.
- Watch for these symptoms indicating an anaphylactic reaction:
  - — Hives or generalized itching other than at the site of the sting
  - — Swelling of the throat or tongue
  - — Difficulty breathing
  - — Dizziness
  - — Severe headache
  - — Stomach cramps, nausea or diarrhea

These symptoms indicate need for immediate treatment with an epinephrine auto-injector followed by medical assistance at an emergency facility.

Sting Basics

For most people, bee or other insect stings simply hurt or itch or cause a lump where the sting happened. This is called a local reaction. It responds well to ice and the itch is relieved by an oral antihistamine.

When the venom causes a reaction other than where the sting happened, it is called a systemic reaction or anaphylaxis. This signals a medical emergency that requires immediate treatment with appropriate medication.

Emergency Treatment

Because anaphylaxis is a severe allergy reaction, many people assume that an oral antihistamine would be the first line of treatment. However, oral antihistamines only treat itching and take up to one hour to begin relieving symptoms. It does not provide lifesaving care during anaphylaxis.

Epinephrine delivered into the thigh muscle begins working immediately to relieve hives, generalized itching, swelling of the throat and tongue, difficulty breathing, dizziness, and other symptoms associated with anaphylaxis. Epinephrine is the synthetic form of the chemical the body makes during a crisis. Sometimes, more than one dose of epinephrine is needed.

Following any treatment for anaphylaxis, the patient should report to an emergency facility for observation, additional treatment and instructions. Late phase reactions can suddenly appear and be more intense than initial reactions.

Follow-up care

Report incidents to your primary care physician and allergist. If you do not have an allergist, ask your primary care physician for a referral. An allergist can offer venom immunotherapy as an effective long-term solution to protect against life-threatening reactions in the future.

Bees

Honey bees are fat, dark brown, slightly hairy insects often found hovering around bright flowers or feasting on clover. Their cousins, the bumble bees, look very similar. Bees build their hives in holes in the ground or on compost piles. Honey bees use the same nest year after year, building elaborate honeycombs; bumble bees start new nests every year.

Hornets

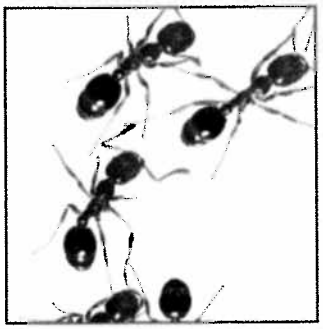
Hornets are slightly larger than yellow jackets – the size of a bumble bee but with a defined, narrow waist – and most are black with white or yellow stripes. Nests are usually found in a tree or under the eaves of a building. It can become as large as a football, always with the opening facing down.

Yellow Jackets

Part of the wasp family, these black and yellow insects swarm around picnic areas and trash cans. Peaking in late summer, they build their nests underground or in fallen logs; some nest in the walls of houses.

Paper Wasps

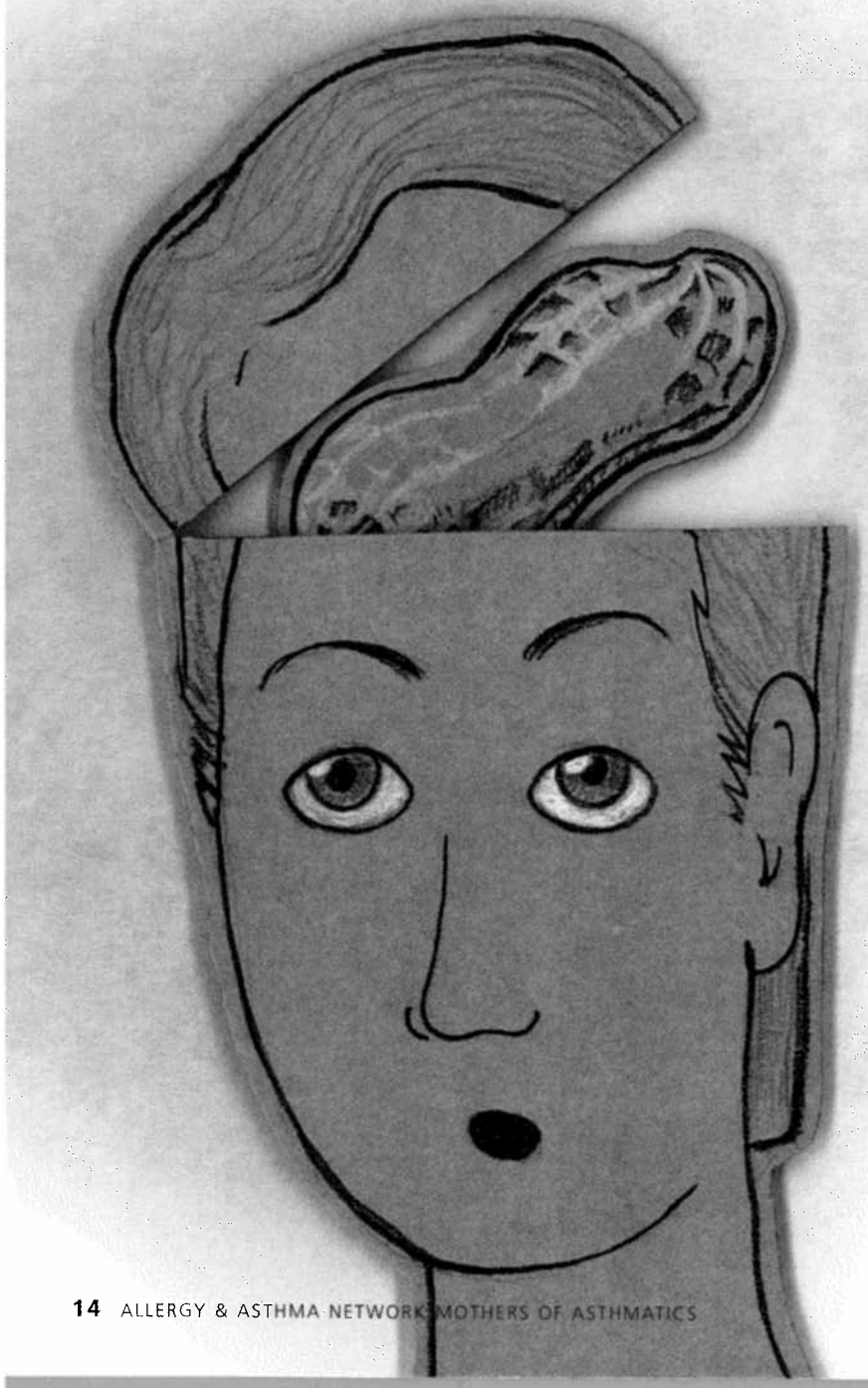
Longer and slimmer than bees or hornets, paper wasps drag their long legs behind them as they fly. Their color ranges from reddish brown to black with yellowish rings. Paper wasps build their nests on and around homes and small buildings. The nests sometimes hang from trees or under eaves and look like paper mache, upside-down umbrellas.



Fire Ants

Red and black imported fire ants are found throughout southeastern regions of the United States. (They cannot survive cold winters in the north.) Fire ants build nests that are large, dome-shaped mounds of crumbly earth up to 18 inches across and 8-12 inches high. The nests do not have visible openings, but if you step on one, fire ants will swarm up onto your feet and legs.

Flipping the Lid On Food Allergies



BY SAKINA BAJOWALA, MD

This column is controversial, but I'm compelled to write it. I have seen too many terrified parents who have been led to believe that being in the same room, on a plane or at a birthday party as a peanut is going to kill their peanut-allergic child. Their children are fearful of classmates, friends and food…and now, in the name of good intentions, many schools and ballparks are advertising "peanut-free."

ENOUGH IS ENOUGH!

If medical care providers with food-allergic families want the rest of the world to take us seriously, it's time to get a grip on actual vs. perceived risk of peanut allergens.

I know the nightmare of being doubled over in pain, covered in hives, and feeling the inside of my throat swell to the point that I had difficulty speaking. I am the mother of two allergic children.

Parents whose children have experienced food-related anaphylaxis are understandably traumatized by the event, and would go to the ends of the earth to prevent a repeat reaction. I get this.

However, I'm saddened by the number of parents who have been made to feel as though the world is not safe for their children. Anaphylaxis sucks. But the vast majority of children with food allergy

– even those who experience anaphylaxis with ingestion – are able to live safely in proximity to their food triggers, as long as common-sense measures are taken to prevent cross-contamination of ingested items.

Peanut protein in peanut butter, for example, is undetectable in the air. Research by Scott H. Sicherer, MD, at the Jaffe Food Allergy Institute at Mount Sinai School of Medicine, evaluated 30 highly peanut-allergic children by having them sniff a half-cup of peanut butter for 10 minutes. None of the children experienced a reaction.

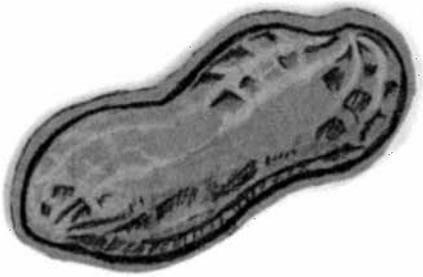
In the same study, the children had a pea-sized amount of peanut butter pressed onto their backs. One-third developed skin redness, itching or a hive at the exact site of contact, but otherwise no generalized reactions occurred.

Although this study does not guarantee that some exquisitely sensitive children may not react more severely, the takeaway point is that MOST peanut-allergic children are not at significant risk of anaphylaxis from smelling peanut butter or even from touching it.

It is important to remember that symptoms at points of contact (eyes, nose, skin) can trigger reactions that resemble anaphylaxis. However, unless the offending food enters the bloodstream, cardiovascular and respiratory collapse – the major dangers in allergic reactions – are exceedingly unlikely to be triggered.

Do we need to ensure that our toddlers are kept away from potentially cross-contaminated sweets? Of course. Do we need to keep our older, mature, and food-allergy-aware children home from parties where the cake was baked in a facility that also processes peanuts and tree nuts? As long as they know not to eat the cake or any food that has come into contact with it, I don't think so.

"It's time to get a grip on actual vs. perceived risk of peanut allergens."



So, why are so many parents telling teachers, school administrators, restaurateurs and airlines the following: "Don't you get it? My child could DIE!" The answer is simple: they believe it. And the medical community is partly to blame.

All too often, it seems easier and safer for a doctor to say, 'Avoid peanuts at all costs. Here's auto-injectable epinephrine – keep it close and don't hesitate to call 911.' Why unnecessarily risk a severe reaction, right? But it doesn't make things easier. It makes things harder. It FREAKS parents out.

The above statement, translated into parent-ese, is this: "Remember how your kid looked after eating that peanut butter cookie – all red and swollen and puking? If you're not careful, it'll happen again. Better be ready!" You think you're being cautious, but at what cost to your patient's quality of life?

No wonder parents are worrying over sleepovers, school lunches and class trips. No wonder we have a new generation of children so ardently protected from any chance peanut encounter, however minute, that they see the outside world as a danger zone!

This is counter to what we should be trying to accomplish as medical professionals. What is needed is a more nuanced discussion of risk, tailored to each peanut-allergic child.

Parents need to know what to protect their children from, to be sure. They need training in the use of emergency medicine. But they also need to know which situations are relatively safe, even if it goes counter to popularly held conceptions.

As physicians, the onus is on us to do better by these families. All it takes is a little time, thoughtfulness, and a willingness to break free from a cookie-cutter approach to treating food allergy. ■

Dr. Bajowala is board-certified in general pediatrics and adult and pediatric allergy and immunology. An AANMA professional member and Anaphylaxis Community Experts (ACEs) volunteer, she practices allergy and clinical immunology in suburban Chicago. She is the mother of two boys with allergies. Read more at http://allergistmommy.blogspot.com.

Reviewed by Andrea Holka

In the Know.

ACAAI American College of Allergy, Asthma & Immunology

Seeing is believing

Sponsor

National Association of School Nurses

On the Go.

You know what anaphylaxis feels like so you stay away from things that make you sick. You know what to do if anaphylaxis starts and how to ask for help. You keep two epinephrine auto-injectors and your anaphylaxis action plan nearby.

Tag it. Take it.

Epi Everywhere! Every Day!

Learn more at
www.aanma.org/BagTags

Allergy & Asthma Network
Mothers of Asthmatics

800.878.4403

I Like

TELL YOUR FRIENDS

©2012 Allergy & Asthma Network Mothers of Asthmatics (AANMA)

Latex Allergy

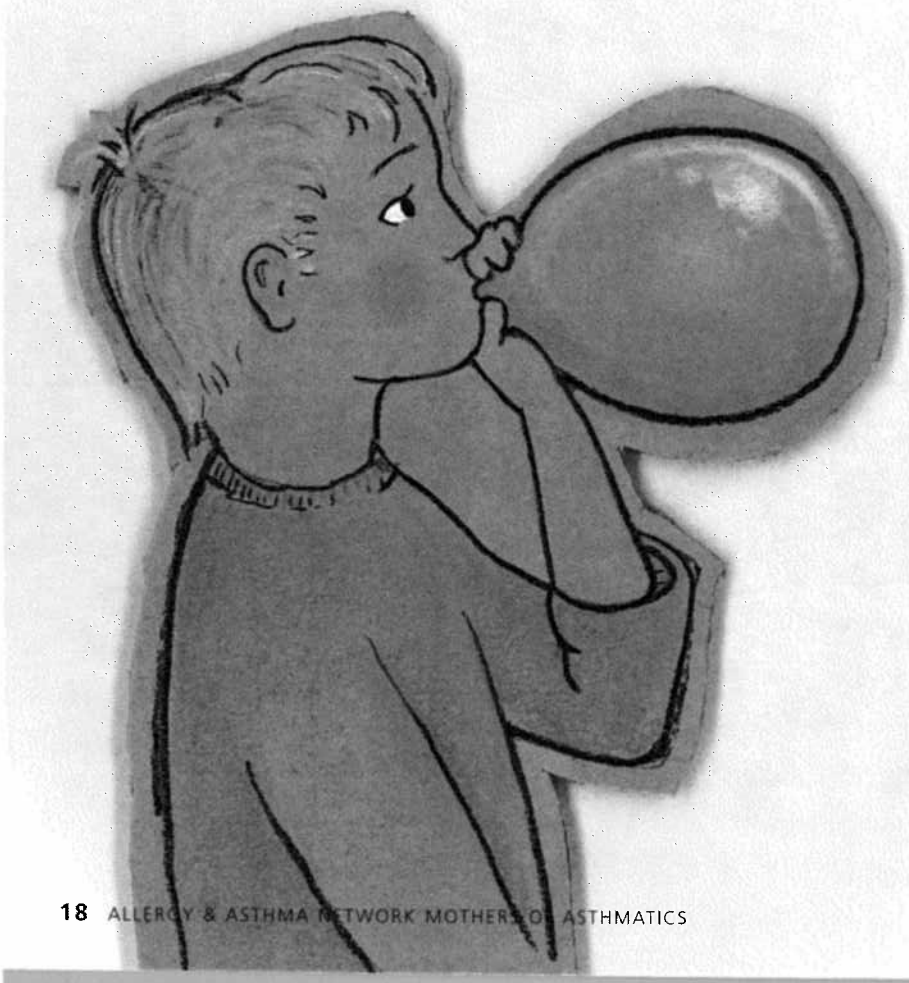
Gerri Rivers woke up with an itchy, red rash on her neck and face. The rash did not spread, but it was still visible and itchy after several days, so she made an appointment to see her physician.

After taking Gerri's medical history, the physician suggested that a stethoscope could be causing the rash. Working two medical jobs – at a local blood center and as an emergency medical technician (EMT) – Gerri wore a stethoscope around her neck most of the day. The rubber tubing of the stethoscope contained latex, a known allergen. At the mention of latex, Gerri recalled that she stopped wearing latex gloves years earlier because they irritated her hands. The doctor suspected latex allergy and sent her to an allergist to confirm his diagnosis. Life as Gerri knew it changed radically.

What's In That Rubber Tree Plant?

Latex allergy is a reaction to proteins in rubber tree sap, a milky fluid called *latex* or *natural rubber latex* used to manufacture products ranging from surgical gloves to helium balloons. The proteins in the sap that cause allergic reactions are called *latex allergens*. (*Allergen* is a term used to describe any substance that causes an allergic reaction.)

How does someone become allergic to latex? A person prone to developing allergies has an immune system that responds to ordinarily harmless proteins like pollen, pet dander or latex by producing an antibody called IgE. When IgE antibodies start to build up in the immune system through repeated exposure to the allergen, the person becomes sensitized to that allergen. The sensitivity builds up to the point that when the person comes in contact with latex allergens again, IgE antibodies prompt other cells to begin the chain reaction that leads to allergy symptoms like coughing, sneezing, watery eyes and shortness of breath. Sometimes the allergic reaction can be more serious – even life-threatening.



In's and Out's of Latex Allergies

Latex allergens can get into your immune system several ways:

- **Inhaling allergens:** Cornstarch powder used inside latex gloves carries traces of latex allergen with it into the air (and into your lungs). Latex allergens can get airborne in lesser quantities from any product made with latex, especially latex balloons.
- **Absorbing allergens externally:** If you have a cut, sore or

irritated area on your hands (or other body part) and touch a latex product, the allergens have an open door to your immune system.

- **Absorbing allergens internally:** Your tissues can absorb latex allergens when a doctor or dentist does an internal examination wearing latex gloves, when a latex injection port is inserted for use with intravenous medications or even when you get a shot – stoppers on medication vials can contain latex.

These are the most obvious exposures to latex allergens. But many people who develop latex allergy have no idea how or when they developed it.

While latex allergy is becoming somewhat less common as powdered latex gloves are used less often, the American Latex Allergy Association says it still affects from 8 to 17 percent of healthcare workers in the United States, compared with 1 percent of the rest of the population.

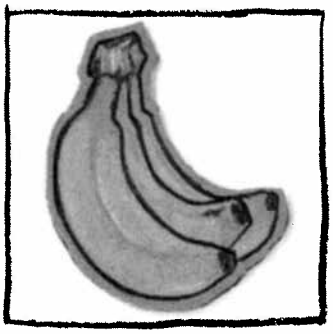
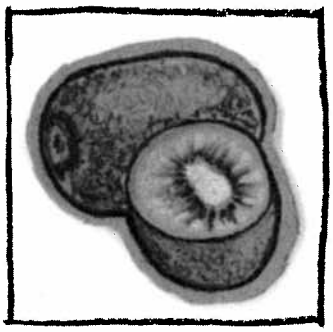
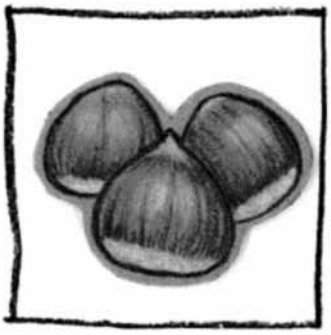
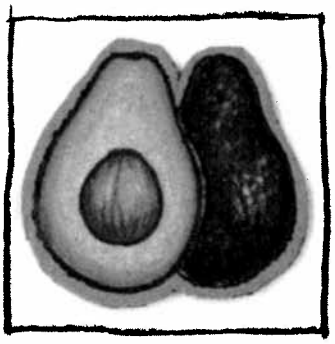
What are the symptoms? Most reactions to latex gloves are not allergic reactions to latex, according to Jordan Fink, MD, Professor of Pediatrics and Medicine, Allergy Division, at the Medical College of Wisconsin, but contact dermatitis caused by chemicals inside the gloves. Symptoms include a red, bumpy rash and itchy skin that can lead to blisters, sometimes appearing hours after contact (like breaking out from poison ivy the day after a camping trip). This can be an irritant reaction or an immunologic type IV (delayed-type) hypersensitivity.

A systemic allergic reaction to latex, also known as type I immediate allergic reaction, can cause symptoms including hives, sneezing, nasal congestion, tingling lips, tongue and throat swelling, coughing and wheezing, nausea, abdominal cramping, and facial swelling with itchy, watery eyes. Which of these symptoms a person will experience depends on how sensitive they are to latex and how much latex allergen they were exposed to.

Some people with type I latex allergy will develop anaphylaxis, an allergic reaction that involves multiple organ systems – skin, respiratory tract, gastrointestinal tract and/or cardiovascular system. At their most severe, anaphylaxis symptoms can include trouble breathing and loss of consciousness associated with a dramatic and sometimes fatal drop in blood pressure – anaphylactic shock. It's impossible to predict whether a systemic allergic reaction will turn into anaphylaxis, so you should take all allergic reactions seriously and carry auto-injectable epinephrine.

No two people with latex allergy are alike. A run-in with a latex balloon may give one person itchy hands but cause another to stop breathing. Local allergic reactions don't always signal the onset of systemic allergic reactions; a person could have a local allergic reaction every time he comes into contact with latex. On the other hand, a person who develops latex allergy could go straight to a systemic allergic reaction and possibly anaphylactic shock.

Although latex allergy often lasts a lifetime, a person's level of reaction to latex may change. According to Gerri Rivers, at the height of her latex allergy simply entering a restaurant where someone had a latex balloon earlier in the day sent her to the emergency room. But after years of strict latex avoidance, Gerri can feel an allergic reaction creeping up and can remove herself from dangerous situations before anaphylaxis symptoms kick in.

Where in the World Is Latex?

Some of the places you might find latex include

- Stethoscopes
- Spandex
- Blood pressure cuffs
- Balloons
- Pacifiers and baby bottle nipples
- Gloves for household dishwashing

People with latex allergy can also have an allergic reaction to foods that contain proteins similar to those found in latex. This reaction is called cross-reactivity and is most frequently

caused by bananas, avocados, kiwi fruit and chestnuts. "So it's important for people with latex allergy to avoid these foods," says Dr. Fink.

Synthetic rubber products, including latex house paints (which don't actually contain any latex), usually do not cause problems for latex-sensitive people.

Confirm the Diagnosis

If you suspect that you have latex allergy, make an appointment to see an allergist. Be prepared with as much medical history as possible, including where you were when you had reactions and what latex products you came into contact with. Your doctor will probably arrange for a blood test to look for latex-specific IgE antibodies in your system, which will show that your immune system has developed latex sensitivity.

Unlike tests for pollen or pet dander, a skin prick test is not normally used to detect latex allergy. According to Dr. Fink, there is no standardized skin test for latex allergy in the United States approved by the Food and Drug Administration. Some doctors will perform a skin-prick test using a latex glove to see how a patient reacts, but this type of test could be life-threatening if a person is allergic to latex.

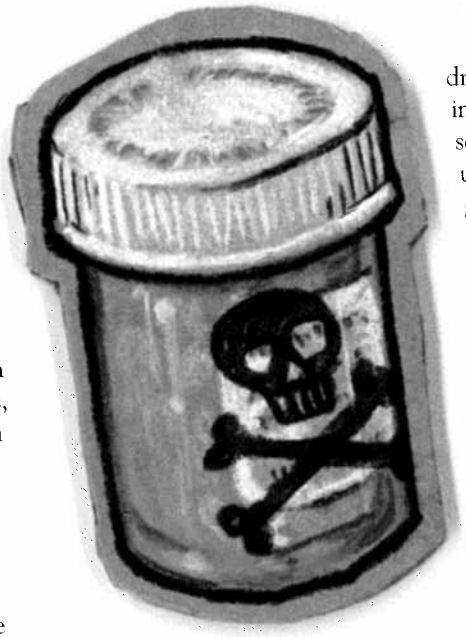
Living Without Latex

If you've been diagnosed with latex allergy, the only way to prevent an allergic reaction is to avoid latex. No pills, inhaled medications or allergy shots are available to minimize symptoms. ■

To learn more about latex allergy, contact the American Latex Allergy Association, a national nonprofit organization that connects consumers with educational materials, support groups, publications and product information on natural rubber latex allergy. Call 888.972.5378 or visit *www.latexallergyresources.org.*

When Medications Make You Sick

What if that spoonful of sugar helped the medicine go down – but the effect of the medication was anything but sweet? If a medicine causes you to bloom with hives and your throat to clamp shut, the diagnosis would be drug-induced anaphylaxis (DIA) and the treatment would be auto-injectable epinephrine.



Drug-induced anaphylaxis symptoms can begin within moments of ingesting a medication or start hours later. Symptoms of DIA include one or more of the following: hives, swelling in your throat, wheezing, light-headedness, nausea or stomach cramps after taking a medication.

Medications that most often cause anaphylaxis include

- Antibiotics
- Aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen
- Drugs used in anesthesia
- Vaccines (especially egg-based formulas if the patient has egg allergy)
- Insulin (rarely)

Penicillin is the most common cause of drug-induced anaphylaxis, causing approximately 400 deaths per year. The most severe allergic reactions to medications usually happen when the medicine is given as a shot or intravenously (when a drug is administered directly through a vein).

If you develop flushing or hives within a few hours of taking a medication, call your medical care practitioner to talk about next steps. If you experience symptoms in multiple body parts – such as hives plus wheezing or stomach cramps – you need immediate medical attention. Follow that up with a visit to an allergist. Together you can confirm whether you have drug-induced anaphylaxis, make a list of safe medications and what to avoid in the future, and create an action plan to treat as well as prevent future anaphylaxis symptoms. ■

Ask Dr. White

Anaphylaxis
a guide for all of us

Epinephrine Or Antihistamines?

"I'm a school nurse. One of my parents insists that Benadryl is the first line of treatment if her child accidentally eats a peanut. I can't convince her otherwise. What do you suggest?"

I'm glad that you brought this up, because it's a very important issue. Many parents are hesitant to give epinephrine after their child has eaten a food to which he or she is allergic. They often cite fear of traumatizing the child (or themselves) as the primary reason, saying that the child has never had what they considered to be a dangerous reaction before.

Parents often want to use an antihistamine such as Benadryl as the first treatment, thinking it is a more gentle approach and would work well for a non-life threatening reaction. The problem with that, however, is that ANYBODY with a food allergy can have a serious reaction, even if previous reactions have all been mild.

We also know that delay in giving epinephrine greatly increases the chance of requiring hospitalization after food-induced anaphylaxis (severe allergic reaction), and that fatal reactions are often associated with either a lack of or a delay in using epinephrine. If you wait until it's obvious that the child is having a serious reaction, it may be too late.

I'm a firm believer in using epinephrine as the first treatment for any sign of an allergic reaction to food. In allergic emergencies, epinephrine saves lives, but antihistamines won't, and you certainly don't want to wait until a child stops breathing or loses consciousness to provide life-saving treatment.

My patients and/or their parents practice using the epinephrine auto-injector in my office, and I often talk with them on the phone when they're using the device for the first time. Within minutes, the child is usually back to normal, and the parents are grateful and relieved.

I can't think of a single parent who has told me that they felt bad about giving a dose of epinephrine. After all, if you give a dose of epinephrine for what may turn out to be a relatively mild reaction, the worse you'll likely do is waste a dose of epinephrine and a little money.

However, if you FAIL to give epinephrine for what turns out to be a severe reaction, the results could be unthinkable. If you think of it as a choice between a little courage and a few tears versus the potential for a lifetime without your child, the answer is obvious.

So, as a school nurse, what do you do? You're in a tough position. Address your concerns with the child's doctor, continue to work with the mom, and suggest patient education organizations such as AANMA to her.

Some states are passing legislation requiring public schools establish policies to stock and administer epinephrine. I applaud those efforts.

Martha White, MD, is a board-certified allergist at the Institute of Asthma and Allergy in Wheaton, Maryland, a member of AANMA's Board of Directors, and a medical editor of *The MA Report* since 1985.

Do you have a medical question you'd like to ask? E-mail *editor@aanma.org* or write to *Ask Dr. White*, AANMA, 8201 Greensboro Dr., Suite 300, McLean, VA 22102.

Anaphylaxis Answers

When food allergy accidents happen, are students and educators prepared? Should state policy require schools to stock epinephrine auto-injectors? Does "peanut-free" mean safe at school?

AANMA addresses these questions and more as part of the 2012 Anaphylaxis Community Experts (ACE) Internet training program "Epi Everywhere! Every Day!™ School-Based Anaphylaxis Preparedness: Policies In Practice."

The program is now available online by visiting AANMA's YouTube channel at *www.youtube.com/breatherville.*

AANMA collaborated with the American School Health Association and the National Association of School Nurses on the program, which originally aired on July 31, 2012. It is the fifth in a series that began in 2010.

ACE is a partnership program developed by AANMA and the American College of Allergy, Asthma & Immunology and sponsored by Mylan Specialty, LP. Visit *www.aanma.org/anaphylaxiscommunityexperts* or email Brenda Silvia-Torma, ACEs Team Program Manager, at *bsilvia-torma@aanma.org*

Allergy & Asthma Network
Mothers of Asthmatics

Anaphylaxis Community Experts

ACAAI American College of Allergy, Asthma & Immunology

ANAPHYLAXIS ACTION PLAN

Name _____ Age/DOB ____/____

History of asthma ❑ Yes ❑ No Allergies ❑ Yes ❑ No NOTE: "Yes" indicates increased risk factors.

Allergens known to trigger anaphylactic reactions for this person:

_____

_____

Epinephrine auto-injector brand name and dose:

_____

NOTE: Epinephrine is always the FIRST medication given. Administer secondary medications if needed:

_____

Patient has been taught how and when to use this epinephrine auto-injector: ❑ Yes ❑ No

NOTE: Due to the nature of anaphylaxis, the patient may or may not be able to self-administer medication during a crisis.

A **Act immediately:** Administer epinephrine auto-injector in thigh when:

_____

C **Call for help:** 911/Rescue Squad.
Speak to at least one person on the emergency contact list below.

E **Expect RAPID results:** IF NO IMPROVEMENT WITHIN 5 - 15 MINUTES, administer second epinephrine auto-injector dose.

EMERGENCY CONTACT INFORMATION:

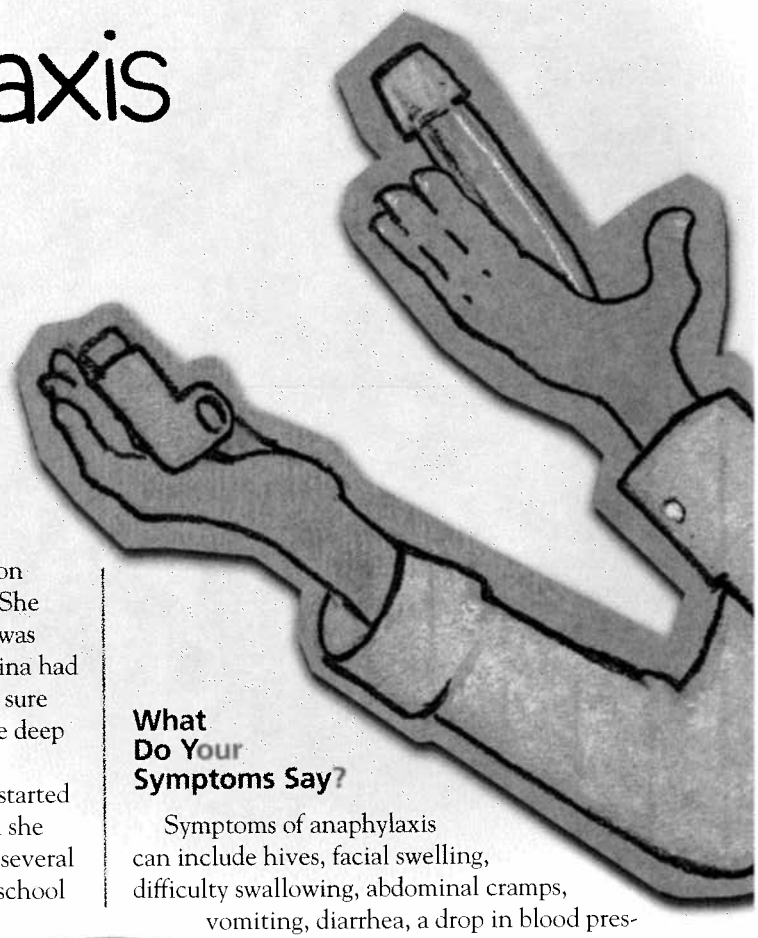
Name	Phone	Relationship
Name	Phone	Relationship
Name Relationship	Phone	

Healthcare Provider Signature	Contact Number	Date
Patient or Parent/Guardian of minor child	Contact Number	Date

ACES7222011 • © Copyright 2011, AANMA • *www.aanma.org*

Is it Anaphylaxis or Asthma?

What to do if you are not sure



On September 29, 2003, Sabrina Shannon ate lunch at her high school cafeteria. She ordered a plate of French fries. Because she was allergic to milk, peanuts and tree nuts, Sabrina had checked at the start of the school year to be sure the ingredients in the fries and the oil in the deep fryer were safe.

About half an hour after lunch, Sabrina started to feel ill. She had trouble breathing, which she thought was due to her asthma, so she took several puffs from her inhaler. Sabrina went to the school office to call her mother, but her condition got worse before her mother could arrive. When a student told the school staff about Sabrina's food allergies, they called 911 and the operator dispatched an ambulance. A teacher ran to Sabrina's locker to get her auto-injectable epinephrine, but Sabrina collapsed into unconsciousness and stopped breathing. School staff started CPR and administered Sabrina's EpiPen®.

Sabrina arrived at the hospital just 30 minutes after she went to the school office with breathing problems. She died the next day. Although her symptoms started with bronchospasm, the cause of death was anaphylaxis. Sabrina was 13 years old.

Sabrina Shannon

What Do Your Symptoms Say?

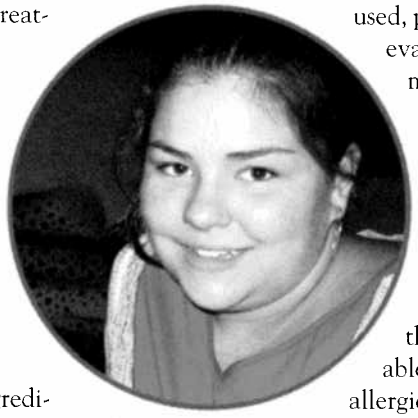
Symptoms of anaphylaxis can include hives, facial swelling, difficulty swallowing, abdominal cramps, vomiting, diarrhea, a drop in blood pressure, breathing problems and unconsciousness. However, according to Hugh Sampson, MD, Director and Division Chief, Pediatric Allergy and Immunology, Jaffe Food Allergy Institute, Mt. Sinai School of Medicine in New York, "Patients experiencing anaphylaxis may not have all these symptoms during a reaction." In addition, early food allergy symptoms can be mistaken for asthma symptoms. "When skin symptoms are not present and the patient is having difficulty breathing," adds Sampson, "it can look and feel like an asthma attack."

To further complicate the issue, people with

asthma are at risk for more severe anaphylaxis symptoms. "Individuals with food allergy who have underlying asthma are at an increased risk of more severe food-induced reactions because they frequently will have bronchospasm (tightening of the muscles in the airways) as a component of their reaction," says Mary Farrington, MD, an allergist at Virginia Mason Medical Center in Seattle, WA. "They may not initially realize that they are having an allergic reaction to an accidental ingestion of their food allergen, but rather think they are having a sudden, severe asthma attack. This confusion can lead to a delay in epinephrine use, which is critical for the adequate treatment of anaphylaxis.

Unpredictable Anaphylaxis

Emily Vonder Meulen, also 13 years old, died from anaphylaxis on April 13, 2006. She was shopping with her mother and sister at a local mall. They stopped to get a sandwich at a restaurant where Emily had eaten before. Emily checked that the ingredients were safe for her peanut allergy and then ate her sandwich. After eating, Emily felt a little tight in her chest, so she took two puffs of her asthma inhaler and thought she was fine. She then went to the restroom, leaving her mother and sister looking at clothes.


Emily Vonder Meulen

A few minutes later, Emily's mom got a call on her cell phone from a passer-by stating that Emily was having a bad asthma attack. Emily's mother rushed to the restroom and found Emily gasping for air. Emily tried to use her inhaler again, and her mother called 911. They tried CPR, but Emily died at the scene. Doctors told Emily's parents that Emily had died of anaphylaxis, not asthma. The apparently safe sandwich that Emily had eaten contained traces of peanuts.

"Even if an individual has had only mild food-induced allergic reactions in the past," says Dr. Farrington, "they may have a more severe life-threatening reaction with accidental ingestion in the future. This is particularly true for peanut-allergic individuals. Because we can't predict who these at-risk patients are, we stress that all food allergic individuals carry epinephrine with them at all times. Early administration of epinephrine for severe allergic reactions can mean the difference between life and death."

When In Doubt, Use your Epinephrine Auto-Injector

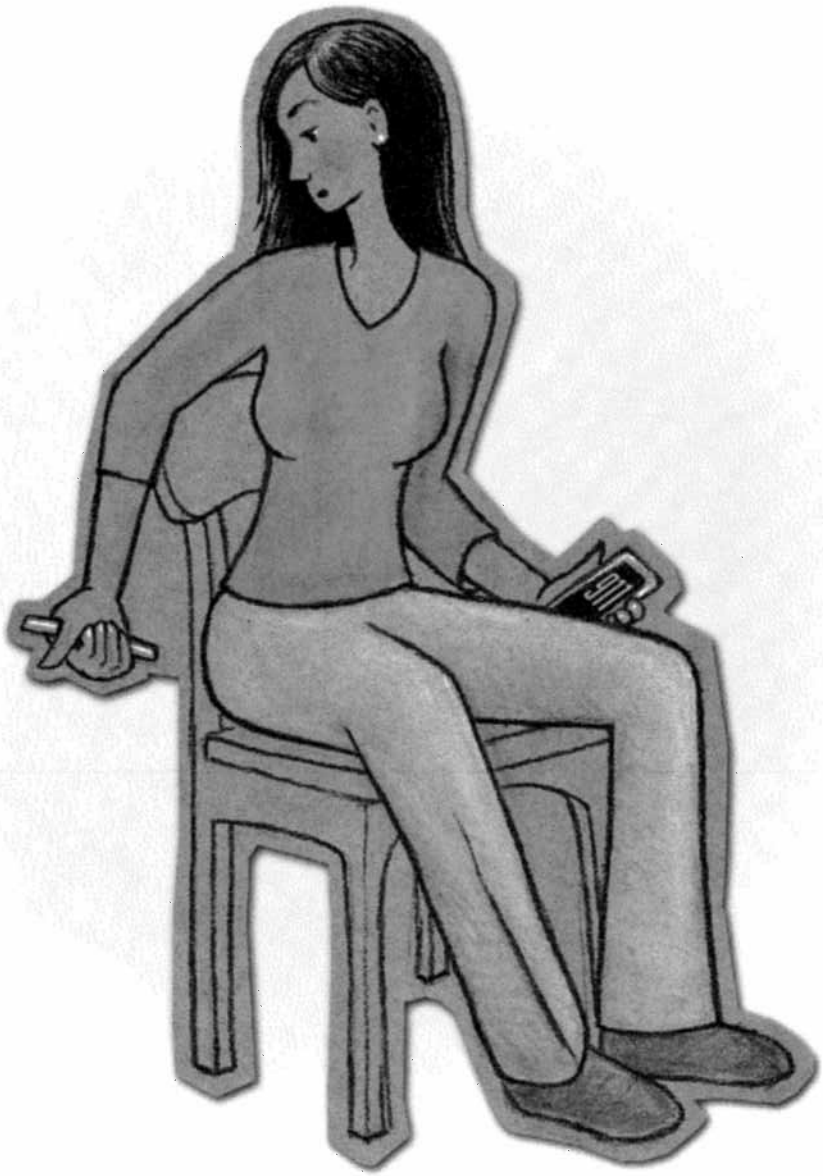
"If patients with food allergy and asthma have sudden onset of severe asthma symptoms following food ingestion, they should presume that they had an accidental ingestion of their food allergen and immediately use their epinephrine auto-injector," Dr. Farrington adds. "After epinephrine is used, patients need to be immediately evaluated in the emergency department for ongoing treatment of anaphylaxis. Some individuals will have a second episode of significant anaphylaxis symptoms following an initial improvement after epinephrine use."

When allergic individuals (or their caregivers) are knowledgeable about and prepared for an allergic emergency, the risk of dying from anaphylaxis is extremely remote. If you or your child has both food allergy and asthma, talk to your doctor about an emergency action plan and ask what to do in case of sudden, severe asthma-like symptoms after eating.

Reading ingredient labels and being careful about what you eat is crucial, but it is not enough. Accidents happen. Whether your food allergy reactions in the past have been mild or severe, it is important to have emergency medication on hand at all times and to know how (and not hesitate) to use it. If your child carries auto-injectable epinephrine auto-injectorwith her at school, make sure she knows to keep it on her at all times and keeps a spare in the nurse's office.

According to Dr. Sampson, "When we reviewed a series of fatal anaphylactic reactions to food and compared it to nonfatal cases, one factor that stood out was the delay in getting epinephrine and medical care in most of the fatal cases. Inhalers won't stop anaphylaxis, but epinephrine will stop either an asthma attack or anaphylaxis. So if in doubt, use epinephrine auto-injector and cover your bases." ■

Epinephrine Auto-injector How-To



Epinephrine is an adrenaline hormone your body produces naturally in response to stressful situations, often called the "fight or flight" response. The epinephrine you get as a medication has a similar effect on your body. It increases your heart rate and blood pressure, relaxes muscles in your airways, reverses swelling and suppresses your immune system's response to allergens -- temporarily halting life-threatening effects of an anaphylactic reaction. On the flip side, the increased heart rate may make you slightly "jittery."

One type of epinephrine auto-injector is a prescription device about the size of a magic marker that contains a premeasured dose of epinephrine. Another device is the size of a small thin cell phone. (There are two different strengths available, to treat different body weights.) In both devices, the needle in an auto-injector sits protected inside the device until you push the injector against your thigh. The needle is designed to go through clothing.

When to Inject

Talk with your provider about exactly when you should use your auto-injectable epinephrine and ask for a written action plan.

Anaphylaxis symptoms can sometimes mimic asthma symptoms (see page 23). If you experience shortness

of breath and/or wheezing right after you've eaten, for example, consider that you may have been accidentally exposed to a food allergen and should use your epinephrine.

According to Hugh Sampson, MD, Director of the Jaffe Food Allergy Institute in New York, "When we reviewed a series of fatal anaphylactic reactions to food and compared it to nonfatal cases, one factor that stood out was the delay in getting epinephrine and medical care in most of the fatal cases. Inhalers won't stop anaphylaxis, but epinephrine will stop either an asthma attack or anaphylaxis. So if in doubt, use epinephrine and cover your bases."

Phil Lieberman, MD, of Allergy & Asthma Care in Germantown, Tennessee, agrees there is no substitute for epinephrine. "Epinephrine is the only drug that will reverse an anaphylactic episode. Antihistamines take an hour to begin to work. But in that time an attack could be fatal. In addition, antihistamines only counter the activity of histamine, and there are several other chemicals that produce the symptoms of anaphylaxis. So antihistamines are no substitute for epinephrine."

Storage Tips

Store your auto-injectors as close to room temperature as possible. Leaving them in extremely hot or cold temperatures may make the epinephrine ineffective or cause the injector to malfunction. But if you're outside, you do need to keep it close at hand, so try to keep your injector close to your body (to keep it warm) on cold days and in a purse or backpack on hot days. Do not store it your car or the refrigerator.

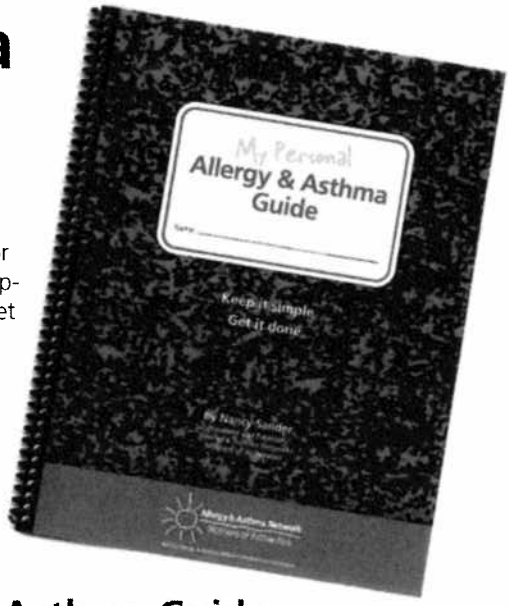
Keep your auto-injector out of direct sunlight, which can cause the epinephrine to oxidize (combine with oxygen, which changes the makeup of the drug) and become ineffective. Oxidized epinephrine will appear dark or have solid particles in it. Epinephrine can also oxidize on its own over time, so check your device regularly to be sure the liquid inside looks clear.

Epinephrine has an expiration date. Do you know when yours expires? Check the date right now and start a list of all your devices and when they expire, including backups that may be in a nurse's office or at a family member's house.

My Personal
Allergy & Asthma Guide
By Nancy Sander

Does your Facebook page timeline read like one asthma or food allergy crisis after another? Caught in the treat-the-symptom-not-the-cause cycle? Feeling like there is no way out? Get ready for a change!

My Personal **Allergy & Asthma Guide** is your step-by-step tutorial from today's turmoil to tomorrow's success. Readers are shown how to "Keep it simple, Get it done" using NHLBI *Guidelines for the Diagnosis and Management of Asthma* while working with qualified medical providers, teachers, school nurses and family members.



My Personal Allergy & Asthma Guide
www.aanma.org/aanma-store for **$18.95** plus S/H • **800-878-4403**

Found a Peanut Allergy

BY MARYANNE MAUST

Nobody in my family has food allergies; I have seasonal allergies and am sensitive to tea, but that's it. My husband Adam has no allergies we know of, and in the 12 years we've been together, I've rarely seen him sick.

So I had no reason to suspect that the bumpy, itchy rash around my nearly 4-year-old daughter's mouth was serious, much less a peanut allergy.

Lauren was newly recovered from a cold when the spots first appeared just before Christmas — I thought they were somehow related. The spots would fade and randomly come back.

That went on about a week. She'd also been coughing, sometimes so bad that she threw up. I asked my husband exasperatedly, "What is she coming into contact with? What's different?" She had no symptoms besides the coughing, vomiting and spots.

The Mausts: Adam, Maryanne, four-year-old Lauren and one-year-old AJ

Adam thought of it first: We'd never fed Lauren peanuts before, and our family had been eating peanuts all week long. Maybe that was it! We cut out peanuts — anything with nuts — from Lauren's diet.

The spots went away almost immediately. Then, at a New Year's Eve party, more spots appeared after a boy ate something with peanut and kissed Lauren on the cheek, but she's had no reactions since.

At the Allergist

We took Lauren to see an allergist. He did a skin test, and she reacted strongly to peanut, cockroach, dust mites, mold, and a little bit to ragweed. She also had a slight reaction to dog and a bigger one to cat.

The doctor explained that we can do things like use allergen-protective casings on Lauren's pillows and bed to help with environmental allergens and irritants. He said to keep peanuts out of her diet. We went to a lab to have Lauren's blood drawn for further testing — we hope the results tell us more about the severity of her allergies.

The doctor prescribed Lauren auto-injectable epinephrine. He had a practice injector device and showed me how to administer it against the thigh. "When in doubt, use it," he said — if you're thinking it needs to be done, it's best to inject and seek medical attention. We learned that up to 30 percent of anaphylaxis cases require a second dose of epinephrine, so we keep two with Lauren at all times.

The fact that Lauren's reaction to peanut gets worse with each exposure makes me nervous that I'll have to use that epinephrine someday — if the time comes, I will, but I hope it never does.

I don't expect a peanut-free world, but I'd like for Lauren to have every advantage she can. I want people to be cautious around her. I mean, I understand – Adam and I both love peanuts, peanut butter cups, and so on, and this is going to be a change. Luckily, we parent very much on the same page.

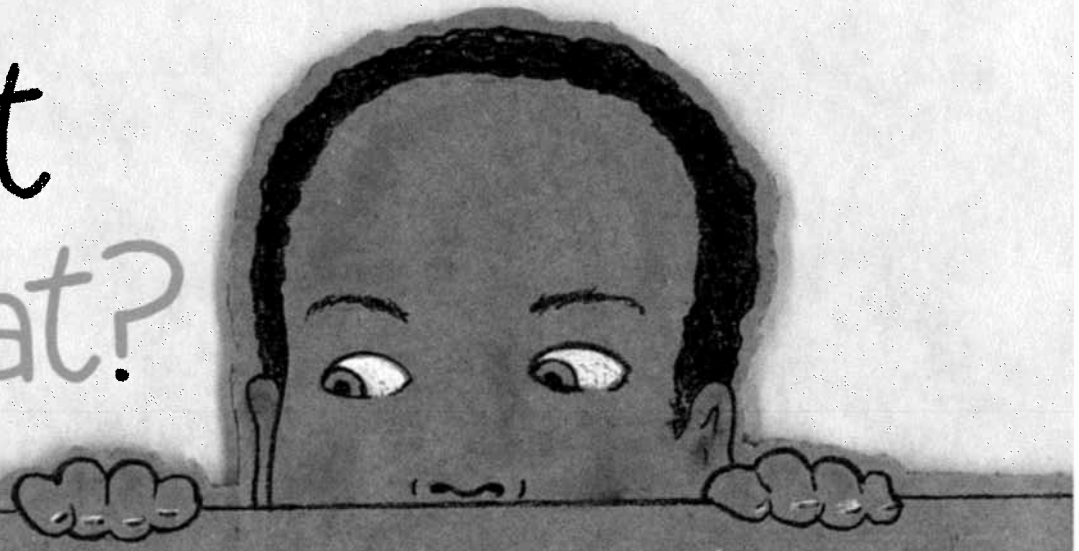
Lessons Learned

After what we experienced, I can see how parents don't always put it together at first that their child is having an allergic reaction. Lauren told me her stomach hurt, she had a rash around her mouth, and she had a terrible, wheezy cough where she just couldn't catch her breath. I didn't think, "Stomach ache, rash, cough — allergic reaction." We're lucky nothing worse happened.

Now, I always look for those signs. I'm learning how to read my daughter and to always, always read those food labels. Connecting with AANMA as well as others going through this is a great help! ■

This article was condensed from the Spring 2012 edition of Allergy & Asthma Today.

What to Eat?



Practical Steps To Conquer Anxiety

BY KIMBERLEE ROTH

Eight-year-old Jordan Hill is allergic to peanuts, tree nuts, soy, sesame, poppy, peas, beans and pumpkin. At school she checks with teachers before eating anything not sent from home by her mom, MaryKay. But at a recent school event, Jordan strayed from her "if mom didn't pack it, I'm not going to eat it" rule.

After checking the label and asking school staff about the ingredients, Jordan ate a snow cone. Soon she felt sick to her stomach and went to the school nurse's office. The school nurse called MaryKay and told her that based on Jordan's symptoms – and after reading the ingredient list for the snow cone – she didn't think this was an allergic reaction. MaryKay agreed. Based on the circumstances, she suspects that Jordan's reaction stemmed from anxiety rather than something in the snow cone or cross-contamination. The following week, Jordan had a series of panic attacks and was afraid to go back to the school cafeteria.

Food allergies can generate plenty of anxiety for parents and children alike, says Mary Klinnert, PhD, a psychologist and associate professor of pediatrics at National Jewish Medical and Research Center in Denver, Colorado.

That an allergic reaction could turn life-threatening can be a major issue for kids, says Dr. Klinnert, who plans to further explore whether children who have experienced severe reactions to food have higher levels of anxiety than other children with food allergies. For parents, Dr. Klinnert continues, "it's your core fear as a parent that something's going to happen to your child, something you could possibly prevent."

For both parents and children, feeling anxious and out of control is especially common when a child is first diagnosed with food allergy, adds David Swanson, PsyD, a psychologist in Encino, California. But that's not necessarily a bad thing.

That initial anxiety about food allergies can motivate parents to seek information and strategize about avoiding allergens and handling emergencies. Once you've put those early nerves to good productive use, you and your child can manage – even banish – anxiety for good.

Make a Plan

We can't control every single detail of our children's lives, but we can control our crisis planning, says Dr. Swanson, who urges parents to create an action plan as the first step toward freeing yourself, and your child, from worry. The food allergy and anaphylaxis management plan – developed with your child's medical care team –

PUBLISHER
Allergy & Asthma Network
Mothers of Asthmatics
8201 Greensboro Dr.,
Suite 300
McLean, VA 22102
800.878.4403
www.aanma.org

EDITOR IN CHIEF:
Nancy Sander
AANMA President and Founder

CREATIVE DIRECTOR:
Paul Tury

MANAGING EDITOR:
Gary Fitzgerald

MEDICAL EDITORS:
Phil Lieberman, MD
Carol Jones, RN, AE-C

Comments and Questions:
editor@aanma.org

Allergy & Asthma Network Mothers of Asthmatics (AANMA) is a 501(c)(3) national nonprofit organization that provides award-winning patient education, advocacy and community outreach services.

Anaphylaxis: A Guide for All of Us ©2013, *Anaphylaxis: A Guide for You and Me* ©2010, 2008
Published by Allergy and Asthma Network Mothers of Asthmatics (AANMA) Anaphylaxis Community Experts ACEs developed in partnership with the American College of Allergy, Asthma and Immunology (ACAAI), *www.AllergyandAsthmaRelief.org*. Sponsored by Mylan Speciality, LP

Mylan®
Seeing is believing

Editor's Letter

If you could save a life, would you? The operative words are "could" and "would."

Could you rush into a burning building or jump into frigid waters and bring anyone out alive? Would you try? I don't have those skills or physical strength. I don't know what I would do and I don't like thinking about it.

However, if I saw someone having an anaphylactic reaction, a life-threatening allergic attack, I could and would be able to help. I have the skill and the will to do it *if the right medication is at hand*. At the end of reading *Anaphylaxis: A guide for all of us*, you will too.

Anaphylaxis is a severe allergic reaction that can be life threatening. Anaphylaxis is only scary if, like the burning building or frigid waters example, you don't have the skills to deal with it. So here are some facts:

Left untreated, most anaphylaxis patients will suffer for a while but fully recover, some suffer long-term or permanent brain impairments, and some will die.

However, if treated with an epinephrine auto-injector when it first becomes obvious that patient is having an anaphylactic reaction, the episode usually reverses before the patient reaches the hospital for follow-up care. Thirty-five percent of cases will need a second dose of epinephrine.

Yes, it's frightening to watch someone suffer an attack. However, you are not powerless to stop their suffering. You can confidently apply knowledge and develop skills needed to save a life *even if that life is yours*.

Nancy Sander
AANMA President and Founder

Anaphylaxis
a guide for all of us

Find It Here

5 In Touch

6 Anaphylaxis: It's New to Me

9 Is It Food Allergies?

11 Allergic To Exercise

12 Venom Allergies

14 Flipping the Lid On Food Allergies

18 Latex Allergy

20 When Medications Make You Sick

21 Ask Dr. White — Epinephrine Or Antihistamines?

22 Anaphylaxis Action Plan

23 Is it Anaphylaxis or Asthma?

25 Epinephrine Auto-injector How-To

27 Found a Peanut Allergy

28 What to Eat? Practical Steps To Conquer Anxiety

31 Breathe: It's the Law

Anaphylaxis Community Experts

ACEs In the Neighborhood

ACE volunteer Jon Terry and allergist Syed Shahzad Mustafa, MD, scored big when they showed high school coaches and security staff in Rochester, N.Y., how to identify and handle anaphylaxis emergencies.

Allergy, Asthma & Immunology Associates of South Texas hosted the Alamo ACE Challenge cook-off in San Antonio! Chefs showed crowds how to be creative with food allergies and avoid anaphylaxis.

ACE allergists and nurses at South Bay Allergy & Asthma Associates in Torrance, Calif., taught 20 preschool teachers about food allergies and how to use epinephrine auto-injectors.

Kam McEwen, RN, gave Epi Everywhere! Every Day!™ bag tags and stickers to students in Hutchinson, Kan., to show they're carrying epinephrine auto-injectors inside their backpacks.

Is there an ACE Team in your neighborhood?

Learn more at:
www.aanma.org/anaphylaxiscommunityexperts
or email *ace@aanma.org*.

ACE is an unbranded partnership developed by AANMA and the American College of Allergy, Asthma and Immunology and sponsored by Mylan Specialty, LP.

Breathe: It's the Law

State laws protect students diagnosed with asthma and anaphylaxis. They have the right to carry and if needed, use prescribed lifesaving medications at school. They should be taught from a young age to keep these medications nearby every day.

A growing number of states are strengthening anaphylaxis preparedness policies to protect students whose first severe reaction happens at school. Is your school ready? Are YOU ready?

What would YOU do if suddenly responsible for a student whose lips and tongue are red and swelling? Or when a student is covered in hives and gasping for air?

States Protecting Student Rights to Carry and Self-Administer Prescribed Asthma and Anaphylaxis Medications As of 2012

Color Key:

- States with asthma and anaphylaxis laws
- States with ONLY asthma laws

School policy and training programs should answer those questions before faced with the situations. You won't have time to run to the clinic and search for the student's health records. No time to second-guess the consequences of using another student's epinephrine auto-injector. No time to call 911 and the parents.

Allergy & Asthma Network Mothers of Asthmatics (AANMA) supports state laws requiring all schools to establish and enforce anaphylaxis preparedness programs consistent with the Guidelines for the Diagnosis and Management of Food Allergy in the United States: Report of the NIAID-Sponsored Expert Panel.*

AANMA encourages schools to stock emergency epinephrine auto-injectors. Check manufacturer websites for free and discount programs offered to schools that stock epinephrine auto-injectors for use in emergencies. ■

*http://www.niaid.nih.gov/topics/foodAllergy/clinical/Pages/default.aspx

Learn more. Do more. Get involved. Join AANMA's network of volunteers. Here's how:

- Anaphylaxis Community Expert (ACE) Teams: *www.aanma.org/anaphylaxiscommunityexperts*
- AANMA Outreach Service Coordinators: *www.aanma.org/about-aanma/osc*
- AANMA Advocacy Network: *www.aanma.org/network*

Resources

- Epi Everywhere! Every Day!™ School-Based Anaphylaxis Preparedness: *www.youtube.com/breatherville*
- National Association of School Nurses: *www.nasn.org* or 866-627-6767
- American School Health Association: *www.asha.org* or 800-638-8255
- National School Board Association: *www.nsba.org* or 703-838-6722

Together It's Possible

Allergy & Asthma Network Mothers of Asthmatics is your go-to source for award-winning, family friendly, medically accurate and timely information and inspiration.

Members value AANMA's education, advocacy and outreach services. *The MA Report* newsletter and *Allergy & Asthma Today* magazine is like having a support group in your mailbox.

Since 1985, AANMA has helped hundreds of thousands of families live and breathe well.

Now it's your turn. Join now!

Allergy & Asthma Network
Mothers of Asthmatics

Joining is Easy

Online: aanma.org/join
Phone: 800-878-4403
Mail: AANMA • 8201 Greensboro Drive Suite 300, McLean, VA 22102

Join: ❑ **$35 Family/Individual**

$_____ **TOTAL**

Name

Address

City

State Zip Phone

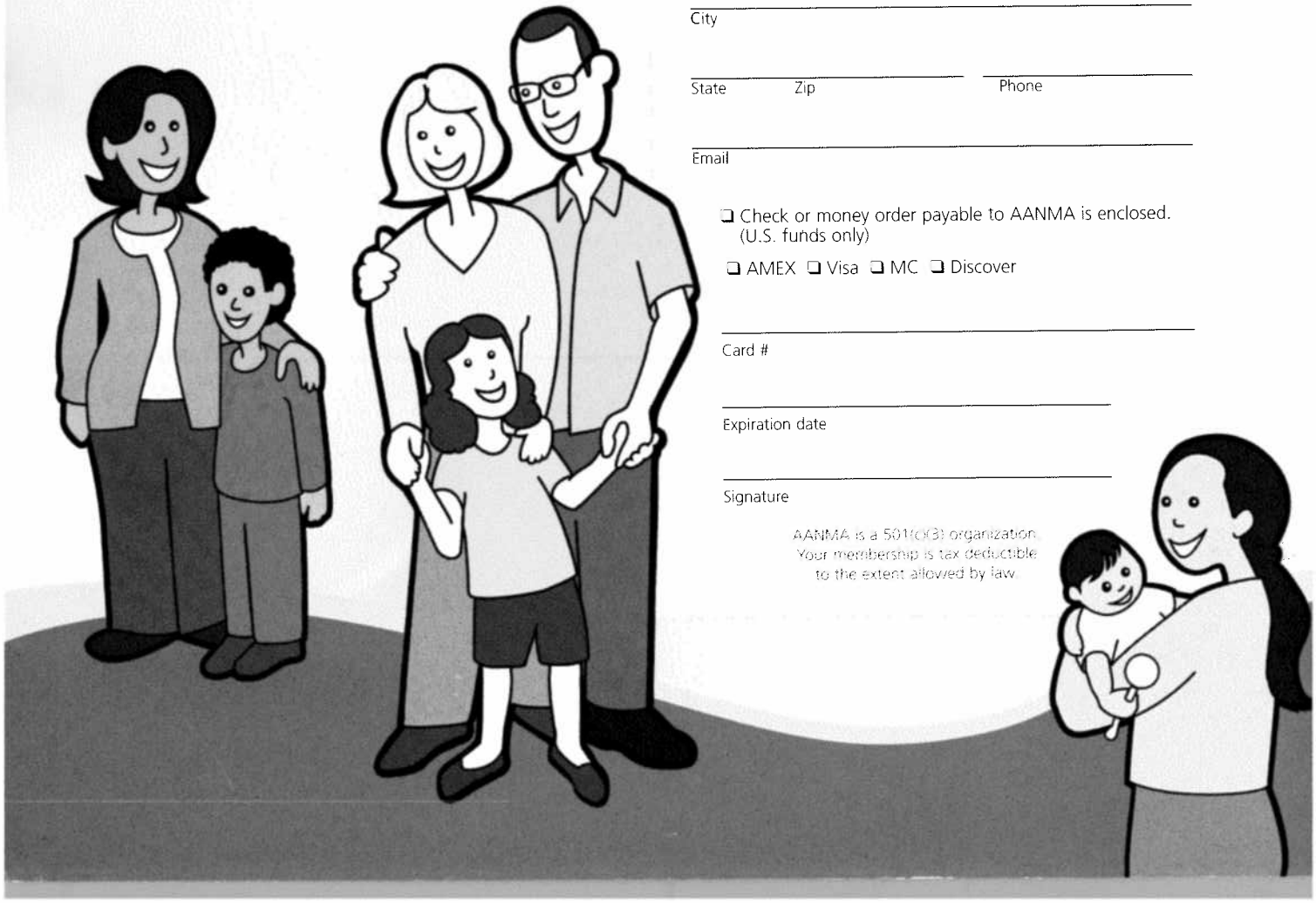
Email

❑ Check or money order payable to AANMA is enclosed. (U.S. funds only)

❑ AMEX ❑ Visa ❑ MC ❑ Discover

Card #

Expiration date

Signature

AANMA is a 501(c)(3) organization. Your membership is tax deductible to the extent allowed by law.