

Asthma

LAURA'S STORY

"Childhood stopped when I was five," Laura said, then continued. "From then until the age of 30, I didn't have a day without medication and I don't remember a year without at least one hospital stay of a week or more. In addition to that, a good part of my free time was spent in the doctor's office."

In early childhood Laura sneezed a lot and had itchy eyes. By the age of five, her problem was diagnosed as asthma. The doctors said she'd probably outgrow this condition, and prescribed a medication, liquid Marax, to help relieve the discomfort associated with it. Once Laura was on this strong medication, she stopped sneezing and she didn't resume sneezing until she was over 30 years old and off the medication.

As Laura approached her teenage years, her doctor changed her prescribed medication from liquid form to pills. It seemed like she was always getting shots, skin tests, and new pills. Most of the medications for asthma have a side effect of being an "upper" or a stimulant that speeds up metabolism. "I was always jittery and hyper from the medication," she said, "and it's hard for me to believe that people take "uppers" on their own."

WHAT IS ASTHMA?

Asthma is a lung ailment that produces wheezing and breathing difficulty and affects 10 million Americans, causing about 4,600 deaths annually. It is a form of an inflammatory disease in which the small tubes in your lungs become inflamed and won't open to let the bad air out. It feels like the reverse; like you can't get any good air in. That's a little ahead of things, so I'll start with the basics.

Think of your lung system as two miniature trees growing upside down in your chest, with your mouth and bronchial tubes as the trunk and large branches. The outer branches get smaller and smaller, just like on a tree. But in place of leaves, the lateral outgrowth from a stem, a bronchiole leads to what looks like a microscopic bubble or balloon, the alveolar, which is bathed by microscopic blood vessels. In the alveolar, blood picks up oxygen and releases the waste gas, carbon dioxide (CO₂). This miraculous exchange all takes place the instant you breathe.

When you have asthma, the microscopic tube that leads to the alveolar becomes inflamed and swells up. As a result of the swelling, you can force air in, but the bad gas, CO₂, won't come out. When CO₂ builds in your blood, a sensor in the back of your brain screams "breathe." If you can't get the bad air out you panic, because it's like smothering. The whole process takes place in just a few minutes. An extreme attack of asthma could cause a person to pass out and die, so it is not something our brain takes lightly.

Breathing is the most basic function, and if it is impaired, the body panics.

Now you can see why the doctors' objective is so clear when someone has an asthma attack: get those microscopic branches, the bronchioles, to relax and let the bad air out. Doctors accomplish this by getting the medication into your blood by using pills or shots. Nowadays, doctors also use inhalers that finely mist the medication, so you take it into your lungs with the air you breathe. During an extreme asthma attack, a respirator is used to force the air containing the drug into the lungs. It can be a mighty frightening experience if you're on the receiving end of the treatment, but it surely beats dying.

Asthma, similar to other inflammatory diseases, such as arthritis and psoriasis, remains dormant for various time periods and then can flare up unexpectedly for many reasons. Even though the victim of an asthma attack might be on medication, an intense flare up can still come on like a bolt of lightning. A flare up could result in a day of restricted activity with extra medication, a trip to the hospital for an injection, or, if severe enough, a two week stay in the hospital. Consequently, precautions should be taken to avoid flare ups. Sometimes, although rarely, a flare up can bring on death.

The occurrence of flare ups can be traced to many things, including food. For instance, dairy products are high on the list, and other foods, ranging from meat to shell fish, can be identified. Since there are no firm rules on which foods cause a flare up, one asthmatic's poison can be another's food. You have to test yourself by keeping a careful food diary so you can identify the foods that aggravate you and then avoid them.

To make it worse, these foods that cause a flare up don't appear to be food allergies. They're more correctly called food sensitivities, which seem to change from time to time. For instance, you might find eggs are okay now, but you could become sensitive to them next year. So although some food sensitivities will not change, some will change. Therefore, you can't let your guard down.

Food sensitivities behave quite differently than allergies. For example, an allergy that shows up as a rash often requires a very small amount of the food. In contrast, one woman I interviewed, who was sensitive to eggs, could get along with eating just one egg. But if she had two eggs on one day or one egg daily for three days, she'd get a flare up. She is sensitive to eggs, but definitely not allergic to them.

Laura is allergic to shellfish, among other things. Once she inadvertently ate some shellfish and literally went into anaphylactic shock (a hypersensitive reaction). Anaphylactic shock is so severe that you pass out and can die. Thanks to the quick thinking of her doctor, Laura's life, in this case, was saved with an injection of Benadryl to help her body calm down and recover.

Besides food, other things can cause asthma to flare up, such as the hair on pets, fresh paint or varnish, falling leaves, grass, dust, spring pollen, and some things most people don't notice particularly. Sometimes a combination of factors complicates the condition even more. For example, cigarette smoke seems to aggravate asthma. If the asthmatic

attack is caused by some other irritant, such as new mown grass, the addition of smoke will make the flare up a lot worse. In other words, if you react to eggs and eat them inadvertently when people around you are smoking, your attack could be far more severe than if you simply ate some eggs. Think of smoke as the promoter, and eggs as the initiator of a flare up.

I've interviewed many asthmatics and all of them list stress as a flare up promoter. Emotional or physical stress is sure to promote an attack and often a trip to the hospital. Emotional stress could be the loss of a loved one, a bad grade in school, your work environment, family problems, and so on. Physical stress, for instance, could be a chill, overexertion, fatigue, eating the wrong food, or exposure to fumes. There are no firm rules.

A COLLEGE FLARE UP

Laura's husband Scott learned she had asthma while they were dating in college. One beautiful fall day in Indiana, Laura and Scott spent the afternoon walking through the woods around their college campus, rolling in piles of autumn leaves, and talking and conspiring about the future—things young couples have done since time began. Fall colors and young love had invigorated their spirits. By evening, the air was clear and crisp and the sky was filled with bright stars that looked like you could reach out and touch them. In order to get Laura back to her dorm on time, Scott was walking at a rather fast pace, and several times Laura asked him to slow down. Finally, she explained that she had asthma and didn't want to cause a flare up. This was Scott's first encounter with asthma.

Laura slowed down on the walk home because she knew she had over exerted herself all day and had been exposed to a lot of dust. She didn't want to take any chances. That night in her dormitory room, she paid a high price for her day of fun.

"My lungs couldn't get air. I felt like there was no more air in the room. I was too weak to stand up." She sounded scared just recounting the episode. "Finally, I crawled on my hands and knees down the hall to the next occupied room. It took all my strength to pound on the door."

Our scene shifts now to the hospital where Laura was put on a respirator, a machine that causes your lungs to relax and expand, so medication can be administered directly into your lungs. Medication was used to relax the bronchioles, the microscopic airways, so she could start breathing normally. Scott was called to her bedside and got to see what an asthma attack is all about. After a few days in the hospital, Laura returned to normal.

Normalcy is a subtle problem that plagues all asthmatics. When they're not having a flare up, they outwardly appear quite normal. Consequently, most people get the impression that asthmatics don't have any illness at all, that it's "in their head," or perhaps they simply have a cold. Since most people never see an asthmatic having a serious flare up, they have no idea of the seriousness of the disease. Witnessing an asthmatic attack can be a frightening experience.

LOVE CONQUERS ALL

Scott became well acquainted with asthma, but love and biology prevailed, and he and Laura were married. Scott accepted a position in Las Vegas, where Laura also landed a job as the band director at the local school. By this time, Laura was on heavy duty medication, which included Marax and a Primatene Mist inhaler, among others.

Like many young couples in their age group, they had a water bed. Scott developed a sense for life at sea because Laura, being on asthmatic medication, was always on "uppers." Most folks move a little in their sleep, but Laura was more restless than a tom cat during a full moon when eight local female cats are in heat. "Sleeping on a water bed was like being at sea," Scott laughed. "I actually felt a little woozy at first, then I got my sea legs."

During the eight years they lived in Las Vegas, they were blessed with a little girl, but Laura also had five additional two to three week hospital stays for her asthma attacks. That's just about one major stay each year. Trips to the emergency room were too many to count. Scott became quite knowledgeable on what would and wouldn't work for Laura's asthma.

One typical attack would go like this: A flare up would occur and Scott would take Laura to the emergency room. The intern or resident, not having had experience with such a severe case of asthma, would give her about two to four shots of epinephrine, because that's what the book said to do. After about two or three hours, she'd be admitted to the hospital where she would stay for a few days or up to three weeks, depending on circumstances.

Laura and Scott learned to give shots of Bricanyl, which relaxes the bronchioles. This would help suppress the attack in its early stages and allow Laura to breathe. This precautionary measure is much like the shots people who are extremely sensitive to bee stings carry with them to help prevent severe shock. Laura and Scott became very good at giving shots and even their daughter became accustomed to her mom getting them.

During these years, life was never normal for anyone in the family. Long work hours, job stress, being a wife and mother, and constantly being "hyped" from medication zapped all Laura's energy; she was forever tired.

After eight years in Las Vegas, Scott accepted an offer for a better job in California, which meant that Laura wouldn't have to work any longer. Since she had become very interested in drugs, this was her opportunity to return to college for an advanced degree in pharmacy. They both were very excited, but didn't look forward to the actual work involved in relocating. Needless to say, the stress of moving accumulated and on moving day, Laura was admitted to the hospital for an eleven day stay. Friends pitched in to help Scott and fortunately, everything went smoothly.

By the time they moved to California, Laura's condition had worsened and she was now on steroids. Steroids are big league inflammation fighters. Even though the objective of these drugs is to keep you out of the hospital, living with their side effects is a stiff price to pay. For instance, among the side effects are fluid retention, tiredness, and accelerated bone loss. For Laura, daily naps became

routine, just to stay awake. When she asked her doctor how long she'd be on the steroids, his answer was very clear: "For the rest of your life."

Drugs can save lives but have to be used very cautiously. Many asthmatics use a class of drugs known as bronchodilators that relax and expand lung airways during an asthma attack. They are often dispensed in inhalators. Some of the side effects from these drugs are irregular or rapid heartbeat, increased blood pressure, difficulty in urinating, nervousness, and dry mouth.

LAURA FINDS NUTRITION

One especially bad episode turned out to be a blessing in disguise. Laura had an attack that her inhaler didn't stop, so she went to the hospital. The emergency room physician gave her the wrong medication and made things worse. After a few days in the hospital, she recovered, but during her stay a new acquaintance came to visit her and said, "I think a friend of mine might be able to help you build yourself up. Would you mind if she called you at home?"

Since Laura had tried just about everything else, she agreed. So, when the Shaklee distributor called, she listened. It was a new beginning for Laura's life and the end to her asthma. Three days before she and Scott left to attend an asthma clinic for couples in Denver, Colorado, Laura started taking Shaklee Vita Lea and Instant Protein. On the morning they took off for Denver, she felt better and actually enjoyed the long drive from California to the clinic.

The week spent at the clinic was very enlightening. The staff taught them many things about asthma that they didn't know or hadn't learned from experience. One important point they learned was that the drugs used for asthma don't cure the disease, they simply stop the symptoms. In fact, the drugs actually paralyze parts of your lung so you don't sneeze. Laura realized she hadn't sneezed since she was five years old. Almost 30 years ago!

Another side effect of Laura's medication was bone loss. The doctor explained that steroids wash calcium from the bones. This bone loss is especially critical in the pelvic area where it leads to hip replacement in people with asthma or other diseases, because they must use steroids for so many years. The drug is a trade off. You get the miracle, but you pay a price.

During her stay at the clinic, Laura continued taking the Instant Protein and Vita Lea, and by the end of the week she felt even better. When she returned home and was ready to refill her supplements, she added a few more to her order after listening to a tape her distributor had dropped off. She added vitamin C and 30 alfalfa tablets daily. Although she was skeptical at first, she did notice an improvement. She sneezed! Something must be happening.

Laura added more supplements. She was taking the following: Vita Lea, alfalfa, Instant Protein, beta carotene, B Complex, vitamin E, zinc, calcium magnesium, and a couple Herb Lax. One constant side effect of the drugs was constipation, but she was now regular.

Two months after she started taking Shaklee products she felt so good, that she asked her doctor to help her eliminate steroids. Working together with him, they started to reduce the steroids slowly. Laura had been asthmatic for 35 years, so a few weeks or months wasn't a long time.

Eliminating steroids was good news. But there was more good news. Once off steroids, Magnetic Resonance Imaging showed her bone loss had started to reverse itself. If it continued, her bone density would be back to normal for her age.

A dark cloud blotted the sunshine of her progress in the form of migraine headaches. Her distributor suggested taking EPA supplements. The migraines left a few days after she started taking the EPA and have never reappeared.

Six months after starting the nutrition program, Laura, with her doctor's help, was off all medication. For the first time since the age of five, the only pills she took were nutritional supplements. Within a year, her bone density returned to normal for her age, daily naps were no longer necessary, and she had more energy than she could ever remember, even as a child.

Two and a half years have gone by without a single asthma attack. Laura knows she'll always have the disease, so she follows her daily nutrition program faithfully. The good nutrition program keeps the disease in remission, but it will return if she lets her guard down for an instant. If a flare up occurs, she knows her doctors are there, but she hopes she never needs their assistance again.

As if to prove a point, Laura remarked about a friend who followed a similar nutritional program for her asthma with comparable results. One time her friend's asthma subsided, so she thought she was better and stopped following the plan. Her asthma returned, so she went back on medication. Her friend incorrectly concluded that the nutrition had failed to cure the disease. It hadn't. What she didn't realize was that all nutrition does is help the body keep the remission under control. Nothing cures asthma.

IS IT IN HER HEAD?

No! That doesn't mean that attitude doesn't help, but what Laura experienced is real. Consider the nutrients and the roll they played in Laura's conquest.

Laura was on big league medication, with all the stress that it brings. In her own words, the drugs are "uppers," cause constipation, and accelerate bone loss. That all adds up to an increased nutritional need for vitamins, minerals, and especially calcium. The steroids increase the need for B vitamins.

Instant Protein gives her body the tools it needs for tissue repair. But it does more. It provides additional energy, "staying power or stamina. Stamina lets you feel as good at the end of a day as at the beginning.

So by starting a good nutrition program, Laura helped her body deal with the constant stress it was under. She met the additional nutrient needs that stress and drugs impose on any body. In addition, alfalfa might have been an unsung hero in this story.

Alfalfa is especially rich in a type of fiber we call saponins. Saponins are especially effective at binding and accelerating removal of the wastes that accumulate in the gall bladder and pass out through the bile duct. These wastes, often called antigens, get recycled if they aren't removed, and constantly aggravate a chronic condition like asthma or arthritis. Alfalfa fiber, and I believe it's specifically the saponins, is effective in eliminating antigens through the stools. Alfalfa is the best known food source of saponins, and the second best source, beans, are less than one fifth as good.

Although EPA helped the migraines clear up, it also helped the asthma as well. EPA supplements are the most efficient source of the omega 3 oils, which help to modulate inflammation. Hippocrates discovered this in 450 B.C. when he found that flaxseed oil helped reduce asthma attacks. EPA in capsules is more practical than flaxseed oil and keeps better.

Other nutrients helped Laura cope with the stress her body will always need to fight. They include the B-complex of vitamins, vitamin C, and zinc. Vitamin E helped her lungs repair themselves and restored the complex fluid which bathes the alveolar. This fluid, rich in vitamin E, helps neutralize irritants that promote asthma attacks.

It's important to note that Laura and her doctor made a good team and worked together. She didn't quit her medications "cold turkey" on her own. With her doctor's watchful eye, she cut back a little each time until she reached zero. You don't go from over 30 years of taking medication to taking none in one step. In fact, many asthmatics will never get back to zero medication. However, any reduction in medication is a step that will add years to your life and life to your years.

ABOUT THE AUTHOR

James Scala was educated at Columbia (B.A.), Cornell (Ph.D.), and Harvard (Post-doctoral studies) Universities.

He has spent his career in research, research management, and teaching. His accomplishments include over fifty published papers on research in nutrition, biochemistry, and biology. His teaching includes courses for undergraduate, graduate, medical, and dental school students.

As a research manager, Dr. Scala held positions at Procter and Gamble, Owens Illinois, Unilever, General Foods, and was the Senior Vice President of Scientific Affairs for the Shaklee Corporation. He now devotes his energies to writing and speaking for the general public.

Dr. Scala lives with his wife Nancy in Lafayette, California. For recreation, they sail the ketch La Scala from its home port on San Francisco Bay.