Food Allergies While Traveling Abroad

By Bill Frederick, Lodestone Safety International

I was sitting up with a visiting program affiliate, a syringe laid out on the table between us. She had come to my room and awakened me to say that she had a problem. She had a pronounced history of being allergic to nuts and at the buffet table she'd carefully reviewed all the ingredients of all of the dishes being served – except the salad dressing. Some 20 – 30 minutes after eating, she started to experience some unpleasantly familiar sensations.

As allergens enter our system, whether by ingestion, injection, inhalation or absorption, they show up on our immune system's radar. What would have registered as harmless for most of us sent her immune system into over-drive. Her system is having an abnormal response, a potentially life-threatening allergic reaction. During some previous exposure to the same protein, her immune system “recorded” it as a threat. Now when she is exposed again there is a major mobilization of antibodies with an associated significant release of histamine causing vasodilation, i.e., the blood vessels get bigger and start to leak. This is what causes her symptoms and is what could eventually kill her. She begins to feel a little light headed and anxious as less oxygenated blood reaches her brain. Her skin becomes flushed and there are hives on her belly. As she recognizes the allergic cascade of symptoms, she asks the cook if there are any nuts in any of the food and discovers that the salad dressing contained walnut oil.

She immediately swallows 50 mg of diphenhydramine (Benadryl) an antihistamine that can neutralize the action of the histamine. But antihistamines take time to block this process and cannot reverse the vasodilation that has already occurred. Which is why she is asking me to stand by with a syringe containing 0.3 mg of epinephrine. Epinephrine is a vasoconstrictor that can rapidly reverse the vasoconstriction.

So, we sit and chat while waiting to see where this is going. If she starts to show hives and/or swelling in her face/neck area, or starts having any airway difficulty, or has any changes in mental status beyond a little anxiety, then I will administer the injection into the lateral aspect of her thigh or into the deltoid muscle. If the reaction continued to worsen, I’d give her a subsequent injection. Usually however, the first injection has dramatic results. The hives disappear before your eyes. A second injection would also be called for if she was improving and then started to have a rebound, i.e., the symptoms began to return. This might occur if the epinephrine wore off before the antihistamine took effect.

Her reaction does not become sufficiently severe to warrant epinephrine. She goes to bed with a roommate keeping an eye on her.

With increasing frequency, students report that they have an allergy history that potentially puts them at greater risk when traveling abroad. Studies show that allergies are increasing significantly in all high-income countries. It is less clear what the rate of increase is in low and middle-income countries. Most low-income countries do not have significant data. A lot of middle-income countries that are beginning to collect data show an increase in the frequency of allergies. Is there a correlation between allergy and income? Or is the correlation between data collection and income? What matters for us is that allergy awareness is underdeveloped in most low and middle-income countries with respect to food labeling and restaurant accommodation. While it has become common in U.S restaurants for your waiter to be able to recite the potential allergen ingredients of every dish on the menu along with the chef’s recommendations, that is less the case overseas and certainly not in underdeveloped economies.
What does this mean for travelers? That depends.

Where on the spectrum of severity is the allergy history? Has the person simply tested positive for the allergy without ever experiencing a reaction? Or have they been hospitalized with potentially life threatening episodes?

How ready, willing and able are they to manage their allergies? Do they manage it diligently and ‘when in doubt – do without’? Are they prepared to navigate the cross-cultural questioning that will be required to eat out? Do they pack their own epinephrine and are they comfortable using it? Do they understand why food allergy symptoms develop and the consequences of a misstep?

How difficult will it be to avoid the allergen? What is the level of awareness at the destination country? How pervasive is the allergen in the food? If you have a nut allergy and your destination’s cuisine uses nut oil, it will be challenging to avoid. On the other hand, if you are in a low-income country where food is processed less, you are less likely to be surprised by hidden allergens in your food.

If you’ve answered these questions and have decided that it is a reasonable risk for the participant and the program, there are a number of additional steps to consider that could increase the margin of safety:

1. Research local foods thoroughly so that you know what goes into the most frequently encountered dishes. Carry supplementary snacks for situations when it isn’t clear that the food being offered is safe.
2. Get some durable allergy translation cards that you can show at a restaurant or grocery store. Google Allergy Translation Cards and you’ll find numerous providers. Or use your smart phone to record the questions you need to ask in the local language. Apparently there is an iPhone application that does all the above as well.
3. Carry epinephrine. You should set this up with your institution’s medical advisor. This can be tricky but usually isn’t. Epinephrine is an over the counter medication in some countries and a prescription medication in others. You should find out beforehand if your destination country considers it illegal (I am unaware of any country that regards it as illegal). I have never encountered any problem going through customs anywhere in the world carrying epinephrine either in the Epi-Pen configuration or just ampules and insulin syringes. However, the value of carrying the less expensive syringe/ampules arrangement may be outweighed by less scrutiny of the Epi-Pens when crossing borders. It is useful to carry a letter of authorization from a medical professional (preferably the prescriber), but letters on program letterhead signed by program administrators are also helpful for passing through customs. You may need to administer several doses in the event of anaphylaxis, so ensure that you are carrying at least several doses. Get some instruction. Most grade school teachers and outdoor instructors have been trained to give epinephrine in an emergency situation. This is an intra muscular injection not an intravenous injection, i.e., it is a simple procedure. Anyone who receives an injection of epinephrine should be seen by a physician to determine the stability of their immune system.

Note: Although there are some legal questions about the administration of epinephrine in educational settings, it has become the de-facto standard of care. It has saved lives and there have been no lawsuits regarding its use. You can avoid this issue by making sure that individuals with known allergies provide an epinephrine prescription in addition to having epinephrine on-hand in case someone without a previously known history develops anaphylaxis.
1. Carry antihistamines. These can be purchased over the counter before you go. If someone develops a systemic allergic reaction, you may wish to administer antihistamines even if epinephrine is not required. The most commonly used antihistamine is diphenhydramine or Benedryl. There should not be any problem bringing this through customs... except in Zambia where it is considered highly illegal. Use a different antihistamine there.

2. Consider having the participant carry a prescription for a short course of steroids. Following a systemic allergic reaction, the steroids can be used to stabilize their immune system pending a physician evaluation.

So, if you are in a high-income country with a participant with an allergy history, you might not have to do much more than you would do at home. However, if the participant has a history of hives, respiratory tract changes, or other acute allergic reactions, and/or your destination is a low or middle-income country, more risk reduction work will be needed. A detailed medical assessment is the starting point for deciding if the precautionary steps and rescue plan are likely to avert a life-threatening event. This is especially important when further evaluation in a clinic or hospital might be delayed due to distance, bad roads, unreliable public transportation, severe weather, or other unforeseen circumstances.