Lupin Flour Anaphylaxis

By ACSH Staff — April 13, 2005

Recently The Lancet posted a correspondence titled, "Lupin flour anaphylaxis ([http://www.thelancet.com/journal/vol365/iss9467/abs/llan.365.9467.review_and_opinion.32938.1](http://www.thelancet.com/journal/vol365/iss9467/abs/llan.365.9467.review_and_opinion.32938.1))." It was followed the next day with a BBC posting titled, "Lupin flour 'poses allergy risk' ([http://news.bbc.co.uk/2/hi/health/4419709.stm](http://news.bbc.co.uk/2/hi/health/4419709.stm)). Since then, there has been a deathly media silence.

The immediate cause of the Lancet piece was a severe anaphylactic response to eating onion rings at a restaurant. It was later learned that there was lupin flour in the batter.

"During the meal, her mouth itched and her lips and tongue started to swell. Fifteen minutes later she was having difficulty breathing, her throat had narrowed, and she felt very weak. An ambulance was called, anaphylaxis diagnosed, and she was given intramuscular adrenaline. In spite of this treatment she continued to deteriorate and during the journey to hospital required continuous oxygen and two further doses of adrenaline. On arrival, intravenous fluids, hydrocortisone, and chlorpheniramine were given, and she recovered without further complications" (Radcliffe et al. 2005).

As we read further, we learned that this was not the first recorded instance of lupin anaphylaxis as there were cases recorded in France as early as 1994.

"The first report of lupin allergy was in 1994 and involved a 5 year old girl with a known peanut allergy who developed urticaria and angioedema after eating spaghetti fortified with lupin flour. Lupin flour allergy has been mainly reported in European patients known to be allergic to other legumes, particularly peanut, soya or pea" (Radcliffe et al. 2005)

The evidence is mounting that those who have a peanut allergy can have an anaphylactic response to lupin on the very first encounter. To my limited knowledge, the only other case of an allergenic response on first encounter was for echinacea purpurea for those who had a ragweed allergy (Mullins and Heddle 2002). Echinacea is a member of the ragweed family. The data supports the "possibility that cross-reactivity between echinacea and other environmental allergens may trigger allergenic reactions in 'echinacea-naive' subjects" (Mullins et al. 2002). As with lupin, this fact seems not to have gained any media attention, even though the product is widely used by those who seek "alternative" remedies to modern pharmaceuticals.

On reading these reports, one might think that the lupin problem is confined to Europe. However, my suspicions were aroused given that lupin appears to be a trendy new legume which is just the kind of foodstuff, such as amaranth or other seemingly exotic crops, that appeals to the "organic" food faddists. I did a Google search.

First up was a food site that claimed to be a pioneer in the production of foods for vegans and
animal rights advocates. "Our speciality is making food products free from any animal origin. This means we make great tasting products ideal for those who follow a vegan diet and for all those with allergies to ingredients like dairy milk, eggs etc." There were a number of recipes for carob products using lupin. Carob is among the items fed to children instead of chocolate. On another site in the UK, there was a Organic Corn & Lupin Bread at £2.15 for 250g.

I found "new high yielding non GE lupin varieties" being touted by a large American "organic" chain of foods stores that pride themselves on being GM free. Lupin was deemed to be "a low input plant making it useful for organic production" and a "good alternative to soy as a protein source for cattle." I have several students out checking this chain and any other "health food stores" for lupin in their products.

Imagine now if the source of the anaphylaxis was a transgenic food. Does anyone doubt that this "scandal" would have become a major news event? After all, non-existent allergenic responses to transgenic foods have become the stuff of activists' legend and are rarely, if ever, corrected by the media. And there is the case where a seed company developed a transgenic variety of soybeans for animal feed, had it tested and found it allergenic, never released it and allowed the results to be published in a prestigious peer-reviewed medical journal (Nordlee et al. 1996). Given the source for the novel protein that was expressed, there was every reason to expect an allergenic response but there were also good reasons to see if the additional protein could be safely added. Somehow, this event where the system worked as intended is circulated as a horror story about the dangers of transgenic food production. Activists somehow manage to keep their myths (some of us might prefer to use a much stronger term than myths to describe them) circulating endlessly no matter how massively refuted they may have been.

There is a legitimate question that can be raised as to why the media somehow manages to carry food stories of imagined harm that serve the cause of ideological activists groups and ignores stories of genuine concern. Again, there is no question that had a transgenic food product been responsible for the anaphylaxis, there would have been a hysterical response. In this case, hysteria is not in order, but the potential for harm does warrant something other than almost total media silence (as this is being written on the Monday night following the posted story). There are too many unanswered questions for us to rush to judgment, but there are enough answered ones to warrant public discussion of the issues. There is a need for public warning, labeling and other considerations. If the allergenic response to lupin is as powerful as it is to the peanut allergy, then food producers will have to weigh whatever benefits are achieved by using lupin flour as a substitute for non-allergenic or at least less allergenic products to the potential harm not only in the product itself but also from cross contamination. In order for there to be intelligent discussion of the many issues involved, the media should calmly and rationally bring it to the public's attention.

Finally, we have to ask once again about the silence of the NGOs. Where are Greenpeace or Friends of the Earth or the Soil Association or the Center for Science in the Public Interest when we really need them? Would they have us ban lupin or maybe ban the introduction of all novel foods? Where were they just a few months back when the BBC reported dioxin "contamination" of free range chickens and the eggs that they produced? Using the BBC search engine to find the story, I found numerous earlier stories on dioxin in free range chickens and even an interview
where it was clear that dioxin "contamination" was inherent in raising chickens outdoors on the ground. Yet there was not a peep from those who demand zero tolerance for dioxin in our foods. Danish studies have also found that 100% of free range chickens were infected with Campylobacter jejuni yet there was NGO and media silence on this also. We could go on! There is the famous journalist line in the John Ford's The Man Who Shot Liberty Valance, "when the legend becomes a fact, print the legend." Unfortunately, when it comes to food safety, the media is better at ignoring the facts and printing the legend.

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References


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