

## GMO Soybeans & Allergies

Jeffrey Smith, Institute for Responsible Technology, Author of *Seeds of Deception*.  
[www.seedsofdeception.com](http://www.seedsofdeception.com)

Beginning in 1996, genes from bacteria and viruses have been forced into the DNA of soy, corn, cotton, and canola plants, which are used for food. Ohio allergist John Boyles is one of a growing number of experts who believe that these genetically modified (GM) foods are contributing to the huge jump in food allergies in the US, especially among children.

The UK is one of the few countries that conduct a yearly food allergy evaluation. In March 1999, researchers at the York Laboratory were alarmed to discover that reactions to soy had skyrocketed by 50% over the previous year. Genetically modified soy had recently entered the UK from US imports and the soy used in the study was largely GM. John Graham, spokesman for the York laboratory, said, "We believe this raises serious new questions about the safety of GM foods."

There are many ways in which the process of genetic engineering may be responsible for allergies. The classical understanding is that the imported genes produce a new protein, which may trigger reactions. This was demonstrated in the mid 1990s when soybeans were outfitted with a gene from the Brazil nut. While scientists attempted to produce a healthier soybean, they ended up with a potentially deadly one. Blood tests showed that people allergic to Brazil

nuts reacted to the beans. It was never marketed.

The GM variety planted in 91% of US soy acres is called Roundup Ready—engineered to survive otherwise deadly applications of Monsanto's Roundup herbicide. The plants contain genes from bacteria, which produce a protein that has never been part of the human food supply. Since people aren't usually allergic to a food until they have eaten it several times, no tests can prove in advance that the protein will not cause allergies.

Frighteningly, the only published human feeding study on GM foods ever conducted verified that the gene inserted into GM soy transfers into the DNA of our gut bacteria and continues to function. This means that years after we stop eating GM soy, we may still have the potentially allergenic protein continuously produced within our intestines.

Damaged soy DNA creates new (or more) allergens -The process of creating a GM crop produces massive collateral damage in the plant's DNA. Native genes can be mutated, deleted, permanently turned on or off, and hundreds may change their levels of protein expression. This can increase existing allergens, or produce a new, never seen before, unknown allergens. Both appear to have happened in GM soy.

Levels of one known soy allergen, trypsin inhibitor, were up to seven times higher in cooked GM soy compared to cooked non-GM soy. Another study discovered a unique, unexpected protein in GM soy, likely to trigger allergies.

In addition, of eight human subjects who had a skin-prick (allergy-type) reaction to GM soy, one did not *also* react to non-GM soy, suggesting that GM soy is uniquely dangerous. Increased herbicides, digestive problems and allergies - Farmers use nearly double the amount of herbicide on GM soy compared to non-GM soy; higher herbicide residues might cause reactions.

GM soy reduces digestive enzymes in mice. If proteins "digest" slowly in humans, there is more time for allergic reactions (possibly to *many* food proteins).

Documents made public from a lawsuit revealed that FDA scientists were uniformly concerned that GM foods might create hard-to-detect allergies, toxins, new diseases, and nutritional problems. Their urgent requests for required long-term feeding studies fell on deaf ears. The FDA doesn't require a single safety test. The person in charge of that FDA policy was Monsanto's former attorney, who later became their vice president.

Buying products that are organic or labeled non-GMO are two ways to limit your family's risk. Another is to avoid products containing any ingredients from the seven GM food crops: soy, corn, cottonseed, canola, Hawaiian papaya, and a little bit of zucchini and crook neck squash. This means avoiding soy lecithin in chocolate, corn syrup in candies, and cottonseed or canola oil in snack foods.