



**Start buying non-GMO today.
Help us stop the genetic
engineering of our food supply.**

Membership

Membership in our Campaign for Healthier Eating in America is free. Contributing members receive a free educational gift. Donations are tax-deductible.

There are three ways to become a member or make a donation:

By mail: Institute For ResponsibleTechnology
P.O. Box 469
Fairfield, IA 52556

Online: www.ResponsibleTechnology.org

By phone: (641)209-1765

The health information is from the book *Genetic Roulette: The Documented Health Risk of Genetically Engineered Foods*, by Jeffrey M. Smith.

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GMO Health Risks

**Genetically modified foods:
YES, you're eating them.
NO, they're not safe.**

Did you know... since 1996 Americans have been eating genetically modified (GM) ingredients in most processed foods.

Did you know... GM plants, such as soybean, corn, cottonseed, and canola, have had foreign genes forced into their DNA. The inserted genes come from species such as bacteria and viruses, which have never been in the human food supply.

Did you know... The American Academy of Environmental Medicine states, "Several animal studies indicate serious health risks associated with GM food," including infertility, immune problems, accelerated aging, faulty insulin regulation, and changes in major organs and the gastrointestinal system. They ask physicians to advise patients to avoid GM food.

**Learn the risks and start protecting
yourself and your family today!**

Why isn't the FDA protecting us?

In 1992, the Food and Drug Administration claimed they had no information showing that GM foods were substantially different from conventionally grown foods. Therefore they were safe to eat, and absolutely no safety studies were required. But internal memos made public by a lawsuit reveal that their position was staged by political appointees who were under orders from the White House to promote GMOs. In addition, **the FDA official in charge of creating this policy was Michael Taylor, the former attorney for Monsanto, the largest biotech company, and later their vice president.**

In reality, **FDA scientists** had repeatedly warned that GM foods can create unpredictable, hard-to-detect side effects, including allergies, toxins, new diseases, and nutritional problems. They **urged long-term safety studies, but were ignored.**

Today, the same biotech companies who have been found guilty of hiding toxic effects of their chemical products are in charge of determining whether their GM foods are safe. **Industry-funded GMO safety studies are too superficial to find most of the potential dangers**, and their voluntary consultations with the FDA are widely criticized as a meaningless façade.

Genetic modification is radically different from natural breeding

Genetic engineering transfers genes across natural species barriers. It uses imprecise laboratory techniques that bear no resemblance to natural breeding, and is based on outdated concepts of how genes and cells work. Gene insertion is done either by shooting genes from a "gene gun" into a plate of cells or by using bacteria to invade the cell with foreign DNA. The altered cell is then cloned into a plant.

Widespread, unpredictable changes

The genetic engineering process creates massive collateral damage:

- Mutations are produced in hundreds or thousands of locations throughout the plant's DNA.
- Natural genes can be deleted or permanently turned on or off.
- Hundreds of genes may change their behavior.
- Even the inserted gene can be damaged or rearranged, and may create proteins that can trigger allergies or promote disease.

GM foods on the market

There are eight GM food crops. The five major varieties—**soy, corn, canola, cotton, and sugar beets**—have bacterial genes inserted, which allow the plants to survive an otherwise deadly dose of weed killer. Farmers use considerably more herbicides on these GM crops and so the food has higher herbicide residues. About 68% of GM crops are herbicide tolerant.

The second GM trait is a built-in pesticide, found in GM corn and cotton. A gene from the soil bacterium called Bt (*Bacillus thuringiensis*) is inserted into the plant's DNA, where it secretes the insect-killing Bt-toxin in every cell. About 19% of GM crops produce their own pesticide. Another 13% produce a pesticide and are herbicide tolerant.

There is also GM **Hawaiian papaya** and a small amount of **zucchini** and **yellow crookneck squash**, which are engineered to resist a plant virus.

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Growing evidence of harm from GMOs

GM soy and allergic reactions

- Soy allergies skyrocketed by 50% in the UK, soon after GM soy was introduced.
- A skin prick allergy test shows that some people react to GM soy, but not to wild natural soy.
- Cooked GM soy contains as much as 7-times the amount of a known soy allergen.
- GM soy also contains a new unexpected allergen, not found in wild natural soy.

Bt corn and cotton linked to allergies

The biotech industry claims that Bt-toxin is harmless to humans and mammals because the natural bacteria version has been used as a spray by farmers for years. In reality, hundreds of people exposed to Bt spray had allergic-type symptoms, and mice fed Bt-toxin had powerful immune responses and damaged intestines. Moreover, the Bt in GM crops is designed to be more toxic than the natural spray and is thousands of times more concentrated.

Farm workers throughout India are getting the same allergic reactions from handling Bt cotton as those who reacted to Bt spray. Mice and rats fed Bt corn also showed immune responses.

GMOs fail allergy tests

No tests can guarantee that a GMO will not cause allergies. Although the World Health Organization recommends a screening protocol, the GM soy, corn, and papaya in our food supply fail those tests—because their GM proteins have properties of known allergens.

GMOs may make you allergic to non-GM foods

- GM soy drastically reduces digestive enzymes in mice. If it also impairs your digestion, you may

become sensitive and allergic to a variety of foods.

- Mice fed Bt-toxin started having immune reactions to formerly harmless foods.
- Mice fed experimental GM peas also started reacting to a range of other foods. (The peas had already passed all the allergy tests normally done before a GMO gets on the market. Only this advanced test, which is never used on the GMOs we eat, revealed that the peas could actually be deadly.)

GMOs and liver problems

- Rats fed GM potatoes had smaller, partially atrophied livers.
- The livers of rats fed GM canola were 12-16% heavier.
- GM soy altered mouse liver cells in ways that suggest a toxic insult. The changes reversed after they switched to non-GM soy.

GMOs, reproductive problems, and infant mortality

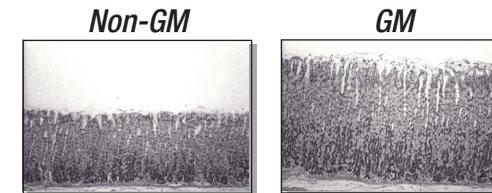
- More than half the babies of mother rats fed GM soy died within three weeks.
- Male rats and mice fed GM soy had changed testicles, including altered young sperm cells in the mice.
- The DNA of mouse embryos functioned differently when their parents ate GM soy.
- The longer mice were fed GM corn, the less babies they had, and the smaller their babies were.



Babies of female rats fed GM soy were considerably smaller, and more than half died within three weeks (compared to 10% of the non-GM soy controls).

Bt crops linked to sterility, disease, and death

- Thousands of sheep, buffalo, and goats in India died after grazing on Bt cotton plants after harvest. Others suffered poor health and reproductive problems.
- Farmers in Europe and Asia say that cows, water buffaloes, chickens, and horses died from eating Bt corn varieties.
- About two dozen US farmers report that Bt corn varieties caused widespread sterility in pigs or cows.
- Filipinos in at least five villages fell sick when a nearby Bt corn variety was pollinating.



The stomach lining of rats fed GM potatoes showed excessive cell growth, a condition that may lead to cancer. Rats also had damaged organs and immune systems.

Functioning GM genes remain inside you

Unlike safety evaluations for drugs, there are no human clinical trials of GM foods. The only published human feeding experiment revealed that the **genetic material inserted into GM soy transfers into bacteria living inside our intestines and continues to function.** This means that long after we stop eating GM foods, we may still have their GM proteins produced continuously inside us.

- If the antibiotic gene inserted into most GM crops were to transfer, it could create super diseases, resistant to antibiotics.
- If the gene that creates Bt-toxin in GM corn were to transfer, it might turn our intestinal bacteria into living pesticide factories.
- Animal studies show that DNA in food can travel into organs throughout the body, even into the fetus.

GM food supplement caused deadly epidemic

In the 1980s, a contaminated brand of a food supplement called L-tryptophan killed about 100 Americans and caused sickness and disability in another 5,000-10,000 people. The source of contaminants was almost certainly the genetic engineering process used in its production. The disease took years to find and was almost overlooked. It was only identified because the symptoms were unique, acute, and fast-acting. If all three characteristics were not in place, the deadly GM supplement might never have been identified or removed.

If GM foods on the market are causing common diseases or if their effects appear only after long-term exposure, we may not be able to identify the source of the problem for decades, if at all. There is no monitoring of GMO-related illnesses and no long-term animal studies. **Heavily invested biotech corporations are gambling with the health of our nation for their profit.**

Help end the genetic engineering of our food supply

When the tipping point of consumer concern about GMOs was achieved in Europe in 1999, within a single week virtually all major food manufacturers committed to remove GM ingredients. **The Campaign for Healthier Eating in America** is designed to reach a similar tipping point in the US soon.

Our growing network of manufacturers, retailers, healthcare practitioners, organizations, and the media is informing consumers of the health risks of GMOs and helping them select healthier non-GMO alternatives with our Non-GMO Shopping Guides.

Go to www.ResponsibleTechnology.org to get involved and learn how to avoid GMOs.