

The Health Risks of GM Foods: Summary and Debate

<http://www.seedsofdeception.com/Public/GeneticRoulette/HealthRisksofGMFoodsSummaryDebate/index.cfm>

This section summarizes the health risks of genetically modified foods and serves as a forum for a global discussion and debate. It is organized around the 65 main point summaries presented on the left side of the two-page spreads in Part 1 of *Genetic Roulette*. Each section linked below offers the opportunity for people to submit updates, corrections, challenges and responses. Before making a submittal, please review the full content in that section of the book.

Contents at a Glance:

Part 1: The Documented Health Risks of Genetically Engineered Foods

Section 1: Evidence of reactions in animals and humans.

- 1.1 GM Potatoes Damages Rats (see full content)
- 1.2 Rats Fed GMO Tomatoes got bleeding stomachs, several died
- 1.3 Rats Fed Bt Corn had multiple health problems
- 1.4 Mice Fed GM Bt Potatoes had intestinal damage
- 1.5 Workers exposed to Bt cotton developed allergies
- 1.6 Sheep died after grazing in Bt cotton fields
- 1.7 Inhaled Bt corn pollen may have triggered disease in humans
- 1.8 Farmers report pigs and cows became sterile from GM corn
- 1.9 Twelve cows in Germany died mysteriously when fed Bt corn
- 1.10 Mice fed Roundup Ready soy had liver cell problems
- 1.11 Mice fed Roundup Ready soy had problems with the pancreas
- 1.12 Mice fed Roundup Ready soy had unexplained changes in testicular cells
- 1.13 Roundup Ready Soy Changed Cell Metabolism in Rabbit Organs
- 1.14 Most offspring of rats fed Roundup Ready soy died within three weeks (see full

content)

1.15 Soy allergies skyrocketed in the UK, soon after GM soy was introduced

1.16 Rats fed Roundup Ready canola had heavier livers

1.17 Twice the number of chickens died when fed Liberty Link corn

1.18 GM peas generated an allergic-type inflammatory response in mice

1.19 Eyewitness reports: Animals avoid GMOs

1.20 A GM food supplement killed about 100 people

Section 2: Gene insertion disrupts the DNA and can create unpredictable health problems.

2.1 Foreign genes disrupt the DNA at the insertion site.

2.2 Growing GM crops using tissue culture can create hundreds or thousands of DNA mutations.

2.3 Gene insertion creates genome-wide changes in gene expression.

2.4 The promoter may accidentally switch on harmful genes.

2.5 The promoter might switch on a dormant virus in plants.

2.6 The promoter might create genetic instability and mutations.

2.7 Genetic engineering activates mobile DNA, called transposons, which generate mutations.

2.8 Novel RNA may be harmful to humans and their offspring.

2.9 Roundup Ready soybeans produce unintentional RNA variations.

2.10 Changes in proteins can alter thousands of natural chemicals in plants, increasing toxins or reducing phytonutrients

2.11 GM crops have altered levels of nutrients and toxins.

Section 3: The protein produced by the inserted gene may create problems.

- 3.1 A gene from a Brazil nut carried allergies into soybeans.
- 3.2 GM proteins in soy, corn and papaya may be allergens.
- 3.3 Bt crops may create allergies and illness.
- 3.4 The Bt in crops is more toxic than the Bt spray.
- 3.5 StarLink corn's built-in pesticide has a "medium likelihood" of being an allergen.
- 3.6 Pollen-sterilizing barnase in GM crops may cause kidney damage.
- 3.7 High lysine corn contains increased toxins and may retard growth.
- 3.8 Cooking high lysine corn may create disease-promoting toxins.
- 3.9 Disease-resistant crops may promote human viruses and other diseases.

Section 4: The foreign protein may be different than what is intended.

- 4.1 GM proteins may be misfolded or have added molecules.
- 4.2 Transgenes may be altered during insertion.
- 4.3 Transgenes may be unstable, and rearrange over time.
- 4.4 Transgenes may create more than one protein.
- 4.5 Weather, environmental stress and genetic disposition can significantly change gene expression.
- 4.6 Genetic engineering can disrupt the complex relationships governing gene expression.

Section 5: Transfer of genes to gut bacteria, internal organs, or viruses.

5.1 In spite of industry claims, transgenes survive the digestion system and can wander.

5.2 Transgene design facilitates transfer into gut bacteria.

5.3 Transgenes may proliferate in gut bacteria over the long-term.

5.4 Transgene transfer to human gut bacteria is confirmed.

5.5 GM foods might create antibiotic-resistant diseases.

5.6 The promoter can also transfer, and may switch on random genes or viruses.

5.7 If Bt genes transfer, they could turn our gut bacteria into living pesticide factories.

5.8 Genes may transfer to bacteria in the mouth or throat.

5.9 Transfer of viral genes into gut microorganisms may create toxins and weaken peoples' viral defenses.

Section 6: GM crops may increase environmental toxins and bioaccumulate toxins in the food chain.

6.1 Glufosinate-tolerant crops may produce herbicide "inside" our intestines.

6.2 Herbicide-tolerant crops increase herbicide use and residues in food.

6.3 Tiny amounts of herbicide may act as endocrine disruptors.

6.4 GM crops may accumulate environmental toxins or concentrate toxins in milk and meat of GM-fed animals.

6.5 Disease-resistant crops may promote new plant viruses, which carry risks for humans.

Section 7: Other types of GM foods carry risks.

7.1 Milk from rbGH treated cows may increase risk of cancer and other diseases.

7.2 Milk from rbGH-treated cows likely increases the rate of twin births.

7.3 Food additives created from GM microorganisms pose health risks.

Section 8: Risks are greater for children and newborns.

8.1 Pregnant mothers eating GM foods may endanger offspring.

8.2 GM foods are more dangerous for children than adults.