



THE TRUTH ABOUT

gmo's

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gmo - Genetically Modified Foods

You hear a lot about GMO's these days. What is the best way to avoid GMO's? Eat whole foods! What exactly is a GMO? Genetically modified foods have had foreign genes inserted into their genetic codes.

“Genes change every day by natural mutation and recombination, creating new biological variations. Humans have been exploiting this for centuries—shuffling genes in increasingly systematic ways and using extensive crossing and artificial selection—to create many combinations that would never otherwise have occurred. Just about everything we eat is derived from livestock, crops, and microorganisms bred specifically to provide food. Humans have also redistributed genes geographically: the soybean is native to Asia but is now grown throughout the Americas, and the potato, native to the American continent, is grown throughout the temperate world. DNA has never been “static,” neither naturally nor at the hand of people.

Genetic modification is an extension of this. However, unlike conventional breeding, in which new assortments of genes are created more or less at random, it allows specific genes to be identified, isolated, copied, and introduced into other organisms in much more direct and controlled ways (see boxes). The most obvious difference from conventional breeding is that genetic modification allows us to transfer genes between species.”

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The average American's diet relies heavily on corn, not so much in its vegetable form, which is okay in moderation but in its more toxic forms like high-fructose corn syrup, which is found in a lot of the fake, processed foods available in your grocery store or restaurants. If you are vegan or vegetarian, you probably get soy in your diet as a protein substitute.

Potential Benefits:

- More nutritious food
- Tastier food
- Disease and drought-resistant plants that require fewer environmental resources (water, fertilizer, etc.)
- Decreased use of pesticides
- Increased supply of food with reduced cost and longer shelf life
- Faster growing plants and animals
- Food with more desirable traits, such as potatoes that absorb less fat when fried
- Medicinal foods that could be used as vaccines or other medications

Potential Risks:

- Modified plants or animals may have genetic changes that are unexpected and harmful.
- Modified organisms may interbreed with natural organisms and out-compete them, leading to extinction of the original organism or to other unpredictable environmental effects.
- Plants may be less resistant to some pests and more susceptible to others.

It is easy to see that there are perceivable benefits to genetically modifying our foods. It is less apparent to many that there can be a huge and detrimental impact upon our health by eating the same. So...what should we do?

1. **Remove processed foods from your diet and eat whole foods.**
2. **Eat animal protein that is organic and naturally raised.**

It's virtually impossible to provide a complete list of genetically modified food (GM food) in the United States because there aren't any laws for genetically modified crops!

Some estimates say as many as 30,000 different products on grocery store shelves are “modified.” That’s largely because many processed foods contain soy. Half of North America’s soy crop is genetically engineered!

Rapeseed

Resistance to certain pesticides and improved rapeseed cultivars to be free of erucic acid and glucosinolates. Glucosinolates, which were found in rapeseed meal leftover from pressing, are toxic and had prevented the use of the meal in animal feed. In Canada, where “double-zero” rapeseed was developed, the crop was renamed “canola” (Canadian oil) to differentiate it from non-edible rapeseed.

Honey

Honey can be produced from GM crops. Some Canadian honey comes from bees collecting nectar from GM canola plants. This has shut down exports of Canadian honey to Europe.

Cotton

Resistant to certain pesticides – considered a food because the oil can be consumed. The introduction of genetically engineered cotton plants has had an unexpectedly effect on Chinese agriculture. The so-called Bt cotton plants that produce a chemical that kills the cotton bollworm have not only reduced the incidence of the pest in cotton fields, but also in neighboring fields of corn, soybeans, and other crops.

Rice

Genetically modified to contain high amounts of Vitamin A. Rice containing human genes is to be grown in the US. Rather than end up on dinner plates, the rice will make human proteins useful for treating infant diarrhea in the developing world.

Soybean

Genetically modified to be resistant to herbicides – Soy foods including, soy beverages, tofu, soy oil, soy flour, lecithin. Other products may include breads, pastries, snack foods, baked products, fried products, edible oil products and special purpose foods.

Sugar cane

Made resistant to certain pesticides. A large percentage of sweeteners used in processed food actually come from corn, not sugar cane or beets. Genetically modified sugar cane is regarded so badly by consumers at the present time that it could not be marketed successfully.

Tomatoes

Made for a longer shelf life and to prevent a substance that causes tomatoes to rot and degrade.

Corn

Resistant to certain pesticides – Corn oil, flour, sugar or syrup. May include snack foods, baked goods, fried foods, edible oil products, confectionery, special purpose foods, and soft drinks.

Sweet Corn

Genetically modified to produces its own insecticide. Officials from the US Food and Drug Administration (FDA) have said that thousands of tonnes of genetically engineered sweet corn have made their way into the human food supply chain, even though the produce has been approved only for use in animal feed. Recently Monsanto, a biotechnology food producer, said that about half of the USA's sweet corn acreage has been planted with genetically modified seed this year.

Canola

Canola oil. May include edible oil products, fried foods, and baked products, snack foods.

Potatoes

(Atlantic, Russett Burbank, Russet Norkatah, and Shepody) – May include snack foods, processed potato products and other processed foods containing potatoes.

Flax

More and more food products contain flax oil and seed because of their excellent nutritional properties. No genetically modified flax is currently grown. Herbicide-resistant GM flax was introduced in 2001, but was soon taken off the market because European importers refused to buy it.

Papaya

The first virus resistant papayas were commercially grown in Hawaii in 1999. Transgenic papayas now cover about one thousand hectares, or three quarters of the total Hawaiian papaya crop. Monsanto, donated technology to Tamil Nadu Agricultural University, Coimbatore, for developing a papaya resistant to the ring spot virus in India.

Squash

(yellow crookneck) – Some zucchini and yellow crookneck squash are also GM but they are not popular with farmers.

Red-hearted chicory

(radicchio) – Chicory (*Cichorium intybus* var. *foliosum*) is popular in some regions as a salad green, especially in France and Belgium. Scientists developed a genetically modified line of chicory containing a gene that makes it male sterile, simply facilitating the production of hybrid cultivars. Today there is no genetically modified chicory on the market.

Cotton Seed Oil

Cottonseed oil and linters. Products may include blended vegetable oils, fried foods, baked foods, snack foods, edible oil products, and small goods casings.

Tobacco

The company Vector has a GMO tobacco being sold under the brand of Quest® cigarettes in the U.S. It is engineered to produce low or no nicotine.

Meat

Meat and dairy products usually come from animals that have eaten GM feed.

Peas

Genetically modified (GM) peas created immune responses in mice, suggesting that they may also create serious allergic reactions in people. The peas had been inserted with a gene from kidney beans, which creates a protein that acts as a pesticide.

Vegetable Oil

Most generic vegetable oils and margarines used in restaurants and in processed foods in North America are made from soy, corn, canola, or cottonseed. Unless these oils specifically say “Non-GMO” or “Organic,” it is probably genetically modified.

Sugar beets

May include any processed foods containing sugar.

Dairy Products

About 22 percent of cows in the U.S. are injected with recombinant (genetically modified) bovine growth hormone (rbGH).

Vitamins

Vitamin C (ascorbic acid) is often made from corn, vitamin E is usually made from soy.

Vitamins A, B2, B6, and B12 may be derived from GMOs as well as vitamin D and vitamin K may have “carriers” derived from GM corn sources, such as starch, glucose, and maltodextrin.

Sources

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