How do You Know . . .

If Your Food is Genetically Modified?

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When polled only about one-quarter of Americans report having eaten genetically modified food. However, if you **randomly pick an item off your grocery store's shelves**, you have a **70% chance of picking a food with genetically modified (GM) ingredients**. This is because at least **7 out of every 10 items have been genetically modified.**

If more Americans were aware of this fact, the polls would certainly turn out differently, but Americans are kept largely in the dark about GM products, and most are not aware they are eating these foods because there are **no labeling requirements for GM foods**.

This, despite the fact that there have been **no studies done with humans to show what happens when genetically modified foods are consumed**, and an ABC News poll (PDF) found that **92% of Americans want mandatory labels on GM foods**.

Even more concerning is the fact that genetically modified organisms are **not easily contained**. The Washington Post reported "techniques for confining genetically engineered . . . organisms are still in their infancy, and far more work needs to be done to make sure the new products do not taint the food supply or wipe out important species."

As a consumer, one way you can voice your resistance to these widely untested, experimental organisms is by not purchasing GM products, a task that is not easy to achieve when you consider the extent to which GM products have already saturated the American market.

There are, however, several ways to reduce your chances of eating GM foods -- if you know where to look.

Buy Organic

Buying organic is currently **the best way to ensure that your food has not been genetically modified**. By definition, food that is certified organic must be:

- Free from all GM organisms
- Produced without artificial pesticides and fertilizers
- From an animal reared without the routine use of antibiotics, growth promoters or other drugs

However, GM crops are becoming more and more prevalent, and **the spread of GM seeds and pollen is a major concern**. Even organic products may be contaminated with traces of GM elements that have been spread by wind or insects such as bees.

Read Labels

GM soybeans and corn make up the largest portion of genetically engineered crops. When looking at a product label, if any of the following ingredients are listed there's a good chance it has come from GM corn or soy (unless it's listed as organic):

Corn Derivatives (Food ingredients which may contain GM corn)

corn flour and meal	fructose and fructose syrup (unless specified non-corn)	**corn syrup**
malt	baking powder (corn starch is the usual filler)	malt syrup
malt extract	monosodium glutamate	maltodextrin
sorbitol	mono- and diglycerides	starch
food starch	modified food starch	confectioner's sugar
dextrin	**vitamins that do not state "corn-free"**	

Soy Derivatives (Food ingredients which may contain GM soy)

most miso	soy sauce	tamari	textured vegetable protein (usually soy)
teriyaki marinades	tofu	soy beverages	**soy protein isolate** or protein isolate
tempeh	shoyu	**lecithin** or soy lecithin	many non-stick sprays rely on soy lecithin
bread	pastry	**margarine**	

Mayonnaise and salad dressings also may include lecithin.

As you can see, there are many products that may contain GM soy or corn derivatives (or GM vegetable oil). Some of these products include:

Other Products (Food ingredients which may contain GM ingredients)

infant formula	**salad dressing**	**bread**
cereal	hamburgers and hot dogs	margarine
mayonnaise	crackers	cookies
chocolate	candy	fried food
chips	veggie burgers	meat substitutes
ice cream	frozen yogurt	tofu
tamari	soy sauce	soy cheese
tomato sauce	**protein powder**	baking powder
alcohol	vanilla	powdered sugar
peanut butter	**enriched flour and pasta**	

Non-food items include cosmetics, soaps, detergents, shampoo and bubble bath.

Aside from corn and soy, other **GM foods grown in the United States include cotton, canola, squash and papaya.**

Look at Produce Stickers

Those **little stickers on fruit and vegetables** contain **different PLU codes** depending on whether the fruit was conventionally grown, organically grown or genetically engineered. The PLU code for conventionally grown fruit consists of four numbers, organically grown fruit five numbers prefaced by the number 9, and **GM fruit five numbers prefaced by the number 8.**

For example:

- Conventionally grown PLU: 1022
- Organically grown PLU: 91022
- Genetically modified PLU: 81022

In terms of fruit, another strategy is to **avoid hybrid varieties**, which are fruits that have been **altered by humans**. Typically hybrid fruits contain more sugar than regular varieties so they taste sweeter and can be picked out because they **don't contain seeds** (seedless watermelon, seedless grapes, etc.).

Avoid Processed Foods

About 70% of all processed foods contain genetically modified ingredients, and the food manufacturers themselves often don't know for sure whether their products contain GM elements.

There are many reasons why processed foods are not optimal for your health -- for instance they often contain **trans fat**, **acrylamide** and little nutritional value -- so avoiding them will not only help you to cut back on the amount of GM foods you are consuming, but will also boost your health.

What is Trans Fat?

Trans fatty acids are also known as trans fat or hydrogenated oil. Trans fat is an artery-clogging fat that is formed when vegetable oils are artificially hardened into solid fat. This form of fat does not occur in nature and is sometimes called "plastic fat". Trans fat is associated with initiating poor health and degenerative diseases, including cancer. In fact, Dr. Johanna Budwig, a famous German biochemist and leading European authority on fats and nutrition, **proved that trans fat help to initiate cancer**. Trans fat does not belong in the human body if good health is desired.

What is Acrylamide?

Acrylamide is a white, odorless but potentially cancer-causing chemical, which has been found in many common foods such as potato chips, French fries, bread, rice and cereals. The chemical is a byproduct of cooking food at high temperatures. In 2002, Swedish researchers discovered acrylamide formation in highly heated food. Now, the FDA and many other countries have confirmed significant levels of acrylamide in many foods as a result of baking or frying – and most likely from grilling and roasting food. The Environmental Protection Agency's (EPA) website says: "EPA has classified acrylamide as a Group B2, **probable human carcinogen**," and according to the U.K. independent Committee on Carcinogenicity of Chemicals in Food, Consumer Products and the Environment (COC), ". . . exposure to **DNA-damaging carcinogens such as acrylamide** should be as low as reasonably practicable." Acrylamide has also been shown to **cause cancer and neurotoxic effects** in animal studies, and **damage to the nervous system in humans** who were exposed to the chemical at work.