

**“GMO Foods: Are They Dangerous to Your Health?”**

**Dr. Oz introduction:** I'm throwing out a term today that affects what you're eating each and every day. Genetically modified foods, well you're probably eating them right now and don't even know it. And a new report claims they can damage your health and even cause cancer. But some experts say they're inexpensive and healthy way to put dinner on your table. Are they safe? Should they be labeled? What do you need to know?"

**Voiceover on images:** "It's the brave new world of food and it's probably already on your plate. Scientists can now take DNA from one species, a plant, bacterium or (emphasis added) even a fish! and add it to another. The goal? To produce bigger crops, ward off plant diseases and ultimately lower the price of the food on your table. Introduced less than 20 years ago, nearly 90 percent of the corn, soybeans and sugar beets grown in America have been genetically modified. As a result, experts estimate up to 3 out of 4 of your favorite foods have been genetically modified. Many of these foods have been banned by some European countries and even in Peru. But the FDA says they are not harmful. There's enough controversy that Californians will soon vote to decide if genetically modified foods should be labeled. You have a right to know what's in your food. So what do you need to know about genetically modified foods?"

**Dr. Oz presentation:** "Let me show you in more detail how genetically modified food is made. The basic idea is to take a feature from one organism and you put it into another organism. You might take bacteria genes and mix them into a plant like in corn. In plain English that means right now we can take corn with built in pesticide that kills off any bugs and makes it resistant to all those toxic chemical sprays we put on to kill weeds and other things. Now in the future, scientist might be able to move genes from a fish that lives in cold water and put it into a tomato so maybe that tomato can easily survive in the weather, especially if that weather is cold. That's the aspiration, the hope."

**Dr. Oz interview:** "Dr. Robin Bernhoff past president of the American Academy of Environmental Medicine and Jeffrey Smith author of Genetic Roulette and he's a filmmaker as well are concerned about the potential health risks of genetically modified foods. No for the sake of full disclosure, my wife Lisa was a narrator on Jeffrey's film. And because the things Jeffrey says are so controversial nearly every scientist we reached out to, to defend genetically modified foods said no to coming on the show for one reason or another. Or, they refused to share the stage with him. So today we are doing something we have never done before. After Jeffrey makes his points, he has to leave the stage before we can speak to the scientists in favor of genetically modified foods. (To Jeffrey) I know that will be a little awkward, but we're going to have this conversation. Why are you so concerned about genetically modified foods?"

**Jeffrey Smith:** "Well there's thousands of doctors around the United States who prescribe non-GMO diets. And they and their patients are reporting getting better from a variety of diseases very quickly. The same problems they are getting better from are found in laboratory animals when they're fed GMOs and in livestock they are getting better from these same problems when they take GMOs out of the diet."

**Dr. Oz:** "You know in Jeffrey's documentary he attributes an increase to inflammatory bowel disease, to ulcerative colitis, other gastrointestinal illnesses in this country to genetically modified foods. Dr. Bernhoff, that's a pretty bold claim, as a doctor how do you make sense of that?"

**Dr. Bernhoff:** "Well I agree with Jeff completely. There is an increase in incidence not just in reflux but also in allergies, autoimmunity, asthma, high cholesterol, there's a wide range of chronic illnesses..."

**Dr. Oz:** "Let's just put up one picture up if you don't mind, this is an image that shows over the last several decades of the incidence of reflux, just one of those you just mentioned, and please describe this to us."

**Dr. Bernhoff:** "Alright. Cause and effect is hard to proof. However, if you take people off genetically modified foods then things like reflux, type-2 diabetes, allergies and so on improve and sometimes they go away completely."

**Dr. Oz:** "And there was a recent study that came out looking at rats who were given genetically modified food."

**Dr. Bernhoft:** "Well this is a hugely important study. Seralini's group fed two years of genetically modified corn to (Sprague-Dawley) rats which are the type of rats that every science experiment uses to study cancer in. Normally they get about 15 to 20 percent cancer eating normal food. In his study eating genetically modified food, 80 percent."

*<Note: The posted online Oz Show "episode" version was edited down and stops at this point – the aired program on television included images here of Seralini rats with tumors and the following additional claims.>*

**Dr. Oz:** "80 percent. Here's a picture of some of those rats. These are tumors coming out of these animals?"

**Dr. Bernhoft:** "Yeh, most of the female rats got breast cancer. The male rats got inter-abdominal cancer. There were problems with the kidneys, the liver and the pituitary."

**Dr. Oz:** "So Jeffrey, if these claims, and they are pretty serious ones, are true, why, how can it be this information is being ignored?"

**Jeffrey Smith:** "Well the cover up started more than 20 years ago when the FDA's own scientists repeatedly urged their superiors to require long-term study because they said these foods were dangerous. They said they could create allergies, toxins, new diseases and nutritional problems. But the FDA policy came out ignoring the scientists saying no safety studies were necessary, no labeling was necessary. So they ignored the science and now they have what is called kind of tobacco science, short-term animal feeding studies, studies designed to avoid finding problems. They got bad science down to a science."

**Dr. Oz:** "Well, Jeffrey and Dr. Bernhoft thank you for joining us. You're going to leave the stage now as we've agreed on. Thank you very much, I want to welcome as these scientists leave, Martina Newell-McCloughlin, co-director of the NIH training program for bimolecular technology at U.C. Davis. Now Martina believes genetically modified foods is safe. So how do you respond to Jeffrey's claims that these genetically modified foods have not really been all that well tested and caused the health issues they described?"

**Dr. Martina McCloughlin:** "Well actually we've been genetically modifying foods for thousands of years. Modern techniques are far more precise, far more predictable, far more controlled than these older studies. In addition they're more thoroughly tested than any food or ag process ever in the history of food and ag research. So to me there have been thousands of experiments done and in fact I've been involved in some of those as external reviewers. There are no tests on conventional crops whatsoever, you can produce them one day and sell them the next day. Biotech goes through eight to 10 years of research before any of them are commercialized."

**Dr. Oz:** "Could you help me understand that one study that Dr. Bernhoft mentioned where you had rats that had been fed genetically modified foods and they had those large tumors on them?"

**Dr. McCloughlin:** "Well if you look at rat kibble that has been fed to test rats for the last 15-20 years a large proportion of that has actually been genetically modified and there's been no increase whatsoever in the occurrence of spontaneous tumors above what you already expect for this particular variety of rat."

**Dr. Oz:** "You're a mom. (Yes) and you feed your kids genetically modified foods?"

**Dr. McCloughlin:** "My number one concern is the safety of my family. No way am I going to feed them anything that isn't safe and nutritious. In fact I would probably choose genetically modified foods over other foods to feed to my children because in fact I know that not alone are they safer this is perhaps the most sustainable product system you can find out there."

**Dr. Oz:** “So, let me give you some feedback from the FDA we reached out to and the American Medical Association. They gave us statements. They believe genetically modified food is safe as you claim. But they support labeling. Here’s what they have to say, the FDA argued that they support voluntary labeling that provides consumers with this information and has issued draft guidance to industry regarding such labeling. The AMA said they support the FDA’s science-based approach to product labeling, recognizing that there is no evidence, as you said, that there are material differences of safety concerns in available bioengineered foods. For the full statements you can go to Dr. Oz dot com. Whether or not genetically modified foods cause health concerns or not, the reality is my friends that you are probably getting it today. Should it be labeled? And that’s really the big question we have to answer this year and what will that end up costing you? That’s next.

**Narrator 1:** On Dr. Oz dot com we ask you, if given the choice between eating genetically modified foods and those that aren’t, which would you choose? Your answer when we return.

**Promo Narrator 2:** Coming up next (Dr. Oz) “So why do you think genetically modified food labeling is so critical?” (Gary Hirschberg) “This is about the right to know.” Narrator 2: “What are we really eating? (Dr. Oz) “Do you think genetically modified foods are safe? Narrator 2: And are there health risks? (Hirshberg) “We have the right to know while science sorts this out.” Narrator 2: And later (Dr. Oz) “Most of these grown in America today are genetically modified, and what you can do right now if you want to avoid them.” Narrator 2: “Don’t go away.”

**Gary Hirshberg, Founding Partner, Just Label it:** (*Note: very beginning of segment pre-empted by local weather alert*) “... I can think of hundreds of reasons, but for example there are folks, nurses are concerned about the increased amount of herbicides that are now being used and the results of these herbicide tolerant crops. Religious groups are concerned about messing with God’s work, with the actual DNA of these crops. We have environmental groups concerned about the herbicides. We have folks who just don’t trust big business. The bottom line is people feel they should have the rights to know what’s in their food that, by the way, citizens have in 50 other nations including Russia and China.

**Dr. Oz:** “That right? (Yeh) One of the big fears I’ve heard mentioned of labeling all these products and determining what’s genetically modified and what’s not. What you do think that impact is on us in our wallet?”

**Mr. Hirshberg:** “I think this is a diversionary tactic honestly and we should really keep our eyes on the ball. This is about the right to know. Emory University has calculated that even if you load those full costs of those labeling changes on its 73 cents. So this is a... (Dr. Oz 73 cents per person?) Yes, 73 cents per consumer. So this is a non-issue. To me that’s a small price to pay for transparency and the right to know, very fundamentally an American ethic.”

**Dr. Oz:** “Well Alison Eenennaam is an animal scientist from UC Davis, she disagrees with Gary and thinks mandatory food labeling will cost consumers significant more. Alison thanks for joining the show. Give us an idea how much this is going to cost?”

**Alison Van Eenennaam, PhD, Animal Scientist, UC Davis:** “They’ve estimated this initiative, this Prop 37, is going to increase the cost for a family yearly grocery bill about three to four hundred dollars. As a California consumer I’m not willing to pay that to have mandatory labeling. And, the reason that the cost of food is going to go up is that those grocers are going to have to go in and go through the hundreds of thousands of products they have in their stores and determine which have bioengineered ingredients, and that’s about 60 to 70 percent of processed foods. They’re going to have to label it specifically for the California market and of course national changes are going to have to specifically have labels for California or else reformulate that to have non-biotech ingredients and that’s going to have an additional cost as well, so that’s the reason it’s going to increase the cost of food.”

**Dr. Oz:** “So Gary, that’s a big difference, 73 cents – three to four hundred dollars?”

**Mr. Hirshberg:** “I’ve read the study Alison quotes. The reality is that the bulk of those costs are associated with this substitution that Alison just mentioned, this idea that the companies have to change

over. The reality they don't have to substitute if they're so proud of these technologies I think they should remain. Nothing about this initiative in California or nationally asks them to get rid of these crops. We're simply saying we have the right to know while science sorts this out.

**Dr. Oz:** "Alison do you think genetically modified foods are safe, independent from the labeling costs?"

**Dr. Van Eenennaam:** "Yes I do. As a scientist I've looked at the data and I believe that these foods are safe. And I think it's a little disingenuous to compare the cost of labeling for a specific brand that you might change randomly to mandatory process-based labeling. And that's what this initiative is asking for, it's saying this particular process, genetic engineering needs to be mandatory labeled and that actually has quite extensive costs in the food supply chain in order for you to comply with that because it's a law, it's no longer a voluntary approach like for example organic based process labeling and that provides consumers that want to avoid genetically engineered foods with an option in the market place right now and so I don't want to have conventional foods cost more when people that want to avoid genetically engineered products can go ahead and buy organic if that's what they chose to do."

**Dr. Oz:** "Thank you for your insights. Whether or not genetically modified food labeling happens in California or in the nationwide, if what you heard today concerns you what you can do about now. I'll have that answer when we return."

**Narrator-2:** "Coming up, what you can do to avoid genetically modified food."

**Dr. Oz:** "We're back discussing what you can do about genetically modified food today. We took a poll online at Dr. Oz dot com we found that overwhelming 91 percent of you would prefer purchasing non-genetically modified food if you were given the choice. So if you want to know if your food is genetically modified I believe you should have that right. Since I'm not aware of any solid data on long-term effects of genetically modified foods in humans, as you learned today, I prefer to be cautious. And because it's not yet required by law, here's what you can do right now if you want to avoid it. First off, go organic. Organic food is produced without genetic modification and is regulated by the USDA. You want to look for this label, it will say USDA organic. And if your food isn't already labeled organic then you should probably avoid foods that come from one of these five crops: canola, corn, papaya, soy and sugar beets. Most of these grown in America today are genetically modified so be sure to check your food labels for any of these ingredients because they probably do contain those genetic modifications. If you want to use non-genetically modified oil for example you can swap out your canola or vegetable oil for olive oil or safflower as these are much less likely to contain genetic modifications. And finally, several companies are already using their own voluntary food labeling on non-organic and non-genetically modified products. For those you can look for a NON GMO Project Verified seal, like this one. You see that one there and you know you're good to go. OK, now you know what to look for in your food labels but that's not all you need to pay attention to, coming up three warning signs that could save your life. You don't want to miss this."