**First-Ever Lifetime Feeding Study Finds Genetically Engineered Corn Causes Massive Tumors, Organ Damage, and Early Death**

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**By Dr. Mercola**

The first-ever lifetime feeding study[1](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn1) evaluating the health risks of genetically engineered foods was published online on September 19, and the results are troubling, to say the least. This new study joins a list of over [30 other animal studies](http://media.mercola.com/assets/pdf/articles/Peer-reviewed-studies-on-GM-food-health-risks.pdf%20) showing toxic or allergenic problems with genetically engineered foods.

The study, published in the peer-reviewed journal *Food and Chemical Toxicology*, found that rats fed a type of genetically engineered corn that is prevalent in the US food supply for two years developed massive mammary tumors, kidney and liver damage, and other serious health problems.

The research was considered so "hot" that the work was done under strict secrecy. According to a French article in *Le Nouvel Observateur,*[2](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn2) the researchers used encrypted emails, phone conversations were banned, and they even launched a decoy study to prevent sabotage!

According to the authors:

*"The health effects of a Roundup-tolerant genetically modified maize (from 11% in the diet), cultivated with or without Roundup, and Roundup alone (from 0.1ppb in water), were studied 2 years in rats.* [Editors note: this level of Roundup is permitted in drinking water and GE crops in the US]

*In females, all treated groups died 2-3 times more than controls, and more rapidly. This difference was visible in 3 male groups fed GMOs.*

*All results were hormone and sex dependent, and the pathological profiles were comparable. Females developed large mammary tumors almost always more often than and before controls, the pituitary was the second most disabled organ; the sex hormonal balance was modified by GMO and Roundup treatments.*

*In treated males, liver congestions and necrosis were 2.5-5.5 times higher... Marked and severe kidney nephropathies were also generally 1.3-2.3 greater. Males presented 4 times more large palpable tumors than controls, which occurred up to 600 days earlier.*

*Biochemistry data confirmed very significant kidney chronic deficiencies; for all treatments and both sexes, 76% of the altered parameters were kidney related. These results can be explained by the non linear endocrine-disrupting effects of Roundup, but also by the overexpression of the transgene in the GMO and its metabolic consequences."*

Folks, if this doesn't get your attention, nothing will.

Does 10 percent or more of your diet consist of genetically engineered (GE) ingredients? At present, you can't know for sure, since GE foods are not labeled in the US. But chances are, if you eat processed foods, your diet is chock full of genetically engineered ingredients you didn't even know about.

The study in question includes photos and graphs. I highly recommend taking the time to actually read through this remarkable study,[3](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn3) and look at the documented evidence. They really are not exaggerating when they say it caused massive tumors... They are huge! Some of the tumors weighed in at 25 percent of the rat's total body weight. This is the most current and best evidence to date of the toxic effects of GE foods.



**Why Aren't Americans Dropping Like Flies?**

Rats only live a few years. Humans live around 80 years, so we will notice these effects in animals long before we see them in humans. The gigantic human lab experiment is only about 10 years old, so we are likely decades away from tabulating the human casualties. This is some of the strongest evidence to date that we need to exercise the precautionary principle ASAP and avoid these foods. Naturally, the study is already under heavy fire. According to Monsanto spokesman Thomas Helscher:[4](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn4)

*"Numerous peer-reviewed scientific studies performed on biotech crops to date, including more than a hundred feeding studies, have continuously confirmed their safety, as reflected in the respective safety assessments by regulatory authorities around the world."*

However, it's critical to understand that the longest feeding study was a mere 90 days long – a far cry from two years! In the featured study, the true onslaught of diseases really set in during the 13th month of the experiment, although tumors and severe liver and kidney damage did emerge as early as four months in males, and seven months for females.

Is it any wonder then that feeding studies lasting just a few weeks or even three months have failed to corroborate these horrific findings? Reuters quotes Mark Tester, a research professor at the Australian Centre for Plant Functional Genomics at the University of Adelaide as saying:[5](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn5)

*"If the effects are as big as purported, and if the work really is relevant to humans, why aren't the North Americans dropping like flies? GM has been in the food chain for over a decade over there – and longevity continues to increase inexorably."*

Although there are clearly many variables that contribute to cancer, GE foods are a new candidate as they have been in our food supply for over a decade. Interestingly, cancer was just declared as having overtaken heart disease as the number one killer among American Hispanics,[6](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn6) and according to 2009 CDC statistics it's now also the leading killer in 18 states.

I believe it is crucial that we implement the precautionary principle as rapidly as possible as this study confirms it is difficult to predict precisely what GE foods might do to the youths of today, as many are eating a fair amount of GE ingredients practically *from day one.* (Yes, some [infant formulas](http://articles.mercola.com/sites/articles/archive/2012/04/01/gmo-infant-formula.aspx) actually contain GE ingredients!) What will *their* health be 10 or 20 years from now? Most adults simply haven't been eating GE foods long enough to tell what the real ramifications are.

Do we *really* wait 50 years to see what GE foods will do to the human health and lifespan?

**GE Foods' Connection to Breast Cancer**

This newest study provides clear and convincing evidence that GE agriculture is contributing to cancer in exposed populations. The timing of this new study – two weeks before Breast Cancer Awareness Month (BCAM) – is therefore all the more fitting, as GreenMedInfo.com recently commented on this study:[7](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn7)

*"...in female animals, 93 percent of the tumors found were in the mammary glands. They also '...observed a strikingly marked induction of mammary tumors by R[oundup] alone ...even at the very lowest dose administered.'"*

Generational gene transfer is yet another issue. A frequent claim has been that new genes introduced in GE foods are harmless, as they would theoretically be broken up in the intestines. But researchers have now discovered that genes can be transferred through the intestinal wall into your blood. GE crop genes have been found in sufficiently large amounts in human blood, muscle tissue and liver to be identified.[8](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn8) And the biological impact – especially the generational impact – of this gene transfer is completely unknown, and cannot be known for at least a human generation or two. Unless we take notice of the results from animal feeding studies, that is...

**10-Year Feeding Study ALSO Found GE Foods Cause Severe Health Problems**

This news comes on the heels of another experimental animal feeding study carried out over a 10-year period in Norway. It was published earlier this summer, and in this study, genetically engineered (GE) corn and corn-based products were found to cause obesity, and alter the function of the digestive system and major organs, including the liver, kidneys, pancreas, and genitals.[9](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn9) Animals fed genetically engineered Bt corn ate more, got fatter, and were less able to digest proteins due to alterations in the micro-structure of their intestines. They also suffered immune system alterations.

The impaired ability to digest proteins may be of particular concern as this can have far-reaching implications for human health. If your body cannot digest proteins, your body will be less able to produce amino acids, which are necessary building blocks for proper cell growth and function.

**Monsanto's GE Corn is Already Losing its Effectiveness, Giving Rise to Superbugs and Superweeds**

Related news also sheds light on the massive devastation brought on the environment by GE crops, and how soil destruction ends up affecting your health by decimating the nutrient content in the foods you eat.

In response to a scientific study that determined Western corn rootworms on two Illinois farms had developed resistance to Monsanto's YieldGard corn, the US Environmental Protection Agency (EPA) made an admission about genetically engineered crops: Yes, there is "mounting evidence" that Monsanto's insecticide-fighting corn is losing its effectiveness in the Midwest. Last year, resistant rootworms infested corn fields in Iowa, Illinois, Minnesota and Nebraska.

According to Bloomberg:[10](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn10)

*"The agency's latest statement on rootworm resistance comes a year after the problem was first documented and just as U.S. corn yields are forecast to be the lowest in 17 years amid drought in the Corn Belt. Corn is St. Louis-based Monsanto's biggest business line, accounting for $4.81 billion of sales, or 41 percent of total revenue, in its 2011 fiscal year.*

*...The EPA's focus is Monsanto's YieldGard corn, which is engineered to produce the Cry3Bb1 protein from Bacillus thuringiensis, or Bt, a natural insecticide.*

*The EPA expects to get data on the performance of YieldGard from Monsanto within two months and complete its analysis by year-end the agency said in its statement, which was e-mailed by Stacy Kika, an EPA spokeswoman. The evaluation will include a review of scientific studies, it said.*

*...The agency may implement 'strategies' to reduce the threat of resistance to Cry3Bb1, it said. Kika said she couldn't comment on what those strategies may include."*

Considering the fact that YieldGard was introduced less than a decade ago, in 2003, this could be very bad news for farmers growing genetically engineered Bt crops everywhere. It really is just a matter of time before resistance sets in, and it doesn't take very long. Naturally, Monsanto disagrees – more data is needed to prove their insecticide-fighting corn is failing, the biotech giant claims.

**Roundup-Ready Crops Pose Even Greater Resistance Problem**

But YieldGard is just one of Monsanto's problems. Roundup-Ready crops are creating super-resistant weeds that no longer respond to the herbicide. In fact, the problem is so bad that 20 million acres of cotton, soybean and corn have already been invaded by Roundup-resistant weeds.[11](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn11)

To combat the problem, the EPA requires farmers to plant non-modified corn next to their Bt corn, in the hopes that unexposed bugs will mate with the resistant rootworms and create a new generation of hybrids that are again susceptible to the Bt toxin.

However, one has to wonder whether or not it might also work the other way around. The hybrids may just as well incorporate the resistance... Still, that's the prevailing logic the EPA is running with at the moment.

Unfortunately, resistant weeds are not the only, or the worst, side effect of Roundup-Ready crops, genetically engineered to withstand otherwise lethal doses of glyphosate – the active ingredient in Roundup.

Mounting evidence tells us glyphosate itself may be far more dangerous than anyone ever suspected... Earlier this month, Purdue scientist Dr. Don Huber again spoke out about "the woes of GMO's" and the inherent dangers of glyphosate in an article published by GM Watch.[12](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn12)

*"Corn used to be the healthiest plant you could grow. Now, multiple diseases, pests, and weak plants are the common denominator of 'modern' hybrids,"* he writes.

*"Over three decades ago we started the shift to a monochemical glyphosate herbicide program that was soon accompanied by glyphosate- and insect-resistant genetically engineered crops.*

*These two changes in agricultural practices – the excessive application of a strong essential mineral chelating, endocrine-disrupting chemical for weed control and the genetically engineered production of new toxins in our food crops – was accompanied by abandonment of years of scientific research based on the scientific precautionary principle. We substituted a philosophical 'substantially equivalent,' a new term coined to avoid accountability for the lack of understanding of consequences of our new activities, for science."*

**The Environmental and Human Health Hazards of Glyphosate**

I previously interviewed Dr. Huber about the dangers of [glyphosate](http://articles.mercola.com/sites/articles/archive/2012/01/15/dr-don-huber-interview-part-2.aspx), and if you missed it, I highly recommend taking the time to listen to it now. It is indeed sobering, as this broad-spectrum herbicide adds its own health risks to an already stacked deck of health hazards related to genetically engineered foods, whether it be Bt- or Roundup-Ready.

Total Video Length: 00:58:12

[Download Interview Transcript](http://mercola.fileburst.com/PDF/ExpertInterviewTranscripts/InterviewDonHuber-Part2.pdf)

The problem stems from the way glyphosate persists in and alters the soil, which has wide-ranging ramifications. As a potent organic phosphate chelator, glyphosate immobilizes micronutrients that are essential for normal physiological functions not only in soils, but also in growing plants and in those who eat the plants, namely animals and humans.

The nutritional efficiency of genetically engineered (GE) plants is profoundly compromised. Far from helping improve nutrition, micronutrients such as iron, manganese and zinc can be reduced by as much as 80-90 percent in GE plants! Glyphosate also decimates beneficial microorganisms essential for proper plant function and high quality nutrition, while promoting the proliferation of disease-causing pathogens.

*"****Glyphosate is a very powerful selective antibiotic that kills beneficial, but not pathogenic, microorganisms in the soil and intestine at very low residual levels in food****,"* Dr. Huber writes.[13](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn13) *"****Residue levels permitted in food are 40 to 800 times the antibiotic threshold and concentrations shown in clinical studies to damage mammalian tissues****.*

*By genetically engineering plants with the insertion of certain foreign bacterial genes, glyphosate can be applied directly to crop plants without killing them. There is nothing in the genetic engineering technology that does anything to the glyphosate that is applied to the plant – and that accumulates in it. Both the toxic proteins produced by the foreign bacterial genes and the glyphosate chemical are now present in the feed and food produced for animal and human consumption.*

*Genetic engineering has introduced other genes for insect resistance where additional toxic proteins accumulate in plant tissues consumed by animals and man. These toxins are found in the blood and readily transferred across the placenta to developing babies in the womb.*

***Genetic engineering is more like a virus infection than a normal breeding process and results in a multitude of mutations and epigenetic effects as genetic integrity in the plant is disrupted****.*

*These 'foreign' bacterial genes are highly promiscuous and easily transferred by wind or insects to other plants; to soil microorganisms during plant residue decomposition, or to intestinal microflora during food digestion where they continue to direct the production of toxins and allergenic proteins.* ***Epigenetic effects are manifest in GMO plants as a yield drag, poor nutrient efficiency, increased disease, and reduced stress tolerance****."*

As Dr. Huber warns, scientific studies demonstrate that the assumptions about genetically engineered crops relied upon by the biotech industry and ignorant regulators are *invalid*. The truth of the matter can be clearly seen in the following effects:

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| Development of [resistant "super-weeds"](http://articles.mercola.com/sites/articles/archive/2010/05/06/overuse-of-gm-crops-becoming-a-serious-problem.aspx) | Development of resistant "super-pathogens" and [brand new GE-related organisms](http://articles.mercola.com/sites/articles/archive/2011/12/10/dr-don-huber-interview-part-1.aspx) |
| Loss of natural biological controls of pathogens (plant, animal, and human)  | Degradation of soil quality  |
| Reduced crop yields  | Reduced nutrient content  |
| [Increased disease](http://articles.mercola.com/sites/articles/archive/2012/08/07/genetically-engineered-foods-hazards.aspx) and more virulent pathogens  | Exponential rise in [infertility and birth defects](http://articles.mercola.com/sites/articles/archive/2011/04/29/monsanto-chemical-shown-to-cause-infertility-and-super-weeds.aspx)  |

**Why We Don't Need Genetically Engineered Foods**

As stated by Dr. Huber:

*"Future historians may well look back upon our time and write, not about how many pounds of pesticide we did or didn't apply, but by how willing we are to sacrifice our children and future generations for this massive genetic engineering experiment that is based on flawed science and failed promises just to benefit the bottom line of a commercial enterprise."*

The saddest part about the GE debacle is that there's no real need to take the wild risks we're currently taking with our food supply and our future. For years, genetically modified crops have been sold as the solution for feeding the world. But mounting evidence shows the way to feed seven billion plus inhabitants on this planet is by increasing biodiversity and sustainable agriculture.

In fact, the most authoritative evaluation of agriculture, the *International Assessment of Agricultural Knowledge, Science and Technology for Development,*[14](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn14) determined that the genetically engineered foods have nothing to offer the goals of reducing hunger and poverty, improving nutrition, health and rural livelihoods, and facilitating social and environmental sustainability.

The report was a three-year collaborative effort with 900 participants and 110 countries, and was co-sponsored by all the majors, e.g. the World Bank, FAO, UNESCO, WHO. In reality, genetic engineering reduce yields,[15](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn15) increase farmers' dependence on multinationals, reduce biodiversity, increase herbicide use, and take money away from more successful and appropriate farming methods.

Hans Johr, a high-ranking executive at the Nestle Company recently went on the record saying GE food is not only unnecessary, but that the food industry would be better off employing other techniques.

According to GM Watch:[16](http://articles.mercola.com/sites/articles/archive/2012/09/22/superbugs-destruct-food-supply.aspx?e_cid=20120930_SNL_MV_1" \l "_edn16)

*"Jonathan Foley, director of the Institute on the Environment at the University of Minnesota and co-author of a study... on water management and yield production, agrees with Johr that GMOs are not the answer to food security. 'I don't think GMOs have contributed, or will likely contribute much, to food security. Most of the GMO traits are focused on pest and herbicide resistance, which is arguably a good thing, but are not improving yield characteristics all that much (at least compared to conventional breeding, or better yet, marker-assisted breeding).*

*Furthermore, there are other approaches to managing pests and weeds that would be equally (or more) effective, like not planting such large monocultures in the first place...' Johr also went one step further, and addressed the issue of labeling. 'We [Nestle] have a very simple way of looking at GM: listen to what the consumer wants. If they don't want it in products, you don't put it in them...'"*

**Passing Prop 37 is Key to Expanding Sustainable Agriculture in North America**

Despite Johr's stated view, Nestle has donated nearly $1.17 million to the "No on 37 Coalition," which is working to prevent the labelling of GE foods in California. So much for listening to consumers...

Although many organic consumers and natural health activists already understand the importance of [Proposition 37](http://articles.mercola.com/sites/articles/archive/2012/08/28/ronnie-cummins-gmo-labeling.aspx), the California Right to Know Genetically Engineered Foods Act, it cannot be overemphasized that winning the battle over Prop 37 is perhaps *the* most important food fight Americans – not just Californians – have faced so far. Once food manufacturers can no longer label or market GE-tainted foods as "natural" or "all-natural," and once all GE ingredients are clearly marked, millions of consumers will demand non-GE alternatives, and organic and non-GE food sales will dramatically increase.

But in order to win this fight for the right to know what's in our food, we need your help, as the biotech industry will surely outspend us by 100 to 1, if not more, for their propaganda.

Please remember, the failure or success of this ballot initiative is wholly dependent on your support and funding! There are no major industry pocketsfunding this endeavor, which was created by a California grandmother. In order to have a chance against the deep pockets of Big Biotech and transnational food corporations, it needs donations from average citizens. So please, if you have the ability, I strongly encourage you to make a donation to this cause.

It's important to realize that getting this law passed in California would have the same overall effect as a national law, as large companies are not likely going to label their products as genetically engineered when sold in California (the 8th largest economy in the world), but not when sold in other states. Doing so would be a costly PR disaster. So please, I urge you to get involved and help in any way you can, regardless of what state you live in.

* Whether you live in California or not, please donate money to this historic effort through the [Organic Consumers Fund](http://www.organicconsumersfund.org/label/).
* If you live in California and want to get involved, please contact [CARightToKnow.org](http://www.carighttoknow.org/join). They will go through all volunteer requests to put you into a position that is suitable for you, based on your stated interests and location.
* No matter where you live, please help spread the word in your personal networks, on Facebook, and Twitter. For help with the messaging, please see [CARightToKnow.org](http://www.carighttoknow.org/recruit).
* Talk to organic producers and stores and ask them to actively support the California Ballot. It may be the only chance we have to label genetically engineered foods.
* For timely updates, please join the Organic Consumers Association on [Facebook](https://www.facebook.com/home.php#%21/organicconsumers), or follow them on [Twitter](http://twitter.com/#%21/organicconsumer)