

# Food Revolutionary Action Guide

You Can Heal Your Body, and Your World... with Food!

By John and Ocean Robbins

#### **Table of Contents**

INTRODUCTION	2
JOEL FUHRMAN, M.D.: SPECIFIC STEPS TO EXCELLENT HEALTH	3
JEFFREY SMITH: TAKE GENETICALLY ENGINEERED FOODS OUT OF YOUR DIET— IMMEDIATELY!	9
FOOD REVOLUTIONARY ACTION PLAN	16
Voices Of The Food Revolution	17
The Food Revolution Summit April 27-May 5, 2013	18
Living The Food Revolution	19

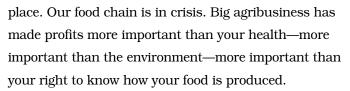
www.foodrevolution.org www.facebook.com/foodrevolutionsummit www.twitter.com/afoodrevolution

Excerpted from the 2013 book, Voices of the Food Revolution. Get all 21 gamechanging conversations when you pre-order the book now.

# Introduction

By Ocean Robbins

Thank you for participating in one of the most important conversations about our food that has ever taken

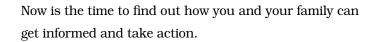


Large-scale industrialized food production is wreaking havoc on our forests, topsoil, air, water, and climate. Farm animals are being treated with tremendous cruelty, and farm workers are often exploited. Genetically engineered "Frankenfoods" are being released, without adequate testing, into the food supply on a vast scale. Meanwhile, people are eating more and more artificial food—and getting fatter and sicker. In fact, more people are chronically ill today than at any time in the history of the world.

You probably already know that large-scale industrial agribusiness is controlling an expanding share of the world's food supply. They have huge advertising budgets to market highly processed, genetically engineered, chemical-laden, pesticide-contaminated pseudo-foods. With all their lobbyists and political donations, they pretty well run the show in most of our government regulatory and agricultural agencies.

These corporations want to keep your mind closed and your voice silent. They'd like you, and all the rest of us, to keep eating foods that are unhealthy, because by eating these foods, we provide big profits for companies like McDonald's, Monsanto, and Coca-Cola. They'd like to keep you subordinate to their agenda, and so distracted that you won't raise a peep of protest.

Fortunately, you don't have to do that.



Have you ever been chronically ill? Worried about the health or survival of a loved one? Would you like to know how to lose weight, clean up your arteries, or defend yourself against cancer?

Do you sometimes wish you had more energy, got sick less often, and felt more confident about what to eat for optimal health?

For most of us, a good diet is the best gift we can give to ourselves and our loved ones... because it's the gift of lasting health. And it's not rocket science. Using simple and easy-to-remember steps, you can dramatically increase your chances of living a long and vibrant life.

You have a right to know the truth about what you eat, where it comes from, and what its impact is on your life and on the planet. The more you know, the more power you have to take meaningful action. The more you know, the better able you are to bring your food choices into alignment with your purpose and your passion. Your mind will be clearer, your heart will be more at peace, and your body will thank you for the rest of your life.

The two conversations in this action guide are excerpted from our 2013 book, Voices of the Food Revolution. In this book, for the first time ever, one of the founders of the modern food movement, my dad and colleague, John Robbins, engages in breakthrough dialogues with twenty-one of today's top food revolutionary experts.

Thanks for joining us in taking action for healthy, sustainable, humane and delicious food for all.

Bon appétit.

Ocean Robbins

# Joel Fuhrman, M.D.

# Specific Steps to Excellent Health



Joel Fuhrman, M.D., is a family physician and researcher who specializes in reversing disease through nutrition. Millions of people were inspired by his work through the PBS special, 3 Step to Incredible Health, which was the network's highest grossing pledge drive program of 2011. Dr. Fuhrman is the number one New York Times bestselling author of Eat to Live, and research director for the Nutritional Research Foundation. He coined the term "nutritarian", which means someone who strives for nutritional adequacy for improved health and whose food choices are high in nutrients per calorie. Dr. Fuhrman's other New York Times bestselling books are Super Immunity and The End of Diabetes.

What is a diet that won't just be a little better than the norm, but that will maximize your potential for optimal health? Which vitamins are healthy for you, and which are so hazardous that they should come with warning labels? What about food allergies, and whole grains? The doc is in, and he's here to give you the latest breakthroughs in nutrition for optimal health.

**John Robbins:** I find you somewhat unique among medical doctors. Very few even study nutrition, much less help their patients apply it. It has occurred to me that a doctor who doesn't know about nutrition is something like a fireman who doesn't know about water.

**Dr. Joel Fuhrman:** The medical profession developed with a primary focus on developing and

prescribing medications to reduce people's symptoms, rather than on dealing with the causes of disease. Thousands of years ago, a doctor was someone who taught people how to live a healthy life. But I think it has evolved to now being a person who is an expert in giving medications. The trouble is that taking toxic remedies to resolve bad lifestyle choices is largely ineffective and allows for peoples' underlying disease process to continue advancing. I think there are a lot of doctors re-evaluating their careers right now. Fortunately I had the opportunity to learn about nutrition at a young age and to pursue a career where nutrition became the centerpiece of my medical practice. It's afforded so much personal reward to help many thousands of people reverse their conditions and get well, without medications.

**John Robbins:** What are the rewards that our readers could look forward to if they were to heed your suggestions?

**Dr. Joel Fuhrman:** Proper nutrition is the foundation for protecting yourself from cancer, obesity, diabetes, heart attacks, and strokes. Most people who learn about my Nutritarian approach are in poor health, after living thirty to fifty years on a diet that breeds disease. Now they can lose weight and they can get in better health, lower their blood pressure, or get rid of their diabetes. But the question is: Is that enough? After forty to fifty years of eating a cancer-causing diet, will a change now be sufficient to prevent you from having your life cut short with a tragic cancer at a later stage from what you ate in the first half of your life?

My answer is that eating decently or making moderate beneficial changes is not adequate enough to repair the broken DNA cross-link—the methylation of DNA. In other words, whatever damage occurred to your cells over those years even before you were born, even when your eggs were in your mother's body before you were conceived, has an impact still. Your health can be affected long-term by your

exposure to toxins, and by a lack of nutrients.

So we maximize the body's ability to repair dysfunctional DNA, to remove toxins from the cells, and to restore itself and its immune system. We have to undo the damage that, if left unchecked, would lead to cancer. My niche in the nutritional world is to help people who don't just want a little better health, but who want to know what would be optimal. To maximally repair cellular damage, we are going to push the envelope of human longevity and really see if we can win the war on cancer.

My approach is not just about losing weight and not having heart attacks. It's also about maximizing healthy life expectancy. A hundred years ago people lived about as long as they are living now. Life expectancy was lower because we had much higher infant and child mortality rates, and many women died during childbirth. But in the real comparison of health issues, we found that people who lived fifty or a hundred years ago actually didn't have as much disability, discomfort, and pain in the last ten years of their lives as people do today. They mostly had a bad time in the last three to six months of their lives. Now people are over-medicated and sickly, and have a very poor healthy life expectancy. This is because the American diet has degenerated with so much fast food, processed food, and refined food.

We are literally seeing an epidemic of disease that's weighing down our health-care system, weighing down our economy, and creating huge amounts of personal human tragedy. Excellent nutrition is tremendously powerful in giving us personal choice and control of our health destiny. It can also be tasty, fun, and exciting to actually be in great health and continue to have a healthy life as we age.

**John Robbins:** You coined the term "nutritarian". Would it be correct to say that refers to someone whose food choices provide an optimal amount of nutrients per calorie?

**Dr. Joel Fuhrman:** Sure, but also a person who strives for better nutrition. A "nutritarian" is someone who chooses to have excellent nutrition, in order to have better health. A lot of people are "nutritarians"

and have never heard of the word before. Micronutrients are the noncaloric portion of food—the vitamins, minerals, phytochemicals, and other newly discovered factors that are so important for human health. I use the

formula H=n/c (health equals nutrients divided by calories). If you want to live a long time, repair cellular damage, and protect against late-life diseases like dementia, you want a large amount of micronutrients per caloric buck. That means a high n/c ratio. You need a broad spectrum of micronutrient diversity. You need to eat a lot of green vegetables and other colorful foods that supply you with high levels of the phytochemicals that prevent cancer.

**John Robbins:** Which micronutrients are the most important to consume to make sure we have superior immune function?

**Dr. Joel Fuhrman:** The most important nutrient for you to consume is the one that you're missing. You have to make sure that you have comprehensive micronutrient adequacy. If your body is an orchestra, you can't have a few extra drum sets pounding on while there are no flutes present. You have to make sure everything's present to create the music.

It's not just about eating more broccoli. It's also about, for example, eating some mushrooms, because mushrooms supply some particular nutrients that are not present in many other foods and that are important to achieve comprehensive micronutrient adequacy. Micronutrient adequacy is not about numbers, but about the complexity and the diversity that is necessary for superior immune function.

**John Robbins:** What are the micronutrients that most Americans are deficient in, and what are good sources to provide them?

**Dr. Joel Fuhrman:** The American diet couldn't be better designed to create cancer and heart attacks had we designed it for that purpose. Right now it's degenerated to the point that 62 percent of calories are from refined foods and about 26 percent come from animal products. Of the 10 percent of calories that remains from unrefined plant food, half of that comes from white potato products, which are not exactly nutrient-rich. Americans are just not consuming fruits, vegetables, beans, nuts, and seeds. They're not consuming sufficient quantity of natural plant foods with a broad assortment of protective micronutrients.

I coined another acronym called G-BOMBS, to help people remember the foods that they are supposed to

be consuming on a regular daily basis.

The "G" stands for greens, which includes both raw and cooked green vegetables. Most of all we're focusing on leafy greens and cruciferous vegetables like broccoli,

cabbage, and Brussels sprouts. A mixture of raw vegetables and cooked green vegetables in your diet

has been documented to have an association with longer life and protection against cancer.

The first "B" stands for beans, which are associated with longer life and are a rich source of phytonutrients that link to longevity in humans.

The "O" stands for onions. I've been shocked and pleasantly surprised at the studies that show how protective onions are against cancer. I have changed





my diet dramatically in the past five to ten years, trying to shred raw onion on my salad, and to eat more onions and mushrooms.

The third one is "M" for mushrooms, which is a very exciting part of research. It appears that mushrooms have the ability to actually enhance human immune function. They

help to label cells that are becoming abnormal for your immune recognition to remove them. Mushrooms also have weight-loss benefits outside of being low in calories, because they actually have angiogenesis inhibition effects, which prevent the blood vessels from fueling fat expansion. So they have fat-inhibiting effects as well as cancer-and-tumor-inhibiting effects.

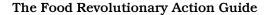
The second"B" stands for Berries. Berries have Polyphenols and Anthocyanidins, which are very beneficial for the brain and the body's immune system.

The "S" stands for Seeds, like flax seeds, Chia seeds, hemp seeds, pumpkin seeds, and sesame seeds. Having some seeds on a regular basis can be beneficial for numerous reasons. The lignins have cancer-protective effects,

and the fatty acids are beneficial for health, the stabilization of inflammation, and heart regularity.

We can construct dietary recommendations to maximize human immune function, and to repair and resist the process of aging. We have an opportunity to live longer and in better health than in any other time or place in human history.

**John Robbins:** Is there a role for whole grains in your diet?



**Dr. Joel Fuhrman:** Well in the diet style I'm recommending, an intact grain is more favorable than even a whole grain that has been ground into a flour. Certainly there's a role for these things in moderate amounts, but it should be as close as possible to its natural, unprocessed state. So for example black or wild rice would be a better food than rice flour. When rice is processed or ground, the hypoglycemic effect is increased. When you eat an intact rice it's a whole grain, and you're not grinding it all. Same thing with wheat berries over whole wheat, or steel cut oats over oat flour. Even though it might be the same food, it's still more favorable to consume it in the least-processed form possible.

We rate carbohydrates based on certain criteria and that criteria helps us to discern what proportion of those foods would be best in the diet.

Because of their fiber content, their micronutrient content, their resistant starch content, and their lower glycemic effect, the most favorable carbohydrate might be beans. Rice wouldn't be as favorable as beans, but some rice could be included in your diet. Beans, squashes, peas, and lentils would all be more favorable foods, for example, than even brown rice. Certainly I would consider white rice and white potato to be less favorable because of factors like resistant starch, low fiber and nutrients, and high-glycemic effects. We want people to make sure they have enough room in their stomach to consume the full spectrum of nutrient-rich foods.

**John Robbins:** Are some beans preferable to others? What about soy, which of course has a higher fat content and a different nutritional profile, for the most part, than other beans? What do you think about soy?

**Dr. Joel Fuhrman:** I think soy is an excellent healthy food. But I also think that nutritional variety is important. I think that it's helpful if we have a few different types of mushrooms in our diet and it's

helpful if we have a few different types of beans in our diet, as well. Our diet shouldn't be revolved around the consumption of one bean. I want you to have some lentils, peas, black beans or navy beans, azuki beans or soy beans. They all have different nutritional profiles and different advantages. It's best to have maybe a few different types in your diet on a weekly basis and not just eat a diet that's soy-bean based.

Like any other bean, soy bean is a very wholesome natural food. If it's processed and made into an isolated soy protein-based product, like a soy hot dog or soy bacon, it's not a natural food anymore. Just like corn, which is a pretty wholesome food, but when you make it into corn chips or Fritos it's not going to be a healthy food any more. We have to eat food that is as minimally processed as possible.

**John Robbins:** I wonder why there is so much disagreement among health advocates about the best way to eat. Some of this seems so obvious.

**Dr. Joel Fuhrman:** I think it is pretty obvious, but we like to believe the things we were raised on. We formulate opinions very young in life. It can be hard

to change people's minds sometimes because they don't make decisions based on science and logic. They make their decisions, especially about food, based on emotions and attachments, and these are hard for many people to break.



I'm suggesting that it's not good enough for people to eat less calories to lose weight. You can't just try to eat less because then you have unrelenting food cravings and food addictions that are counteracting that desire to lose weight and eat less. Your weight just yo-yos and you gain it back again. I'm suggesting that paying attention to the quality of what you eat will help mitigate hunger, lessen food cravings, and remove food addiction. Only through enhancing

the micronutrient quality of your diet can you lose cravings and physical drives that get intertwined and intermingled with your emotional drive in a primitive brain that wants to continue the addiction.

Diets of all descriptions are doomed to fail when people aren't paying attention to meeting the micronutrient needs of the human body. When we eat a diet with better nutritional quality, all types of benefits that make you healthier will enable you to lose weight effortlessly. You won't crave over eating as much, and eventually you'll be put back in touch with what I call true hunger—where your body becomes a precise computer, telling you the right amount of food you require to maintain your perfect weight. It doesn't need to be a guessing game in which you weigh the food and measure how many calories you need. You can get back in touch with your instinctual drive that tells you how to eat, and you'll enjoy food more. You'll enjoy the taste of it more and you'll be able to never be on a diet. You just eat what you want, except what you want is less and what you desire will be foods that are good for you.

**John Robbins:** What about food allergies? How can people know if they are allergic to certain foods, and what can they do about it if they are?

**Dr. Joel Fuhrman:** Some of these problems developed when people were very young—maybe even before they were born. You may have been put at high

risk for allergies from folic acid or the diet your mother was eating or what you were eating when you were young in life.

The first step that I want to take with food allergies is of course identifying and avoiding what

you are allergic to. The second thing is to achieve excellent nutrition and an excellent balance of everything that might be missing. Supplying sunlight and the right fatty acids and micronutrients helps the immune system function better so the allergies have the

potential to get better. It usually takes a few years of actually achieving excellent health to see the allergic tendencies start to diminish. I have much experience with patients who had food allergies, even environmental allergies—including allergies to cats and hay fever—that went away or gradually resolved. Once they are in great health with no nutritional deficiencies, which often takes a few years, then we can try to do oral food challenges and work to see if they can slowly get rid of their allergies. In many cases they just see their allergies start to improve over time with this program.

**John Robbins:** You mentioned sunlight. What do you think about Vitamin D supplements?

Dr. Joel Fuhrman: I think that Vitamin D supplements are essential for a huge segment of the population, especially those of us in northern climates who are living and working indoors and can't get adequate Vitamin D from the sun. I could tell you a lot of stories. For example, one person came into my office unable to eat or swallow. He vomited up everything he ate. He went to various specialists and one person wanted to do surgery to stretch his pyloric valve. Another person wanted to inject him internally with Botox to relax the pyloric valve because he kept vomiting. I found his Vitamin D to be deficient, which had been going on for years. With fixing his Vitamin D, he recovered in a short period of time. We have an epidemic of Vitamin D deficiency. We need people to have adequate levels of all nutrients in their blood, including Vitamin D, in order to maximize immune function and good health.

**John Robbins:** Folate has been found to be nutritionally beneficial. As a result, many people are taking folic acid regularly in multivitamin supplements, and women are strongly encouraged to take it during pregnancy. What's your perspective on folic acid?

Dr. Joel Fuhrman: Folate is found in green vegetables and beans. But folic acid is not the same biological compound as folate. I'm suggesting that the data indicates that folic acid might be a powerful contributor to the cancer epidemic. Even when you take it during pregnancy to prevent birth defects it has negative effects on your unborn child. You can't substitute folic acid for the folate that nature intended us to get.

When women who take folic acid are followed thirty to forty years later, they have high rates of breast cancer, but my concern, too, is the harm that may have been done to the baby. As you are preventing neural tube defects, you might be increasing that child's risk of childhood cancer. There's also the danger that because they're taking the folic acid pills, women will be less likely to concern themselves with eating green vegetables during pregnancy. Like everything else in medicine, we often try to look for a pill solution, which has outcomes that we didn't intend, and which doesn't provide the same benefits as a more natural approach.

**John Robbins:** Are there any specific supplements that you tend to recommend for particular groups of people?

**Dr. Joel Fuhrman:** I do recommend that some groups of people pay more attention to certain nutrients than others. But I want them to achieve that not by taking the conventional multivitamin, which could have isolated beta-carotene, Vitamin A, folic acid, too much Vitamin E, or one Vitamin E fragment in it. In other words there are negative effects from most multivitamins. Most of the studies done on them show overall minimal to no life span enhancement, because people are mixing things that are potentially valuable with things that are potentially hurtful.

A person on a vegan, vegetarian, or nutritarian diet may not be getting adequate B12. The risk of B12 deficiency goes up with aging as the ability to assimilate B12 goes down. The same might be true with Zinc and with Iodine. It might be beneficial to supplement with Iodine, especially if you're not eating salt in your diet, to make sure you have some presence of Iodine

that might not be sufficient in your food. Certain fatty acids are not high in a vegetarian diet, like EPA and DHA. Some people think a person who eats flax seeds and walnuts might make enough. But my twenty years of medical experience drawing blood tests and seeing people develop problems suggests that as people, and especially males, get older, their ability to convert the short chain omega-3 fatty acids into the long chain ones diminishes. To make sure that we're not gambling with people's health, I want to err on the side of safety and confirm that they have an adequate amount of these nutrients present.

**John Robbins:** Your show, 3 Steps to Incredible Health!, was PBS's top fundraising program for 2011. Why do you think there was such a huge response?

**Dr. Joel Fuhrman:** I think it's because people can tell that I'm genuine and that I have credibility that comes from real life experience.

So many people have made recoveries as they have reversed heart disease, reversed diabetes, and gotten rid of asthma, migraines, headaches, and high blood pressure. People watching the show say, "Wow I'm suffering with all kinds of conditions and I'm heading in the wrong direction. But I can be healthy." A lot of people are realizing that they can take control of their health.

For more info on Dr. Fuhrman's work, and to gain access to numerous resources and opportunities, visit www.DrFuhrman.com.

# **Jeffrey Smith**

Take Genetically Engineered Foods Out Of Your Diet -Immediately!



Jeffrey Smith is an international bestselling author and filmmaker, and a leading spokesperson on the dangers of Genetically Modified Organisms (GMOs). He has counseled world leaders from every continent, changed the course of government policies, and is now orchestrating a tipping point towards consumer rejection of GMOs through his programs at the Institute for Responsible Technology. Jeffrey's book, Seeds of Deception, is the world's bestseller on GMOs, and his film, Genetic Roulette, exposes serious health risks of the Genetically Modified (GM) foods Americans eat every day and has been seen by more than 2 million people.

Jeffrey delivers the alarming news that GMOs are leading to a massive increase in human exposure both to the Roundup herbicide, and to the Bt toxin that has been genetically engineered into every cell of corn and other plants. Jeffrey gives you the truth that everyone deserves, and more importantly, he tells you what you can do.

**John Robbins:** Monsanto and its allies continue to fight ferociously every attempt to require labeling of foods made from genetically engineered seeds. They say there is no reason for the public to be concerned. But many people are in fact deeply concerned about the potential dangers. Do they have reason to be?

Jeffrey Smith: Yes, they certainly do. The American

Academy of Environmental Medicine reviewed the animal feeding studies that have been published in peer-reviewed journals and found that the animals that were fed the same GMOs that are in our diet had reproductive disorders, immune system problems, gastrointestinal problems, accelerated aging, organ damage, and dysfunctional regulation of cholesterol and insulin. On top of that, we have story after story of animals—livestock as well as pets—that have been taken from a GMO diet and put onto a non-GMO diet and their behavior improves. The death rate, stillborn rate, and use of medication go down, conception rate and litter size goes up, and even behavior improves. Now we have many doctors saying that when the patients avoid GMOs, a lot of their symptoms go away as well.

John Robbins: We see GMOs linked to toxic and allergic reactions in humans, to sickness, sterility, and fatalities in livestock, and to damage to virtually every organ studied in lab animals. And yet the biotech industry continues to say that the health fears have been disproven. I heard one industry representative say recently that a trillion GMO meals have been served and not a single case of GMO-induced illness has turned up. How do you respond to that kind of statement?

Jeffrey Smith: Well this is one of the most unscientific statements that is made by the biotech proponents. First of all, we do know of a genetically modified food supplement in the 1980s that was directly responsible for the deaths of about a hundred Americans and caused five to ten thousand to fall sick or become permanently disabled. It was L-tryptophan, an amino acid used for stress and insomnia, produced from genetically engineered bacteria. Only the brand that was genetically engineered was responsible for this deadly epidemic. What was telling was that it took four years to discover that the epidemic was actually taking place. It took four years even though the symptoms were

screaming to be discovered. The disease was new, acute, and fast-acting. If the GMO crops on the market are simply contributing to an increased rate of existing disease like cancer or heart disease or diabetes, or if they are producing nonacute reactions or reactions that take place over many years or generations, we would never be able to identify GMOs as the cause. So the statement that GMOs have not caused any problem is false. What we do know is that they haven't been looking for it, and that there is no way to identify it because of an utter lack of post-marketing surveillance, human clinical trials, and long-term animal feeding studies.

**John Robbins:** It sometimes seems to me that not only are we not looking for it, but also that the system has been set up to make it harder for anyone who wanted to look to actually be able to identify and isolate any difficulties that were ensuing.

**Jeffrey Smith:** That's true for a number of reasons. First of all, the scientists that want to do research are often denied access to the patented seeds by the companies that own them. Second, we have documented over and over again that when scientists do discover problems, they are often fired, stripped of responsibilities, threatened, forced out, denied funding, or denied tenure. For example, the Russian Academy of Sciences' senior researcher Irina Ermakova discovered that when she fed female rats genetically modified soy, more than half of their babies died within three weeks. They were sterile and were also quite a bit smaller. She told me that her boss, under pressure from his boss, forbade her from doing any further GMO research. There were methods used to try to intimidate her, documents stolen from her laboratory and burnt on her desk, and samples stolen. One of her colleagues tried to comfort her by saying "well maybe the GM soy will solve the overpopulation problem." She wasn't impressed. She is just one of numerous scientists who have been basically silenced or, in the case of Andrés Carrasco, physically attacked. An organized mob of more than a hundred people attacked him and his friends when he tried to give a talk on the birth defect links to Roundup, Monsanto's herbicide that is used in conjunction with Roundup Ready crops.

**John Robbins:** Many of Monsanto's GMO crops have been engineered to withstand massive sprayings of Roundup, the company's proprietary herbicide. I have seen ads where Monsanto claims Roundup is biodegradable and it is safe. What is the actual environmental and health impact of Roundup?

Jeffrey Smith: Well Monsanto got convicted of false advertising by a New York Court when they used to say that Roundup was biodegradable. But that didn't stop them from saying the same thing in Europe until the French court nailed them and forced them to pay a fine for false advertising. Roundup, it turns out, is linked not only to birth defects but also cancer, endocrine disruption, smaller sperm counts, abnormal sperm, and a host of other disorders. It was originally patented as a broad spectrum chelator, which means it binds with nutrients and does not make them available to plants. When it is sprayed on plants it deprives those plants of nutrients, making them weaker. Then it promotes pathogens in the soil, which kill the plant. So it creates a perfect storm of disease and death.

The largest proportion of the diet of livestock in the United States is Roundup Ready crops - specifically soy, corn, cottonseed meal, canola meal, sugar beet pulp, and alfalfa. Now that they are eating nutrient-deficient crops, there is a universal deficiency of certain nutrients in the livestock in the United States. When we eat these sick and nutrient-deficient animals, and when we eat the nutrient-deficient Roundup Ready crops directly, how does that affect our own nutrient balance? But there's more. When we eat crops that have higher levels of Roundup, we absorb the Roundup, which not only has direct toxicity, but also can chelate, or

bind with, nutrients in our body, depriving us of those very, very important nutrients.

Roundup is now found in air samples, rain samples, water samples, and in our urine. It is found in our blood and in the blood of fetuses. It is dangerous in very minute concentrations. There was some recent evidence that Roundup kills beneficial gut bacteria. In fact, within cows it kills the gut bacteria that keeps down the population of botulism and so there is supposedly an upsurge of botulism now in cows, and possibly also in the human population, linked to the all-pervasive Roundup in our diets.

John Robbins: As bad as Roundup is, I am seeing something worse on the horizon. As use of Roundup has been increasing, it has catalyzed an increase in herbicide-tolerant weeds, thus forcing farmers to switch to other chemicals including the acutely toxic 2,4-D. Most of us are familiar with this as the primary ingredient in Agent Orange, the defoliant used in Vietnam that has been linked to thousands of deaths and birth defects. It seems like something out of a bad science fiction movie, but is it actually true that Dow Chemical wants to solve the problem by creating corn and soybeans that are resistant to 2,4-D, which would lead to millions of acres of U.S. farmland being sprayed with a chemical warfare agent?

Jeffrey Smith: You are absolutely right, it is stranger than fiction and this is their response to the inevitable emergence of herbicide-tolerant weeds. Roundup Ready weeds have emerged on more than 13 million acres in the United States. Instead of going back to more sustainable programs and approaches, they are introducing these Agent Orange crops, which are guaranteed to flood our bodies and our environment with an acutely toxic substance. It is an example of the kind of skewed and profit-driven thinking of the industrial model of agriculture that completely ignores the consequences for health, environment, wildlife, and future generations.

The introduction of GMOs on its own right, even without its associated chemicals from these herbicide-tolerant crops, is pretty scary stuff. We are putting genes into the environment, and we have no technology to be able to recall them. The genes already released become self-propagating pollution in the gene pool, and can outlast the effects of global warming and nuclear waste. On top of that, they affect everyone who eats, so the exposure and the risk of GMOs to all living beings and all future generations is unprecedented in our history.

**John Robbins:** Since the introduction of widespread use of GMOs, we have seen a substantial increase in food allergy rates, particularly in kids. Do you see a connection, and if so, what do you base that on?

**Jeffrey Smith:** I definitely see a connection. Soon after GM soy was introduced to the UK, soy allergies skyrocketed by 50 percent. It was not followed up to see if GM soy was the cause, but there are many reasons why it could have been. For example, there are high residues of Roundup in the soy, which could lead to intolerance. There is as much as a seven-fold increase in a known allergen in soy called trypsin

inhibitor that might cause the alarming increase. There was also a new allergen found in the GM soy compared to a non-GM wild type of soy, and that might cause the problem.

When mice were fed GM soy,

there was damage to their pancreatic cells, which caused a reduction in the production of digestive hormones or digestive aids. If it takes longer to break down proteins, then that means the person will have more opportunity to experience an allergic reaction. Even the Roundup Ready protein has properties of a dust mite allergen, so if you are allergic to dust you might be allergic to Roundup Ready soybeans.

**John Robbins:** Most GMO crops on the market today have been engineered to either be resistant to

Roundup, and/or to produce the Bt insecticide in every cell of the plant. Do you see a possible link between the Bt crops and any health dangers?

Jeffrey Smith: Unfortunately, yes. The Bt crops have been designed to produce their own insecticide, Bt, that breaks open the stomach of insects and kills them. The Bt toxin comes from soil bacteria and it has been used in farming for a long time as a spray. But the genetic engineers take the gene that produces the toxin and insert it into corn and cotton plants. The Bt toxin is known in its natural state to create immune responses and allergic-type responses. When it was sprayed for Gypsy Moth infestation in the Pacific Northwest, about 500 people had allergy or flulike symptoms, and some had the go to the hospital. When it was fed to mice, they had immune system responses.

Now mice fed the Bt corn are getting massive immune responses. Farm workers in India by the thousands are getting allergic reactions and rashes all over their bodies from just touching the Bt cotton, and we see that animals grazing on the Bt cotton after harvest in India are dying by the thousands.

In addition to the presence of the Bt toxin in massive quantities, there are other reasons why Bt crops may be triggering food allergies. The process of insertion of the gene and the cloning of the cell into a plant causes massive collateral damage. This can result in hundreds of thousands of mutations up and down the DNA, and changes in gene expression by hundreds of genes. In Monsanto's Bt corn, a silenced gene was inadvertently turned on, producing a known allergen in the corn. This was only discovered after the corn was on the market, and did not result in any warnings to those who might be reactive.

There is also evidence that by increasing the allergic reactions to one item, you may end up being sensitized to other formerly harmless foods. So exposure to GM corn or soy might also increase reactivity to peanuts and dairy, for example.

**John Robbins:** If someone eats Bt corn, for example, is it possible for the gene that codes for the production of Bt to somehow transfer to gut bacteria in the human intestine?

Jeffrey Smith: Actually this is the subject of the only human-feeding study ever published, and it wasn't on Bt, it was on the Roundup Ready soybean. They found that in fact part of that Roundup Ready gene did transfer to the bacteria living inside human intestines and that these folks had Roundup Ready gut bacteria. This suggested that the gene, once transferred, continued to function. Now they didn't follow up to see if the Bt toxin gene also transfers, but this is a critical question. If the toxin-producing gene is in corn chips, for example, and if it then transfers to our gut bacteria, then our intestinal flora become living pesticide factories, producing the Bt toxin over and over again.

We know that the Bt toxin might be an allergen, but it gets worse. The reason it kills insects is that it breaks open their stomach. It pokes holes in the cell walls of their digestive track. Now, according to the biotech industry, this should only happen to insects and not to humans. That was until 2012 research published in The Journal of Applied Toxicology showed that it happens also in humans—that it pokes holes in the cell membranes, creating pores in the human cells and causing leakiness. Is it possible that eating the Bt toxin, especially if it turns our intestinal flora into living pesticide factories, could be eroding the lining of our intestinal walls and our stomachs? According to numerous medical reports and scientists, if we have permeable intestines, then undigested food particles will make their way into the bloodstream, which can trigger allergic reactions, autoimmune disease, inflammation, and may even be linked to autism.

The biotech industry claims that the Bt toxin is destroyed in the digestive process, but that was disproven in 2011 when a study came out in

Canada showing that 93 percent of pregnant women had the Bt toxin in their blood. In this study, it was also found in the blood of 80 percent of their unborn fetuses. Now this may be a direct result of consuming foods that contain the Bt toxin, or it could be because the gut bacteria of these humans is now producing the Bt toxin on a regular basis. If we have colonized the gut bacteria of North Americans with Bt toxin-producing genes, that might explain the huge rise in gastrointestinal problems, including the 40 percent increase in inflammatory bowel disease since GMOs were introduced. It could explain the multiple chronic illnesses that rose from 7 percent to 13 percent in the first nine years of GMOs, the increase in food allergies, in autism, and in a whole spectrum of other diseases. This would be a fundamental problem that could affect the immune system, the digestive system, the development of babies, and so much more.

John Robbins: The risks that we are taking are obviously immense and the justification that Monsanto and its allies have been proposing for years is that we need these crops to feed the world. They have been promising us crops that would grow in drought conditions and in saline soils, crops that would be nutritionally superior and that would act as medicines. They have been promising us increased yields, and that their crops would lower the use of pesticides. Almost none of that has actually occurred. It would be wonderful if in fact this technology could help us feed our growing numbers. But there seems to be no evidence that it is doing that.

For example, in 2011, the USDA approved Monsanto's first-ever supposedly drought-resistant crop. However, according to the USDA report, this genetically modified corn only works under conditions of moderate drought. We already have conventional corn varieties that substantially outperform this GMO corn in serious drought conditions. So it seems to me that Monsanto's greatly hyped and new sup-

posedly drought-resistant corn is actually no improvement at all.

**Jeffrey Smith:** Absolutely. In fact, this is just another in a long string of promises that they have been using as an excuse for their technology since it was introduced. I talked to a former Monsanto representative, Kirk Azevedo, who was recruited into Monsanto and agreed to join them only after reading the words of then-CEO Robert Shapiro who talked about these glowing promises. When Kirk went to the employee orientation meeting at Monsanto's headquarters in St. Louis, he got up and described how excited he was, and he re-quoted the words of Robert Shapiro about the company's vision for helping the world. After the meeting a Vice President pulled him aside and said: "Wait a minute. What Robert Shapiro says is one thing. What we do is something else. He is the front man that tells a story. We don't even know what he is talking about. We are here to make money."

The experts in feeding the world also agree that GMOs currently have nothing to offer that helps us to feed the world, eradicate poverty, or create sustainable agriculture. This was made clear in the comprehensive International Assessment of Agricultural Knowledge, Science and Technology for Development report on world agriculture, signed off by fifty-nine nations. Credible researchers know very well that the supposed social benefits of genetically engineering our food crops have so far been just a PR line.

John Robbins: One of the most alarming environmental developments of our time is Colony Collapse Disorder. Commercial beekeepers in the United States are saying their industry is on the verge of collapse. The food crops that are dependent on bees for pollination include most of our fruits and many of our vegetables. There is now increasing evidence that nicotine derived insecticides called neonicotinoids, marketed by the German agrichemical giant Bayer, are the primary culprits. They use these to coat the

seeds prior to planting and they use higher concentrations of these poisons in the GMO seeds. Is there a reason that the GMO seeds require more of the insecticide coating than the normal seeds? And do you think there could be a connection between GMOs and Colony Collapse Disorder?

Jeffrey Smith: GMO corn has been genetically engineered to produce the Bt toxin, which kills the corn root worm. When they tested it they found that the amount of Bt that the GMO corn produced in its earliest stages of germination and growth was insufficient to protect the roots, which left the plant vulnerable for probably a few weeks. So for these particular plants, they coat the seeds in neonicotinoids using a time-released program. The neonicotinoids go into the plants themselves and release over several weeks. They put a higher concentration of neonicotinoids in the GMO corn seeds—up to five times the amount—so that the infant plant is protected until it has matured enough for the Bt toxin to take over protection of the plant.

**John Robbins:** So if it is taken into the seed, it goes into the land. Is it also going to be expressed in the pollen that the bees collect?

**Jeffrey Smith:** Yes, but it might hurt the bees even before the pollen is created. When farmers deliver the seeds and plant them, there is a dust residue that ends up on the other crops that the bees will pollinate, including daffodil or dandelions. They have been able to measure levels of this dust borne insecticide in the bees that have died and also in their hives. Then later, as the plant gets older, the pollen itself also carries this insecticide. So whether it is in the dust or in the pollen, there is a perfect storm for increasing the exposure. What happens is the bees can either die directly, or they can lose the ability to find their way back to the hive, which is one of the signature characteristics of Colony Collapse Disorder. The bees just can't figure out a way to get home, and they die on the ground.

**John Robbins:** Is there any data to support the theory that, in addition to use of neonicotinoids with GM crops, there could be a link between the Bt toxin and Colony Collapse Disorder?

**Jeffrey Smith:** There are higher levels of Colony Collapse Disorder in the United States compared to other countries that have lower GMO planting rates. That could be a result of the higher use of neonicotinoids with GM corn, but it could also be exacerbated by the direct impact of bees gathering pollen from fields growing genetically modified corn.

We have two data points to support this. One, in Germany, showed that when bees gathered genetically

modified pollen, the genetically modified genes transferred into the DNA of the microorganisms living inside the guts of the bees, just as it happens in humans. Another study showed that when bees gathered pollen from corn



that was genetically engineered to create the Bt toxin, these bees ended up succumbing to higher rates of a viral infection. The control bees, whose pollen was not genetically modified, did not. This would suggest that the Bt toxin, although it wouldn't kill the bees directly, might compromise their immune system, allowing them to be more susceptible to diseases and disorders. Then there is the fact that many bees are fed high-fructose corn syrup during the winter because big honey operations take all of the honey that would nourish bees through the winter. That corn syrup is mostly GMO, so that is another way that GMOs could be impacting and harming the health of the bees. We don't have any smoking gun on this. I think the nicotine-derived pesticides are the likely leading cause. But GMOs could be a supporting player in this high-stakes drama.

**John Robbins:** Jeffrey, you see the dangers and you articulate them so clearly. How do you live with the knowledge of what we as a culture are doing to our

health and to the whole web of life? What keeps you going? How do you retain your strength in the face of the obstacles and the discouragements that are inevitably part of this activism?

Jeffrey Smith: I am actually very optimistic. We saw what happened in Europe in 1999 when the gag order was lifted on Dr. Árpád Pusztai. He was a researcher evaluating how to test for the safety of GMOs under a UK government grant. His protocols were supposed to be implemented into the EU law for evaluation of subsequent approvals. He discovered quite accidentally that GMOs were unsafe, and he went public with his concerns. He was fired from his job, gagged with threats, and maligned and attacked for seven months. But when his gag order was lifted by an Order of Parliament, the media ran a firestorm of articles about GMOs-more than 700 within a month in England alone. The resulting consumer awareness about GMOs and their possible health impacts was sufficient to create a tipping point of consumer rejection. Within ten weeks after the gag order was lifted, virtually every major food company in England committed to stop using GM ingredients.

We saw what happened as we and others educated U.S. consumers about the health risks of genetically engineered Bovine Growth Hormone and how it is linked to cancer. It has now been kicked out of Wal-Mart, Starbucks, Yoplait, Dannon, and most American dairies.

If you look at the numbers, how many people need to avoid brands that contain GM ingredients before we reach a GMO tipping point? I think that any drop in market share whatsoever that a Kraft Food manager can attribute to the growing anti-GMO sentiment in the United States would be sufficient to cause them to quickly abandon GM ingredients. To get a drop in market share that they can identify as GMO-related, we think we need only about 5 percent of U.S. shoppers avoiding GM ingredients.

Ninety-three percent of Americans polled say they want foods that contain GMOs to be labeled, and

significantly, 53 percent of Americans say they wouldn't eat GMOs if they were labeled. Now the major food companies in the United States have already removed GMOs from their European brands because of a tipping point of consumer rejection that occurred there. If they see that Americans are going to remove their brands from their shopping carts over GMOs, then these companies would rather eliminate GMOs than admit that they use them. So the moment that labeling is required is a watershed moment in the struggle.

Even without a labeling law in place, we have so many people trying to avoid GMOs. We have thousands of doctors prescribing non-GMO diets, mothers protecting their kids, and religious groups protecting members on the basis of their religious beliefs.

I have been working on this issue since 1996, and I can see the signs of a coming tipping point. Non-GMO labels are one of the fastest growing label claims in America on food products sold in grocery stores. We are seeing now the expression of growing anti-GMO sentiment, not only in labeling bills and ballot initiatives, but in rallies held at state houses all over the United States. We now have millions of people engaged for the first time. I think we are seeing a food revolution in the area of GMOs like never before, and I think it is just a matter of time. I hope that I am going to put myself out of a job very soon.

For more info on Jeffrey Smith's work, and to access a huge library of free GMO resources and action opportunities, visit www.responsibletechnology.org.

# Food Revolutionary Action Plan

#### Action 1 - The Great Fridge Swap-Out

Look through your refrigerator and choose one thing in there that you are going to stop buying, and one healthier alternative that you are going to replace it with. Then the next time you go shopping, put your vision into action.

#### Action 2 — Make A Food Diary

Expand your food consciousness by tracking everything you eat or drink, including both items and quantities. You can do this for a day, a week, or even longer. This works best if you bring a spirit of self-love and curiosity. After you're all done with your diary, take a look at the data and see what you notice. For a useful template to help you get started, check out: www.personal-nutrition-guide.com/food-diary-template.html

#### Action 3 — Track Your Mood

Make a chart to track how you are feeling. Do this at a consistent time each day, and give your energy level and happiness level a score in a range of 1 to 10. If you combine your Mood Chart with your food diary, you may get some especially interesting information. If you want to get even more into it, track your exercise level, too.

#### Action 4 — Get the Non-GMO Shopping Guide

The Non-GMO Shopping Guide features over 150 brands currently enrolled in the Non-GMO Project. This purse/pocket-sized guide will help you identify and avoid foods that contain genetically modified organisms (GMOs) foods while you shop. Available in English and Spanish at www.nongmoshoppingguide.com

#### Action 5 — Get the Non-GMO Mobile App

The Center for Food Safety created a mobile app to help you find and avoid genetically engineered (GE) ingredients wherever you shop. This guide gives you valuable information on common GE ingredients, brands to look for and look out for, and common sense tips to keep you in the know. Available at www.foodrevolution.org/gmopack.html

#### Action 6 — Find A Great Recipe — and Use It

Find a new healthy recipe that you love, and start preparing it every week or two. Most of us don't have that many things that we prepare on a regular basis, so by adding something good to your "starting rotation", you can lean into a healthier life. After you get comfortable, bring in another one.

#### Action 7 — Buy Direct from Farmers

Find out where your closest farmer's market is, and if possible, check it out. Supporting farmer's markets and is a great way to get access to fresh, healthy, local food, and to support local living food economies. It can be fun, too. When you join a CSA (Community Supported Agriculture), you enter into a direct win-win partnership with local farmers. In the U.S., the number of farmer's markets has more than doubled in the last decade. For more info on farmers' market and CSA opportunities near you, visit www.localharvest.org.

#### Action 8 — Write A Food Mission Statement

Write a sentence that describes what you want for your relationship with food, and post it somewhere prominent where you will see it every day.

#### Action 9 — Sign or Start Petitions

Check out and sign existing petitions sponsored by organizations like care2.com, change.org, or signon. org. All three of these organizations also make it easy for you to launch your own petition. The petition organizations generally deliver messages to targets via email. If you get a lot of signatures, you can deliver them in person, and contact the media to bring attention to your issue. Or sign the Food Revolution's GMO labeling petition at www.foodrevolution.org/gmo.html

#### Action 10 — Spread The Word

Spread the word amongst friends and colleagues. Give them resources, books, videos and tools. Empower them with as much information as they're ready to absorb.

#### **Voices Of The Food Revolution**

This complimentary food revolutionary action guide was excerpted from the 2013 book Voices of the Food Revolution: You Can Heal Your Body, and Your World... with Food. For all 21 gamechanging conversations with brilliant food revolutionary leaders, and dozens of resources and action steps to help you thrive, order a copy online by clicking here, or get it from your local bookstore.

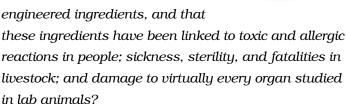
For Voices of the Food Revolution, John and Ocean Robbins conducted deeply informative and inspiring conversations with some of the world's leading scientists, doctors, teachers, farmers, economists, and nutritionists.

You'll hear Dr. Dean Ornish, Bill McKibben, Rory Freedman, Raj Patel, Dr. Vandana Shiva, Frances Moore Lappe', Kathy Freston, Dr. Neal Barnard, Marianne Williamson, Dr. T. Colin Campbell, Dr. Caldwell Esselstyn, Gene Baur, and others as you've never heard them before: engaged in far-ranging, game-changing conversations with one of the undisputed pioneers of the food revolution.

Each "voice" has her or his own unique perspective on the food revolution. Each has taken on some piece of the work that s/he feels most passionate about from undercover videotaping to show the world what really goes on in feedlots and factory farms to getting wholesome food to the poor to breakthrough research on treating obesity, diabetes, cancer, and heart disease through nutrient-rich diets. Together they make one rallying cry: for a healthy, sustainable, humane, and delicious revolution in how we and the world are fed.

#### Did you know that:

More than 80% of the foods you eat in restaurants and buy at supermarkets contain genetically engineered ingredients, and that



If you don't count French fries, ketchup or pizza as vegetables, more than half of Americans eat no vegetables at all?

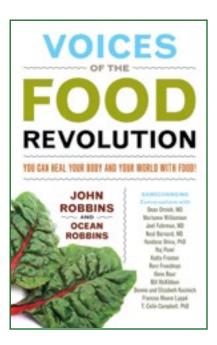
Cancer and heart disease can be prevented and even reversed with the right plant-based food choices?

Cows raised for meat are impacting our climate more than cars?

It's possible to be a positive food revolutionary without sounding like a self-righteous nag?

Read Voices of the Food Revolution and gain perspective and new tools in the fight to heal our bodies and our world - with food.

Available online by clicking here, or from your local independent bookstore.



### The Food Revolution Summit

Every year, you have the opportunity to spend an inspiring and life-changing week with revolutionary thinkers and visionaries that will put the POWER IN YOUR HANDS when it comes to the food you eat!

Dare to discover the most cutting-edge information, startling facts, and inspirational wisdom that will heal you and have you CELEBRATING LIFE!

(For FREE and without having to leave home.)

Perhaps you're aware that we're entering a food crisis, unless something is done. And done now. Never before have the stakes been so high - and the risks.

Food is fundamental to your health and to the health of our world. Information is power. We want to empower you with what will help you and your loved ones thrive.

For each summit, John and Ocean Robbins personally interview 24 of the top food experts and activists on the planet in a week-long "virtual summit." These visionaries have inspired hundreds of millions of people and changed the way we think about food. Interviewees include doctors like Dean Ornish, M.D., Neal Barnard, M.D., and Mark Hyman, M.D., consciousness leaders like Rev. Michael Beckwith, Byron Katie, and Seane Corn, food safety activists like Jeffrey Smith and Andrew Kimbrell, and influential culture-changers like Kris Carr, Mike Adams, and Russell Simmons..

You'll have direct access to 3 highly focused half-hour interviews - personally conducted by John Robbins - every day for a week. You can listen via phone (conference call), or over the internet.



#### Here's what's in it for you. You'll get...

- Information and practical tips from modern day heroes of health and sustainability.
- Extremely current answers to your burning questions.
- Tools for talking with your family and peers.
- Inspiration, useful insights, ideas, motivation and new understanding.
- A deepened relationship with the food you love!

When voices are rising up everywhere to preserve access to healthy food, it's never been more important to roll up your sleeves, get involved, listen and be heard.

Please join us and invite your friends and family along!

# Check out the latest news on Food Revolution Summits at www.foodrevolution.org/summit

Want to catch up on all you missed? Get all the transcripts and MP3 recordings from past summits, plus a huge collection of bonuses, here: www.foodrevolution.org/empowerment

# **Living The Food Revolution**

Are you frustrated with our food industry and its impact on animals and the environment? Tired of not knowing which foods contain GMOs? Fed up with deceptive food labels and the brainwashing of children?

If you're ready to protect your family and raise consciousness in your community, this timesensitive message is for you....

The world needs YOU to join the Food Revolution!

This is for you if you've already basically learned how to eat well. You've already eliminated most junk food, white bread, and trans fats from your diet. You already know that your food choices affect animals and the planet.

But you're frustrated with the world around you. You want your family and friends to eat better, but you don't want to nag them. You want food labels to be truthful.

If so, then I have a question. Are you willing to put up with today's unnatural, unfair, and unsustainable food system?

I didn't think so. That's why we've joined forces to help you protect your family and make a positive difference in the world.

We created a 4-part online course called Living the Food Revolution. It will empower you take a stand for a more compassionate and sustainable world.



#### What You'll Get Out of the Course

- Information and practical tips from modern day heroes of health and sustainability
- Extremely current answers to your burning questions
- Tools for engaging your family and peers
- Inspiration, motivation, and new understanding
- Help taking practical steps on the path of vitality and contribution
- A deepened relationship with the food you love!

If you want inspiration, tools, and support to help you be a food revolutionary... If you want to take a stand and make a difference for your loved ones and for the world... This course might be for you.

#### Find out more at

www.foodrevolution.org/livingthefoodrevolution

# The Food Revolution Network

www.foodrevolution.org facebook.com/foodrevolutionsummit twitter.com/afoodrevolution