

Glyphosate Herbicide (Roundup Active Ingredient) Causes Antibiotic Resistant Bacteria, Kidney Disease and Infertility

Expert Analysis, Dr. Don Huber, Internationally Recognized Expert on Roundup Toxicity

Dr. Huber stated that one could protect oneself from glyphosate exposure with Clinoptilolite (P6,P7)

Centers for Disease Control and Prevention Director Tom Frieden issued an alarming warning in 2014: “Antibiotic resistance that turns ordinary disease-causing bacteria into illnesses that can’t be controlled could bring about the next pandemic.” Frieden brought attention to the growing trend of antibiotic-resistant bacteria which can cause patients to “enter the hospital with one disease and leave with another.”

It is generally acknowledged today that the age of antibiotics is over, as bacteria have adapted to resist man-made pharmaceutical products. The focus now is on the microbiome, both the human microbiome as well as other microbiome systems within our environment, as we enter into a new age of dangerous organisms totally out of control.

How did we get to this point where modern medicines can no longer stop infections? Many analyses correctly point to the fact that we have overused man-made antibiotic drugs, both in medicine and in livestock raised in CAFOs (confined animal feeding operations).

However, as we report to you today, there is probably a far greater reason the human microbiome has been damaged and in many people destroyed, leading to a multitude of allergies and diseases that plague this modern generation. That reason is linked to a common herbicide currently present in 80% of the U.S. food chain: glyphosate, the active ingredient in Roundup and other herbicides.

Glyphosate may well be the most toxic chemical ever approved for commercial use, as it is now linked to kidney disease, antibiotic resistant bacteria, inflammatory bowel disease, obesity, depression, ADHD, autism, Alzheimer’s disease, Parkinson’s disease, ALS, multiple sclerosis, cancer, cachexia, infertility, and developmental malformations. It destroys the microbiome of humans and plants, which is the root cause of many modern diseases.

Research Links Roundup to over 32 Modern Diseases

The internationally recognized expert on Roundup toxicity, Dr. Don Huber, recently spoke with Health Impact News on the subject of preserving human health and the safety of our food supply. Roundup and other weed killing chemicals that contain glyphosate are the most widely used toxic chemicals in the world today. Glyphosate residue from Roundup now contaminates more than 80% of the US food supply. This contamination is not harmless, but has been linked to over 32 modern diseases and health conditions.

Dr. Huber tells us more about how Roundup is being used in modern agriculture, and describes more of the life threatening consequences of glyphosate, which is now considered to be the most toxic agricultural chemical ever used. He explains some of the unintended consequences and points out various ways that we are unknowingly being exposed to this toxic herbicide.

Dr. Huber stated:

I spent some time consulting in Guatemala, and just across the border in El Salvador, we find that one out of four sugar cane workers has end stage kidney failure [because of glyphosate exposure]. These are young men. This is a death sentence for them. We see the same type of kidney disease here in the US [because of glyphosate from Roundup], but we just have more access to kidney dialysis and kidney transplants. Then you see the situation in Washington state with anencephaly (babies being born without brains) and the large number of stillbirths. Human fertility [in the United States] dropped another 25 to 30 percent in just the last 5 years.

These are just a few of the powerful facts that describe the health hazards that come from exposure to Roundup. Glyphosate is considered to be the primary active ingredient, though other chemicals in Roundup are actually just as toxic as glyphosate. The combined effect of the chemical soup in Roundup is actually 125 times more toxic than glyphosate is by itself. Glyphosate containing herbicides are sold under various names and are not only used with genetically modified crops, but the same chemicals are applied to public parks, sidewalks, roads, and millions of home gardens.

A few of the common brand name products that contain glyphosate are: Roundup Original, Eraser Systemic Weed & Grass Killer, Quick Kill Grass & Weed Killer, Bonide Kleenup Grass & Weed Killer, Hi-Yield Super Concentrate Killzall Weed & Grass Killer, and Green Light Com-Pleet 41% Systemic Grass & Weed Killer.

Roundup Destroys the Microbiome

Here are some excerpts of our interview with Dr. Huber:

Question: What are the long-term hazards of using glyphosate on the same land year after year?

Dr. Huber: "Glyphosate is a unique antibiotic and a very unique chelator. It immobilizes many nutrients. When you put the antibiotic and the chelating effect together with the material that is systemic in the plant and persistent in the soil, you'll have a double whammy effect on many of the critical systems we rely on for efficient crop production. We may not see these effects for 5 or 10 years, or recognize them, but they are occurring and they are cumulative. Consequently, we see changes in natural biological controls in the soil that affect soil borne diseases and foliar diseases."

Dr. Huber stated that the antibiotic effect is seen in the soil where glyphosate kills many beneficial soil organisms. This allows harmful pathogens to become more prevalent. In some cases, we see that glyphosate actually can be metabolized by highly dangerous soil organisms. The chelating effect is seen in the soil and in the living plant. Glyphosate has the ability to bind itself to various minerals that are required for soil health and plant health. Thus, the minerals are still present, but they are unavailable to the plants, which make the plants less healthy and less productive.

Question: How exactly does glyphosate kill weeds?

Dr. Huber: "The mode of action of glyphosate knocks out the resistance and defense mechanisms of a plant. It gives a plant a bad case of AIDS and then anything that comes along [from the soil] will attack it and total it. You can't kill a plant with glyphosate that is growing in sterile soil. You can stunt a plant because it is a growth regulator but that is not what kills a plant. It is the soil borne pathogens, which are the mode of action for glyphosate."

Dr. Huber stated that glyphosate weakens the immune system of plants so that soil pathogens can kill them. A healthy immune system will be naturally resistant to these soil pathogens.

Dr. Huber also explains that the situation with weed management in agriculture is very similar to the attitudes toward antibiotics in medicine which have failed us when we kill all microorganisms:

Everything ties together, but we have forgotten this over the last 30 years [since the widespread use of glyphosate and Roundup Ready seeds]. We have been approaching agriculture with a silver bullet attitude. Whenever some stress pops its head up, we respond by putting in the silver bullet. We say “I took care of that” and just go about our business without worrying about anything. That is not what farming is. We can mine the soil, abuse it, but after a little while, it catches up with us. Then the remediation takes more time.

Part of the problem is that our young veterinarians, our young doctors, and our young plant pathologists see all these things and they say, well hasn't it always been this way? Haven't we always had to use two or three applications of fungicide on corn? Well, not at all. It isn't normal.

In the past, before we could register a new pesticide, the FDA required that it could be shown that it degraded and how long it would take to degrade. In the past, certain herbicides could only be applied every 5 years because it took time to degrade completely. It could only be registered for 20% of the area that it might occupy. This meant that there was always time for it to be removed from the system. This allowed for a healing time for any of the side effects or unintended consequences to be taken care of. With glyphosate, that was never done. In fact, all of the side effects were either denied or ignored. The manufacturers would say “poof and it is gone.” Glyphosate is a very difficult chemical for microbial degradation. This is why there were two lawsuits against the manufacturers, because they claimed quick biodegradability. It does break down but it is not predictable.

Question: Is nutrient density reduced because of the chelation of minerals?

Dr. Huber: “There are two factors involved. The first is the initial chelation effect in the soil or in the plant. With continued use after 3 or 4 years then there is the antibiotic effect. It is the antibiotic effect that is the predominate reason for reduced nutrition. This is because glyphosate is very toxic to soil microorganisms that are critical for manganese and iron uptake. When those are thrown off you influence copper, potassium, cobalt, and all your other nutrients. This causes the biological environment to shift dramatically from a reducing environment which makes nutrients available to plants to an oxidizing environment that makes them very immobile or non-available, because you don't have the biological activity.

The use of glyphosate also affects the efficiency of water use. It takes twice as much water to produce a pound of dry matter from a Roundup Ready plant treated with glyphosate as it does for its normal parent plant. When we get a dry spell as we are having this year in California, there will be serious production failures in [genetically engineered plants].”

Roundup Creates Resistant “Super Weeds”

Question: What are Roundup resistant Super Weeds?

Dr. Huber: “We have an unbelievable nightmare with Roundup resistant weeds. Some types of weeds in certain US states have become resistant to soil pathogens, which means that they are also resistant to

Roundup and to other herbicides. We used to see giant ragweeds that would grow up to the height of corn stalks. Now you see ragweed with a stalk that is one to 2 inches in diameter instead of the half inch or three quarter inch stalks that used to be normal. Giant pigweed (lamb's quarters) are extreme competitors and a whole crop can be lost when these Roundup resistant weeds take over a field. We have only had these weeds growing extensively for the last 3 or 4 years. We used to be able to knock down these common weeds with weed control and then pull them out with hand weeding. But now hand weeding becomes a challenge because of the vigor of those plants."

Question: How were Roundup resistant weeds created? Are they genetically modified plants?

Dr. Huber: "Well some of the weeds have become genetically modified, because the genetically engineered genes in Roundup ready plants are very promiscuous. They are not stable. They can move in pollen and move by soil microorganism. Soil organisms can pick up the genes from plant decomposition and then if they infect other plants [such as weeds] the genes can be transferred. [In other cases] some of the super weeds developed from pure selection. If a certain type of weed is repeatedly exposed to something such as glyphosate, eventually an individual weed will survive and produce several hundred thousand seeds that have a competitive advantage over weaker weeds. Eventually the weaker weeds are dominated by the stronger and they begin to dominate the crop. This process of natural selection would have been nullified with some of our older techniques such as crop rotation. The older farming techniques wouldn't have given the super weeds a chance to get established. If they did develop, it might take 30 or 40 years or even a hundred years for a stronger weed to move across the production area."

Glyphosate Toxicity Affects Non-GMO Crops – It is NOT Strictly a GMO Issue

Glyphosate toxicity issues affect far more than just GMO crops, as Dr. Huber explains. If a product claims to be "Non-GMO" this states nothing about its possible/probable contamination with glyphosate, particularly if it is not certified organic.

Question: Why did farmers use glyphosate in US almond production?

Dr. Huber: "They used it for weed control. This is common for many perennial crops such as fruit and nuts. There are very high concentrations of glyphosate in the soil under citrus trees. It is not an active herbicide in the soil, because it is already chelated with calcium, magnesium, manganese, iron and other minerals. However, when phosphate fertilizer is applied [on the soil under the trees] it can desorb the glyphosate and become active again. The [newly released] glyphosate can then be absorbed by the trees and plants, and cause damage to the subsequent crop. It accumulates in the growing points [of plants and trees], which contain the reproductive structures. So it will accumulate at quite high levels in seeds and nuts. At the same time, glyphosate is greatly decreasing the nutrient efficiency of the plant from a production standpoint as well as from a nutrient density standpoint."

Dr. Huber goes on to explain why those farming crops in northern climates, particularly wheat and barley, commonly use glyphosate herbicides. Dr. Stephanie Seneff published research earlier this year showing that most gluten sensitivities may not be related to gluten or wheat at all, but instead to glyphosate (See: [Common Weedkiller Used in Modern Agriculture Could be Main Factor in Gluten Intolerance](#)).

Dr. Huber on the extensive use of glyphosate on wheat and barley:

There are two reasons that a farmer wants to [use glyphosate on non-GMO crops]. It is for late season weed control in situations where he has patches of green weeds in the field that came up late. [This is commonly done with wheat and barley.] It is a little slower to harvest when weeds are present. The other reason involves late season snow. In the northern region such as in the Dakotas, in certain parts of Montana, and in the Prairies of Canada, there is a very short growing season. If it snows on the crop at harvest then you may lose the crop, because you can't get back into the field to do the harvest. In these regions, 70% of the wheat and barley are desiccated with glyphosate before harvest. [This kills the plant so that it will wilt and dry]. Farmers don't want to take a risk in losing their entire wheat and barley crop, so they will take a cut in yield and quality by using glyphosate a few weeks before harvest, and then harvest the crop early.

Farmers don't realize how much they are contaminating that food or feed product when they do this. They will accept the cut [in quality and quantity of the crop], because that can buy them a week advantage in harvest. It's really more done for ease and planning. However, it is just the dumbest thing you could ever do from a health and safety standpoint.

In fact, beer brewers are having a problem with glyphosate. A few years ago, when one of my colleagues wanted to get more Abraxis test strips for testing materials for glyphosate residue, he was told that they had a 3 month backlog. He asked, what was causing this? He was told that every load of malt barley coming out of North Dakota has to be tested, because the glyphosate levels were so high that it kills the yeast in the brew mix.

Question: Does this mean beer drinkers could be unknowingly consuming glyphosate?

Dr. Huber: "This is very serious. When you look at the use of glyphosate as a desiccant, I can't imagine how it was ever approved by the EPA for that purpose. Glyphosate is a systemic chemical — it is highly water soluble — it moves to the growth points of plants. When you put it out at the late stage of growth, 2 to 3 weeks before harvest, the only place that glyphosate can go is into the seed. That's why the EPA has to keep increasing their tolerance levels because the levels in our food keep increasing."

Question: Are there other non-GMO foods that are commonly contaminated with glyphosate?

Dr. Huber indicated that conventionally grown garbanzo beans, kidney beans, lima beans, and peanuts can be desiccated with glyphosate. The agriculture department of the Canadian government permits the use of glyphosate type products to be used as a pre-harvest desiccant on barley, dry beans (chickpea, lupin, and faba), canola, field pea, flax, lentil, oat, soybean, and wheat.

A New Era of Disease: What Do We Do Now?

Let's consider a few of the facts about glyphosate.

It kills plants through chelation. It binds up the minerals that are essential for healthy immune system functioning in plants; then soil pathogens move in and kill the plant. In the soil, it works similarly to an antibiotic and kills organisms. Unfortunately, it kills beneficial organisms and allows pathogenic organism to flourish. In some cases it is actually a food source for some pathogens.

Wherever glyphosate goes, its chelating and antibiotic actions go with it. We now know that at least 80% of the US food supply is contaminated with glyphosate. This means most people are eating glyphosate on a daily basis. This means that the chelating and antibiotic properties of glyphosate are already at work in

the bodies of most Americans. The only exception to this would be people who eat a strict organic diet and never eat food unless they know the source of every bite of food that enters their mouth.

When glyphosate goes into the human digestive tract, it retains its chelating and antibiotic effect. It can chelate (bind) with essential minerals from our bodies and from our food and carry them out of the body.

Glyphosate also affects the human biome by killing certain important microorganisms and by encouraging other microorganisms to over-populate. We now know that the greatest majority of the immune system lies in the human gut. When glyphosate goes into the gut, it changes the balance of microorganisms. It weakens the immune system and establishes conditions that lead to various modern diseases.

Dr. Samsel and Dr. Seneff list some of the modern diseases that are associated with routine exposure to tiny amounts of glyphosate. These diseases include: inflammatory bowel disease, obesity, depression, ADHD, autism, Alzheimer's disease, Parkinson's disease, ALS, multiple sclerosis, cancer, cachexia, infertility, and developmental malformations.

If given the choice, most people would prefer to avoid eating glyphosate. However, avoiding glyphosate is not as easy as one might think since it is in 80% of grocery store food. As was discussed, glyphosate will be found in genetically modified food, but it is also found in many non-GMO foods where glyphosate was used as a pre-harvest desiccant. We know that 93% of Americans want genetically modified food to be labeled so that they can avoid GMO products. This would certainly help us avoid glyphosate and modified genes, however a large percentage of products still contain glyphosate residue even though they are not GMO. This residue does not need to be declared by food producers, because it is very tiny and corporations consider it to be harmless. But, the truth is that glyphosate exposure in the parts per trillion range has powerful harmful effects on the human endocrine system, which can disrupt all major body functions and cause cancer.

Dr. Huber stated that one could protect oneself from glyphosate exposure with:

Probiotics

Dr. Monika Krüger of the University of Leipzig in Germany has worked up some systems for helping. One of her recommendations is probiotics. You will find that most of those 32 or 34 modern diseases from Alzheimer's to leaky gut to autism and all of those in between [will respond to] the re-establishment of the microbial biome in the GI tract.

Fecal Transplant

Fecal transplant is probably the most successful treatment that we have for any of these conditions. Many people have gluten intolerance. It is not the wheat but it is the glyphosate in the wheat or in the food that kills off essential microorganisms that are used to digest the gluten. We take a beating in our immune system as well as our neurological system [when we consume glyphosate]. The organisms in the gut produce serotonin, dopamine, as well as some vitamins, and make minerals available for absorption. Glyphosate is extremely toxic at levels 400 to 4,000 times lower than is found in some of our feed and food products. Fecal transplants are more effective than probiotics. It doesn't sound very well, but I can tell you that fecal transplants can change people's lives for the better overnight with any of these diseases or conditions.

Humic Acid

Humic Acid has been shown in research studies and in animal feeding studies to be able to remove glyphosate from the body. Glyphosate accumulates in the body despite what the manufacturers claim. Research shows that it accumulates in the spleen, muscles, liver, kidneys, and bone. Humic acid is a natural product that comes from plant materials that have been decomposing over centuries.

Clinoptilolite

Clinoptilolite (a form of zeolite) has been shown in research studies and in animal feeding studies to be able to remove glyphosate from the body. Glyphosate accumulates in the body despite what the manufacturers claim. Research shows that it accumulates in the spleen, muscles, liver, kidneys, and bone. Clinoptilolite is a crystal that is mined and ground. It has a tubular structure that is useful for removing things from the body. In Europe it is used for heavy metal detoxification. It also has the capacity to pull out glyphosate, because the chelating quality of glyphosate binds to the clinoptilolite.

Dr. Don Huber, Professor Emeritus, Plant Pathology, Purdue University, is one of the leading experts in the world on Glyphosate and GMOs and how they effect the environment and human health.