

Root Cause Reversal: Stopping Anxiety, Depression, and Dementia Where They Begin

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We Live in a Toxic World

Hippocrates, the father of modern medicine, once said, "Let food be thy medicine."

While this is still true today, much of our food now contains toxic chemicals, genetically modified organisms (GMOs), and pesticides.

Not to mention the toxins typically found in our homes in cleaning agents and in our everyday personal care products that add to our total toxic load. While we don't wish to frighten anyone, we do want to make you aware of the possible dangers so that you can avoid them.

Our health is largely determined by what we eat, drink, breathe, and absorb. Our bodies naturally detoxify themselves. The liver, kidneys, skin, digestive system, and lungs all work together to rid our bodies of toxic substances. However, the body starts to malfunction when this burden becomes too large.

Toxic overload leads to a host of health issues including leaky gut, inflammation, DNA damage, and autoimmune reactivity, and it also affects the brain, leading to depression, anxiety, and other mental disorders and neurodegenerative diseases.

What Are Toxic Substances?

There's a difference between toxins and toxic substances. By definition, toxins are poisonous substances that are byproducts of the biological processes of a living organism and which cause antibody formation when introduced into tissues.

A toxic substance, however, is any substance that can be poisonous or have negative health effects on the body. Chemicals like dioxin and polychlorinated biphenyls (PCBs) that are often found at hazardous waste sites are among the most well-known toxins.

However, ingredients in daily products like household cleaners, furniture, carpets, gasoline, cosmetics, over-the-counter and prescription drugs, alcohol, pesticides, and sometimes the very food we eat can also be toxic.

Poisoning occurs when toxic substances are ingested, absorbed by the skin, or inhaled, and cause damage to healthy tissues. This can occur in small amounts with no adverse effects seen at first but they have a cumulative effect over time.

How Toxins Lead to Chronic Diseases, Including Neurodegeneration

Chronic diseases are conditions that last a year or more and require ongoing medical attention that limits daily activities or both.

Some common chronic diseases include diabetes, neurocognitive disorders, cardiovascular and cerebrovascular disease, metabolic syndrome, cancer, and immune dysfunction like autoimmune diseases.

It is impossible to pinpoint an exact cause of every chronic illness, because many factors, either autonomously or together, could bring about a disease state. However, it is certain that exposure to toxic substances plays a major role in their onset.

There are three main ways through which toxins get into the body:

1. Ingestion (mainly through food and water),
2. Inhalation,
3. Absorption by the skin (through direct contact via clothing, applied substances, air, or water).

Some toxins end up being stored in the muscle, fat, bones, or other soft tissues for long periods. Other factors apart from the concentration of the toxin also contribute to the development of chronic disease.

They include the person's genetic predisposition, their immune system function, the degree of stress they're under, their overall nutritional health, and exposure to other chemicals.

This is where the overall body burden comes into play. The term refers to the total amount of toxic chemicals in a person's body at any one point in time. It tells us what toxins and chemicals we have progressively been exposed to.

The amount of toxins and chemicals found in urine and blood is often transitory — though in some cases they might be representative of toxins in other tissues and organs of the body.

Though it is difficult to determine the exact action of toxins on our health in a simple "cause and effect" formula, an overload of toxins has been observed to often cause:

- Oxidative stress plays a big role in the onset and exacerbation of various chronic conditions

- Endocrine disruption leads to glucose sensitivity changed (cell) energy utilization, and altered neurological development
- Genotoxicity may cause carcinogenesis (cancer formation) or mutagenesis and smaller DNA sequence alterations leading to a state of disease. In a nutshell, this is the development of cancerous diseases.
- Inhibition or alteration of enzymes that would normally ensure that efficient body processes like metabolism take place
- Gut dysbiosis is a disruption of the gut microbiome. This affects many gut functions including detoxification and proper digestion. These, in turn, may lead to the onset of chronic and autoimmune diseases.

There are almost 100 known autoimmune diseases, including rheumatoid arthritis, lupus, multiple sclerosis, inflammatory bowel disease, type-1 diabetes, hypothyroidism, and psoriasis. However, there are many other autoimmune diseases that affect the nervous system, joints and muscles, skin, endocrine gland, and heart.

Basically, autoimmune diseases occur when the body's immune system is attacked by its own tissues instead of foreign agents like bacteria. The body mistakes its tissues for foreign invaders and sets up an inflammatory response. Increasingly, the incidence of this confusion has been linked to the toxins that abound in our bodies.

Autoimmune diseases have tripled in recent decades with 24 million Americans now affected. Neurodegenerative disease is also considered an autoimmune disease. There is a lot of research that shows a link between toxic build-up in the body and the onset of diseases like Alzheimer's.

Toxins That Are Linked To The Onset Of Mental Illnesses & Neurodegenerative Diseases

Heavy Metal Poisoning

Heavy metals such as arsenic, lead, mercury, cadmium, iron, and aluminum are very damaging to human cells, including brain neurons, and cause an inflammatory response. Exposure can come from sources such as dental fillings, personal care products, vaccines, dietary sources like fish, and air pollution. Very limited exposure does not usually cause disease or harm but long-term exposure to low levels of heavy metals can cause the toxins to build up in your body.

Aluminum is in many antiperspirants and over-the-counter medications, processed cheese and related products, baking mixes (e.g., pancake, cake, etc.), frozen dough, most cooking pans, and tin foil. It is also in many vaccines, often replacing mercury as a preservative. Aluminum is more easily absorbed when fluoride is present, such as in municipal water supplies. Aluminum creates inflammation, especially in the brain, and can contribute to Alzheimer's disease.

Mercury is often used as a preservative in the influenza vaccine and is in dental amalgams and farmed or Atlantic fish. Its toxic effects include injured neurons in the brain, neurological illness, and damage to kidneys and lungs.

Lead can be found in drinking water due to old pipes, in paint (unless it says 'lead-free' on the can), in some herbal remedies from questionable brands, and in some chocolate. Lead impairs the brain and causes abdominal issues and headaches.

Arsenic is in conventionally raised chicken, drinking water, and some rice. It disrupts mitochondrial activity and causes serious neurological, respiratory, and gastrointestinal issues.

Cadmium is mostly in cigarettes but is also in plastics, in the water, air, soil and food supply in industrial areas, and even in some chocolate. Cadmium can cause atherosclerosis and kidney damage and increases blood pressure.

Copper is in many common foods like shellfish, soy, coffee, and chocolate. Most IUDs are also made of copper. It causes loss of sexual interest, connective tissue problems, and nervous system dysfunctions.

How to Test for Heavy Metal Toxicity

Heavy metal poisoning is a serious concern and can lead to a variety of autoimmune diseases. If one suspected heavy metal poisoning, they could get tested with a simple blood test. Thanks to research and testing measures, people and food organizations are becoming more aware of the effects these have on our bodies. Research has shown that over the last 20 years, harmful levels of lead in children have dropped by 80%³⁹. This is partly due to the ban on the use of lead paints.

Testing for heavy metal exposure can be done as follows:

- Blood testing
- Hair/nail samples
- Urine

How to Detox Your Body And Brain From Heavy Metal Poisoning

There are steps to doing a safe heavy metal detox. You'll first need to prepare your body before you start detoxing.

Steps to Prepare Your Body For Detox

1. First of all, remove all sources of heavy metal exposure (e.g., amalgam fillings safely removed, aluminum cooking pans replaced with non-aluminum, etc.).
2. Testing of detox pathways is recommended to be sure the liver, kidneys, gut, and lymph system are open and functioning well. You want them to be able to excrete the toxins quickly when they are released from the tissues in your body and not have them floating around causing damage. If any of the pathways are not functioning well, take whatever steps are necessary to correct that before starting a heavy metal detox.
3. Supplement with folate and B vitamins, and eat sulfur-containing foods like broccoli, kale, garlic, onions, and daikon radish to help open the pathways.
4. Supplement with essential minerals to ensure that your tissues have the correct minerals they need to function well. If they are short on the correct minerals (calcium, zinc, magnesium, etc.), the released heavy metals may substitute for them instead of being excreted.
5. Increase your glutathione. Glutathione is a powerful antioxidant that protects you from heavy metal damage, according to studies in both human and rat cells.¹⁻³ This powerful antioxidant also supports liver enzymes that break down mold toxins and heavy metals. Your digestion will destroy normal glutathione, so opt for a liposomal glutathione supplement that makes it through your stomach.

You can also supplement with N-acetylcysteine (NAC) and alpha-lipoic acid, which your body can use to build glutathione on its own.⁴

Healing with Cilantro

“Yoshiaki Omura”, a doctor and director of Medical Research at the Heart Disease Foundation in New York, discovered by accident that cilantro could help chelate mercury, aluminum, and lead from the body. He had treated certain eye infections with antibiotics, and the infections would completely subside, but then return again a few months later. His investigation found the infectious organisms hiding in parts of the body that had large concentrations of heavy metals.

Since heavy metals are excreted in the urine, Dr. Omura began testing the patients’ urine. After one patient ate a meal containing cilantro, his urine tested with increased levels of mercury. So Dr. Omura began testing cilantro for its chelating properties and found that it accelerated the removal of heavy metals from his patients’ bodies.

The antibiotics then eliminated the infections for good.⁵ A year later, a patient had three mercury-based amalgam fillings removed, resulting in a build-up of mercury in his lungs, liver, kidneys, and heart. Dr. Omura prescribed regular cilantro consumption, and after a few weeks, the levels of mercury had significantly decreased.⁶

To use cilantro for its chelating properties, consume a quarter cup of its leaves and stems per day. It’s a good idea to avoid exceeding this amount during the first two weeks since you’ll risk

releasing more heavy metals than your body can efficiently remove. Once the initial deposits are cleared, however, you can increase this amount.

You could even combine the cilantro with other chelating foods, such as spirulina and chlorella, for a more potent detox.⁷

Two teaspoons of this cilantro pesto daily for three weeks is purportedly enough to increase the urinary excretion of mercury, lead, and aluminum, thus effectively removing these toxic metals from our bodies. Consider doing this cleanse for three weeks at least once a year.

Expert Insights

Dr. Daniel Nuzum

There is an "autoimmune" component to Alzheimer's where there are ... There's such inflammation in the brain that as the immune system is trying to clean up the inflammation, it actually does cause damage to the brain. Then, when we have this process, have this condition, where we have nutritional deficiencies, and these toxicities, particularly heavy metal toxicities, it affects the brain deeper and deeper and deeper. And the longer that goes on, the more damage that occurs in the brain. And we end up with memory issues.

One of the things that I've seen over the years that's been very helpful for people with Alzheimer's, is we start to do heavy metal detoxing. We do detoxing in general, heavy metal detoxing, where we're doing things that are gonna pull those heavy metals out of the system, while at the same time, giving them nutrients.

The body can't heal itself effectively if it doesn't have the raw materials to rebuild itself. If you remove toxins and don't replace them with nutrients, all you have is a hole. You take the toxin out, there's a place for things to get stuck into again. If you don't fill that with nutrients, all you have to do is get exposed to the toxins again, and they go right back to where they were originally.

Trying to make these concepts real simple here. So heavy metal exposure, heavy metal toxicity is one, in my opinion, one key component to the development of Alzheimer's. There's another issue that we have in our environment, in particularly in the United States, and that's glyphosate. Glyphosate is the herbicide in the product Roundup, made by Monsanto. Glyphosate will cause neurologic disorders. It kills brain cells. Glyphosate also will bond to heavy metals in your system and move them around in your system, depositing them wherever it goes. Glyphosate is a very, very small molecule and can pass the blood/brain barrier.

So if it passes the blood/brain barrier, while it's carrying aluminum and fluoride at the same time, it takes those neurotoxins right into the brain, deposits them, causes the death of the neurons. So you get brain damage from it. So glyphosate's another contributing factor, and I believe that it plays a pretty big role in the explosion of cases of Alzheimer's that we're seeing today. We're seeing lots of people with Alzheimer's, and in younger and younger ages.

In the process of healing this condition, we got different things that work very, very well at both detoxifying the brain and the nervous system, and introducing nutrition to the nervous system. There are herbs. One of the very best, and this might come to surprise to many, is green coffee bean extract. The chemical chlorogenic acid that occurs in green coffee beans is excellent for both protecting brain cells from the depositing of this amyloid protein, number one. Number two, it acts as an antioxidant, protecting the brain cells, the neurons in the brain.

It also helps with the third factor that we're going to talk about here with Alzheimer's and that is, it improves insulin sensitivity. So it helps with the metabolization of sugar, and we'll get to that in just a minute. We also have Rhodiola. Rhodiola is an herb from Russia that is extremely beneficial for the brain, for memory, and for folks with Alzheimer's. Ashwagandha, an herb from India that also is excellent for the brain.

Both of these, again, they're not only good for enhancing memory, but they're good for protecting the brain. So if you were to start on these earlier on in life, they would be good preventives for Alzheimer's or for neurologic disorders. They're also very beneficial in the treatment of neurologic conditions, including Alzheimer's. Another herb, ginkgo biloba, very, very good. Ginkgo biloba is both an antioxidant and it helps the microvascular circulation in the brain. There's an old saying in medicine, it's a tenet of medicine, and that is that, "Healing is proportionate to blood flow." Ginkgo biloba is one of those herbs, also Rhodiola falls in this category also, that increase microvascular circulation and that microvascular circulation improves the blood flow in the brain. So if we improve that blood flow, as the blood flows better, we get more nutrients flowing into the tissue and more toxins flowing out of the tissue. So it's just extremely important.

Let's talk real quick about sugar. Sugar, it's interesting the average person in the United States consumes almost a hundred pounds of sugar a year. That's astronomical. That's massive, massive amounts of calories in the form of sugar. Well, sugar is an essential nutrient. It's something our body does need.

It doesn't need it in massive quantities, but it does need some of it. When we flood our system with sugar, it's very similar to flooding a car with fuel. Our system will spit and sputter like a car that's flooded "with fuel" will spit and sputter. So things don't operate as well.

Another thing that happens with excessive sugar intake is that our red blood cells start to crystallize. Not only do they not carry oxygen and nutrients very well then, but they crystallize with sugar crystals, and they have like barbs on them or I see similar to prickles on a rose stem that are protruding from the red blood cell. And as those crystallized red blood cells float around through the system, they tear up the blood vessels.

They cut and damage our blood vessels. Very, very, very damaging and this is why folks with diabetes have such poor circulation, is their blood vessels have been torn up by these

crystallized red blood cells, and they've got scarring in their blood vessels. And so the blood vessels don't expand and contract very well, therefore, circulation gets reduced.

We're filming in 2017, The projections are that by 2030, 50% of the US population will have Type 2 diabetes. Now that being the case, Type 2 diabetes is when the system has been flooded with sugar for so long, the cells no longer will accept sugar very well and they do that by way of shutting down the insulin receptor sites.

So you get this keyhole where insulin fits into and what happens is when the cells have been so saturated with sugar, they close down the keyhole and so the key doesn't fit into it anymore, and you get what we call insulin resistance. So insulin resistance, if that happens in your brain, protein starts getting deposited in the brain, these amyloid proteins that disrupt our recall ability and disrupt our memory, and you end up with a condition very similar to Alzheimer's.

Some people call Alzheimer's Type 3 diabetes. Instead of Type 2 or Type 1, they call it Type 3 diabetes, and it's insulin resistance of the brain. And that's because the brain cells have been just chock-full of sugar for so long, they don't want anymore. Then they lock the door by shutting down the keyhole so the key can't fit in the hole anymore, the key being insulin, and so we become insulin resistant. That's a very bad thing because the only food source, the only fuel source for our brain is sugar. So if we don't have enough sugar getting into the brain, the brain doesn't work well. Well, if it doesn't work well, think of all the different things ... That only affects everything that the brain affects. You think of what doesn't your brain affect. Your brain's your body's control center, so it affects everything.

So with Alzheimer's, the path for correcting Alzheimer's has to include a whole food, organic diet. We have to get away from chemicals and pesticides and herbicides and things that are going to be pro-inflammatory. Let me just step over one minute. We'll come back to that thought here. Inflammation in our body will lead to insulin resistance, because inflammation in our cells will cause damage of the insulin receptor sites. So that keyhole for the insulin key to fit into, if we have too much inflammation in the cell, it can damage that keyhole.

So instead of the keyhole being arranged like this, if the cell becomes oxidized because of too much sugar or because of too much inflammation, the keyhole can get tipped or turned or damaged in a way that the key doesn't fit into it anymore. So if it's supposed to be like this, and the key fits in like this, if the keyhole gets tilted, the key can't fit into there. If it gets tilted this way, it can't get fit in. If it gets tilted like this, the key just doesn't fit in. If the keyhole gets warped, the key doesn't fit in. All those things happen in the presence of inflammation. Inflammation causes oxidation of those insulin receptor sites, and this is everywhere in the body that happens.

In the course for correcting Alzheimer's, if we were to remediate Alzheimer's, we have to regulate fuel and that would be your food. We have to regulate the amount of fuel coming in. What I do with Alzheimer's patients as far as diet goes, is I have them eat ... When they eat, they eat two parts vegetables and these are greens, yellows, oranges, green vegetables, red

vegetables, yellow vegetables, purple vegetables on their plate. One half of their plate has to be vegetables.

The other half is half protein and half fruit. So they have two parts vegetable at every meal. One part protein at every meal and one part fruit at every meal. This stabilizes their blood sugar. It brings it down to where it should be. It also maximizes the amount of nutrients, especially the brain protecting nutrients, that they're getting from their food.

Next, the next thing is detoxification. Okay, we have to eliminate accumulated waste in the body in order to reduce inflammation in the body. As long as there's waste that's accumulating in the body, you have two things happening: one, the waste itself will cause inflammation. Two, the waste is going to be very attractive to pathologic microorganisms. Okay, so all the bugs that cause infection like the waste that accumulates in our system. So if we want to reduce inflammation, we've got to eliminate waste. That's cleansing the colon, cleansing the liver and kidneys, cleansing the lymphatic system. Those types of things have to happen. Once we've done that, then we have to start working on heavy metal and chemical detoxification. There are things like selenium and iodine and magnesium that all work. They work really well at neutralizing different toxins in our body. Particularly magnesium helps to neutralize aluminum in our system. Zinc and selenium help neutralize mercury in our system. Iodine helps to neutralize fluoride and also things like BPA in our system.

If we don't supply those nutrients while we're at the same time trying to eliminate the heavy metal toxicities and chemical toxicities, we go back to that problem if our yard's full of dandelions and all we do is go out and dig up those dandelions and leave a bunch of holes in the yard, and we don't fill that back up with nice grass or grass seed in fertilizer of some sort, we end up with a yard that's just as ugly as it was with the dandelions. And all of those holes will be perfect places for new dandelion seeds to take root, right?

So in order to as we're pulling heavy metals out of the system, we need to be infusing the body with nutrients. We got to get those nutrients into the system. So we offset that load of toxicity with an influx of nutrition. We have these nutrients so the body can heal and fix itself. To recap, we have a diet or we have one half of the diet is vegetable. Quarter of the diet is fruit and a quarter of the diet is protein. We have cleansing, detoxification of the colon, the GI tract, the liver, the kidneys, and the lymphatic system. Then we have where we move on into detoxifying the body of chemicals and heavy metals and those types of things while at the same time infusing the body with nutrients. We got to get the body, we got to fill in the holes, right? So those are the steps.

Now, there's other therapies. There's neurofeedback therapies. There's biofeedback therapies. There's cranial sacral therapy. Cranial sacral therapy, in particular, is a very, very good therapy for restoring proper blood flow in the head, in the cranium, in the skull, which is where your brain is, by the way. And the neurofeedback therapies and biofeedback therapies are very good. They're electrical therapies that help to retrain the brain and can actually reroute neurons and it's very, very good therapies. Very helpful for Alzheimer's.

Another good therapy is acupuncture. Acupuncture is very, very good, especially, this is interesting, scalp acupuncture. And it would be something to look up. Acupuncture, auricular acupuncture, where you're using the ears is also very, very beneficial. These are all beneficial modalities.

Mold and Mycotoxins

Mold and the resultant gasses they produce called mycotoxins can attack both the nervous and immune systems.

Researchers believe that they could lead to chronic inflammation which then develops into full-blown autoimmune conditions such as neurological autoimmunity, type 1 diabetes, and autoimmune thyroid disease.⁷ Some studies have even linked exposure to mycotoxins to [the pathogenesis of autism spectrum disorder](#).

According to PubMed, [the effects of mycotoxins can be mediated via different pathways that include the secretion of pro-inflammatory cytokines, especially from mast cells](#).

Research also shows a link between mycotoxins and autoimmune diseases like rheumatoid arthritis, scleroderma, and neuro-autoimmunity⁴⁸.

Molds occur commonly in homes, especially older houses. They grow in damp areas like basements, ceilings, and walls. They grow well on paper and wood products as well as under carpets and inside damp upholstery.

In terms of food, mold is found mainly when the food begins to decay. The mold then grows on it and produces mycotoxins. Foods that grow mold easily like bread and fruits should be refrigerated, particularly if you live in a warm, humid climate. In such climates, it is wise to keep your baking ingredients like flour in the fridge too. Keep food covered to avoid mold spores in the air from contaminating it.

Mold is not always visible to the naked eye, so when in doubt, throw it out! Freshness is key here so buy small quantities and eat them fresh or freeze produce for later use.

Aflatoxins: *Aspergillus Flavus* and *Aspergillus Parasiticus*

Aflatoxins can be divided into two types; *Aspergillus flavus* and *Aspergillus parasiticus* and they are amongst the most poisonous mycotoxins that have been identified.

A study published by PubMed shows that Aflatoxin B1 induces neurotoxicity. This study showed that [AFB1 induced brain damage in mice by inducing the accumulation of ROS, DNA damage, S-phase arrest, and apoptosis](#).

Aflatoxins are a family of toxins produced by certain fungi that can be found in crops like cereals such as corn, sorghum, wheat, and rice; oilseeds like soybean, peanut, sunflower, and cotton seeds; spices, particularly chili peppers, black pepper, coriander, turmeric, and ginger; and tree nuts such as pistachio, almond, walnut, coconut, and Brazil nuts. They can also be found in milk from an animal that has eaten contaminated crops.

Ochratoxin A

Aspergillus and Penicillium are two mold species that commonly produce a mycotoxin called ochratoxin A. The most common means of infection is by consuming food or drinks that have been contaminated. Usually, contamination is caused by poor storage of commodities and improper practices during the drying stage of crop production⁵⁶.

The effects of ochratoxin A in humans are still being determined. Many studies have shown, however, that contamination in animals may cause kidney damage and may have negative effects on the immune system⁵⁷.

Penicillium, however, has been shown to have adverse effects on humans, apart from when it is used in medicine. It is the consumption of contaminated foods that is risky because many species of penicillium produce highly toxic mycotoxins. Especially in stored foods like seeds and grains and unlike other molds, penicillium can thrive even in relatively low humidity⁵⁸.

Additionally, studies have concluded that penicillium does alter human DNA and can cause permanent neurological, pathological, immunological, and psychological damage⁵⁹.

Research on Mental Health Disorders and Mold Exposure

- A study led by Brown University epidemiologist Edmond Shenassa analyzed data from 5,882 adults in 2,982 households and found that [the level of depression in people living in moldy households was 34-44% higher than in people who did not live in moldy houses.](#)
- A study conducted by Cheryl F. Harding and colleagues found that [mold inhalation causes innate immune activation and neural, cognitive, and emotional dysfunction.](#) Interestingly, both non-toxic and toxic mold spores were shown to cause cognitive and emotional dysfunction.
- A study conducted by William J Rea and colleagues was carried out to determine the impact of mold toxicity on 100 patients who had been exposed to toxic molds in their homes. Their study found that [70% of all patients experienced physical signs and symptoms of neurological dysfunction \(e.g., inability to stand on the toes or to walk a straight line with eyes closed, as well as short-term memory loss\).](#)

Real-Life Data: A Case of Mold Exposure

[Amen Clinics published details of a case](#) where a 46-year-old female living in Arizona went from being a highly organized, busy working mother to suddenly being disorganized, withdrawn, confused, and even debilitated.

During her first episode, she lost twenty-five pounds and even had to abandon her practice. Her doctors believed she had depression or bipolar disorder. After a series of tests, she was discovered to have heavy metal poisoning. After chelation therapy, she returned back to normal only to end up with these symptoms again in 5 months' time.

She then decided to see another doctor who tested her for mold toxicity, which came back positive. But detoxing along with removing the mold from her home didn't seem to be effective enough.

After research, she booked herself for a full evaluation at Amen Clinics - run by one of our experts, Dr. Daniel Amen. They did a SPECT scan and found that her brain had swelled from the mold exposure where the blood flow to her prefrontal cortex was nearly completely cut off - causing the debilitating symptoms she experienced.

They also discovered that she had ADD and a prior brain injury that gave her a predisposition to being affected so seriously by the mold toxicity.

This is the perfect example of how anxiety, depression, mood disorders, and other neurological disorders can all be symptoms manifesting from underlying toxicity in the body.

In cases like these, Western medicine practitioners are likely to just prescribe SSRIs and never truly address the cause of the symptoms. This course of treatment is likely to only worsen the disease and not treat it.

Testing for Mold Exposure

Testing for exposure to molds and mycotoxins in humans is simple. It usually involves only a urine sample. Nasal secretions, sputum, blood tests, or tissue biopsy may also be collected by a physician as possible testing methods⁶⁷. Finally, testing for genetic susceptibility is possible using an HLA DR/DQ test⁶⁸.

How to Detox Your Body From Molds & Mycotoxins

If you are in a moldy environment, you have to remove yourself from that environment. Mold is so pervasive that if there is mold present, it will be affecting you. It is not a good enough solution to simply use an air filter. You have to remove the source from your home or from your workplace.

Unfortunately, if you can't relocate or get into a different environment, you'll stay sensitive, reactive, allergic to seemingly everything, even as you progress through protocols. If there's still mold in the environment, it promotes a hypersensitive state.

Natural remedies for mold and mycotoxin toxicity are:

Phosphatidylcholine: Helps to strengthen the outer membrane of your mitochondria
Glutathione: A powerful antioxidant that helps to combat the cellular damage caused by mycotoxins

Garlic: A powerful antifungal that has the ability to fight off molds

Chlorophyll: A substance that has been shown in multiple studies to detoxify deadly toxins, and protect DNA

Activated Charcoal: Helps to bind to mold spores in the body to effectively remove them during detoxification

Ozone Therapy: A Case Study

An article published by Howard Robbins presents a case study that shows how Ozone therapy is an effective treatment for mold and mycotoxin toxicity. According to the article:

"A 59-year-old male, captain of a small charter fishing boat, presented for ozone therapy with multiple documented symptoms of mold toxicity and Lyme disease, stating that he had been diagnosed by another physician as having both of these conditions.

He experienced numerous aches and pains, headaches, memory loss, wheezing, and severe anxiety, depression, mood swings, and fatigue. He also had lost a significant amount of weight and went from 190 to 168 lbs. in the past year. He slept on his boat, which was made of wood. It had been tested and was found have high levels of mold spore counts of several varieties.

He began a course of intravenous ozone therapy using the Robin's Method of Direct Intravenous (RMDIV) and protocols established and pioneered by Dr. Robins. This consisted of 55cc of oxygen and ozone gas mixture, at a 55mcg/cc concentration of ozone.

It was given intravenously in an antecubital vein initially five times a week for the first two months, then three times a week for the next nine months. After approximately two months the patient stabilized, and his symptoms began to improve.

After 11 months of treatment he regained most of his weight (180lb), his symptoms were completely gone, and he was able to return to full-time work. He resumed work on a different non-wood boat, which did not have a mold problem. His case is one of many that ozone therapy has successfully treated in Dr. Robins' practice."

Expert Insights

Dr. Kathleen Toups

Another factor that we see that's driving that brain inflammation is mold or mycotoxin-related illness, and we know that mycotoxins are neuroinflammatories so they're causing all this inflammation in the brains of sensitive people. Now, with mold, not everyone is sensitive to getting sick with mold. 75% of people, if they have a big mold exposure, they may be ill but their body will clear those toxins and they'll be fine but about a quarter of people have a genetic sensitivity. There's an HOA genetic type that we look at for that, and those people, when they get exposed to mold, it just stays in their system and it keeps triggering and triggering the system. It causes tremendous effects in the brain.

I have young people in their 20s that have dementia. I mean, their cognition is so bad. I treat several UC Berkeley students, brilliant young people that have had to drop out of school that can't even read anymore because of the effects on the brain. And then once we remove them from the moldy environment and do various things to bind-up that mold and support their immune system, their cognition will come back. So-

Jonathan Otto:

To what level does it come back?

Dr. Kathleen Toups:

It will come back, yeah. People can get their brains back.

Jonathan Otto:

Meaning that they're fully-functioning?

Dr. Kathleen Toups:

People can get their functioning back. It's a path of course, when you get that ill, but people can definitely get their functioning back. It's the same thing with elderly people dementing as well. If we can intervene and find all these factors that are driving their degeneration of their brain and remove those factors, then we actually can get cognition back and what we see in ... We do volumetric studies in the brain, so we do special MRIs where they take extra cuts through the brain and then you can run them through a program like Neuroreader is the one that I typically use, and that report will give me the actual volumes of all of the structures in the brain and how does that volume compare to an age-matched control.

With Alzheimer's, we often see atrophy of the hippocampus, which is where our memories are stored and formed. When we get these volumetric MRIs, we will see quite a bit of atrophy. When we start working with a functional medicine program to get everything in balance, we can see that reverse. Actually, I had a patient of mine that I've worked with that was here at this

conference. He started working with one functional practitioner who put him on a good starting path and then when he heard I was working with dementia, he referred him to me to take him up a notch. And so we've done various things and literally, I believe his two head scans were six months apart and he had moderate atrophy on the first scan and he had very little atrophy on the next scan.

MoCA is a test that we use to rate a level of dementia, and the MoCA score, I don't remember what it was initially but it was definitely in the clear Alzheimer range and it's come up to maybe one point off of the top score. This was in a pretty short time for this gentleman who is a quite a brilliant psychology professor, and he was here at the conference this week learning about all of these neuroplasticity approaches because it's now become his area of interest because he's greatly benefited from that. So yeah, it was quite exciting to see somebody functioning normally from where he had been before. So yes, we definitely see people improve and get their functioning back.

Jonathan Otto:

He had his life back.

Dr. Kathleen Toups:

Yes.

Jonathan Otto:

And he was able to do the things that he was usually able to do?

Dr. Kathleen Toups:

His brain is working. His first doctor, who has worked with him longer than me, said he was just amazed to see him here at the conference. What a testament it was because he would not have even been able to come and negotiate being at a conference, much less get the benefits that he did.

Jonathan Otto:

Yeah, great. Kat, I wanna ask you about your personal story with what you had, which would be described as dementia?

Dr. Kathleen Toups:

In my case, and this is how I learned functional medicine, it's how many of the early adopters of functional medicine have come to the functional medicine table. We have illness or someone in our family has illness and as physicians, we can clearly see that there is no clear path to treat the kind of illness that we have. In my case, I developed what's called multiple chemical sensitivity, so I got allergic to everything. My immune system was just on hyperdrive, it was reacting to everything. I was allergic to many, many kinds of foods. I couldn't walk into a grocery store because the smells of the chemicals would give me rashes and hives. I was just covered with rashes and hives and completely. With all that inflammation that was happening coming out through my skin, of course it was a systemic inflammation.

I had severe fatigue. I could barely get out of a chair for a year. With all that inflammation, it was eating up my brain. And so when I stopped working, I was doing Alzheimer research. I used to run a clinical trials research center and I've done over 100 clinical trials and I've done 20 trials in Alzheimer's. And just as a little digression, none of those trials were successful, 20 major, long-term trials. We could wipe-out the amyloid plaques, but that was not what was driving the dementia. So I was doing dementia trials and I came to realize that I was as cognitively impaired as some of my patients in the trial. I would do a test called a mini mental status, where I'd give them three words to remember, and I'd have to write down the

Give them three words to remember, and I'd have to write down the three words so that I could ask them a few minutes later, 'cause I couldn't remember those words. And I had given that test for over 20 years, so that was quite an amazing realization-

Was it discouraging? I think I was just trying so hard to survive every day. People ask me, "Were you scared?" And every day was just such a struggle trying to function at my normal level, which of course I clearly wasn't doing, at that point. I couldn't drive a car very well, anymore. My husband got in the car with me one day, and he said, "Carol, what's wrong with you? You're like a little old lady." And I said, "I don't know. There's so many things happening when you drive." And I just, my processing speed was so poor that I couldn't integrate those things well. I actually lost the ability to back up or parallel park. I could not do those things. My brain just couldn't sequence how to do that. I was a good driver before, and I'm a good driver now. But I certainly could not do that at all. I couldn't do things on a computer that I had been doing. My poor husband, I would ask him, "Duran, how do I do this?" And he'd say, "I just showed you that!" I wouldn't even remember that he'd just show me.

I could barely dial a phone number. I would get confused sometimes and have to start over two or three times. So started learning functional medicine.

Jonathan Otto:

Where would you be right now if you hadn't done something?

Dr. Kathleen Toups:

I would be drooling in a nursing home by now if I had not done all that I had done to reverse that inflammation and that cognitive decline.

Jonathan Otto:

What does it feel like for you to look at that picture of you in that old folks home, drooling?

Dr. Kathleen Toups:

It's not a visualization you really want to have. But I think it's just the perspective that we don't have to have people drooling in a nursing home. We have the tools now to look at all of these factors that are affecting their cognitive decline and put them back in balance and stop all the holes in the leaking roof as Doctor Redisson says. Nobody should suffer that way anymore. I

was in my early 50s when I got ill, and I've worked with people diagnosed with Alzheimer's in their early 50s, and it's a different critter. It goes very fast. People in their early 50s, when they have cognitive decline - typically with Alzheimer's we say, okay it's gonna be a ten year process. Your brain will degenerate and you know, eventually stop functioning. But when it affects younger people, it goes fast. Of course now, as we're starting to look at all these factors that are perpetuating and causing the dementia and driving it, what we're seeing more and more in some of the younger people is the seers or the chronic inflammatory response syndrome from Lyme and mold and those kind of factors.

It's really so exciting that we can find these treatment targets now. Toxins are another thing that drives neuro inflammation and degeneration. Now, we have commercially available tests we can use to look at levels of toxic chemicals. We can look at levels of heavy metals. All of those things cause neuro degeneration. Those all become part of what we're looking at.

Jonathan Otto:

How did you get better care?

Dr. Kathleen Toups:

How did I get better? Little by little. I went through all the modules through the Institute for Functional Medicine. I first went to a conference called "Food is Medicine," and that opened my eyes. It changed my life. It changed my practice. It changed my life to understand how food has the power to turn on and off our genes, affect our microbiome, and affect everything in our health. I ate a relatively healthy diet, but it was definitely an eye-opener with that.

Jonathan Otto:

Some things were inflammatory for you though, weren't they?

Dr. Kathleen Toups:

Well, at the point for me, I had become sensitive to everything. So many foods. I went on a diet that eliminated gluten, dairy, eggs, soy, nuts, seafood. Later legumes, later nightshades. I was reacting to pretty much everything. But what happens when you're in that state is, it's that your gut is so leaky that every single thing you eat is getting through those microscopic holes in your gut and activating your immune system. In that case, the real key becomes heal your gut. Do everything you can to heal that leaky gut so that all of that stuff is not chronically activating your immune system. That of course is a process.

When you're as sick as I was, it was not a fast process. I would say it took me eight months of that very restricted diet to start to make some headway with the rashes and hives that were all over me. My patients will say, "how could you stay on that diet for so long?" And I tell them, I had no other option. There was no options. I could take steroids. They would suppress my immune system, but I knew enough that that wasn't going to be the answer to heal anything. We know that when someone is really allergic to gluten, which I certainly was, there are these little villi that lie in the gut. They're like little finger-like projections. They help to absorb our nutrients from our food. When you actually have a gluten allergy, those things get chopped off and

blunted. It takes about eight months for those villi to regrow when you stop your gluten for somebody that's gluten sensitive. It's interesting. I learned that after the fact. When I thought about my timeline, I thought, "oh about eight months on that diet is when I started to make some headway."

So we'll see when we eliminate things for some people in their diet like my patient with severe depression. She just eliminated gluten and dairy, and in four to six weeks, she was a new woman. Some people we see that. It's fantastic. Other people are very sick. Their gut is very inflamed and leaky. It may take a long time, but I think it's really important to empower people to stay that course because it will give you results if you keep going and work on all those factors.

Dr. Daniel Amen

"I have a difficult father, and I'm like many of the people watching, right? When I was growing up, his favorite word was "bullshit." His second favorite word was "no." When I told him I wanted to be a psychiatrist in 1980, he asked me why I didn't want to be a real doctor, why I wanted to be a nut doctor and hang out with nuts all day long. So you can tell, we had issues. He's Chairman of the Board of a four billion dollar company, he's super smart, but not that nice.

And then as I started looking at people's brains, I'm like, "You have to get physically healthy." And I mean, that's what really triggered it for me, and so I would nudge him to do it, and he's like, "Now you're a health nut. So what's with you and the nuts?"

But four years ago, he had mold in his house and he developed a chronic cough and then heart arrhythmia, and then heart failure. And I was really worried we were gonna lose him. And he stopped going to work. He'd been going to work every day for 70 years. And one day I looked at him and he was so depressed, which was not him, and he said, "Danny, I'm sick of being sick. What do you want me to do?"

And you know the reason he asked me is because I live the message. Because I've been consistent in how I live my life, so I was a model. When he needed me, he asked. And he's so stubborn, he did everything I asked him to do. And over the next six months, he lost 40 pounds, he and I work out together on Sunday. We lifted over 2,200 pounds together. He's a beast, he's 89 years old, and he can do a six-minute plank. Like, try to do a six-minute plank. At three minutes, I'm done.

And I love that story so much because if he would've died, I would've felt that pain for the rest of my life. I'm one of seven children, but after he got serious about his health."

Parasitic Infection

Many people living in first-world countries don't believe that they can be infected by parasites. This is very far from the truth. Anyone can have parasites, especially if they've never done a protocol to remove them.

A lot of people also don't know just how harmful parasites can be to your body, and especially your mental health. One of the main symptoms of parasitic infection is changes in mood, including depression and anxiety.

In fact, research shows that an infection with a common parasite called *Toxoplasma gondii* dramatically increases your risk of suicide. Research has also linked infection with this parasite to mental health illnesses like schizophrenia.

Common Parasites That Cause Infection in the US

Toxoplasma gondii

Toxoplasma gondii causes a disease called *toxoplasmosis*. The parasite passes from the host to humans, where it forms cysts — usually in your brain, skeletal muscle, myocardium (heart muscle), and even your eyes (retina). [12] And, it's really easy to become infected.

These parasites can get into:

- The water supply,
- Playground Sandboxes,
- Gardens and lawns,
- Fresh produce (fruits and vegetables),
- Not applying proper hand washing techniques.
- And of course, though handling a litter box

Anything that cat feces comes into contact with can become a carrier of this parasite. [8][9]

Another common source of parasitic infections is through **eating contaminated meat** that is not thoroughly cooked. The most frequent sources of this type of contamination are pork, shellfish, lamb, and venison.

Helminths: roundworms, tapeworms, and flukes

Much of the research done about the link between intestinal parasites and autoimmune disease has shown mixed results. The concern, however, is about autoimmune responses in individuals who were infected by parasites. One of these studies from Argentina followed 12 patients with multiple sclerosis (MS). They had all had gastrointestinal infections caused by helminths⁸⁴.

[add research]

Naegleria Fowleri

[add research]

How to Test For Parasites

Testing can be done in the following ways⁸⁵:

- Stool samples before taking any treatments
- The “Scotch tape” test
- For more severe infections, the doctor may do x-rays with a barium solution

How To Remove Parasites From Your Body

Parasites love to clog up the liver bile duct. Bugs and pathogens in general love to cause stagnation of the body fluids because it gives them an environment in which they can thrive. A lot of great natural products are available that can really change lives and help people with parasites.

Herbs

These three herbs kill over one hundred different parasites: green/black walnut hull, fresh ground clove powder, and wormwood. All three herbs must be used together to kill the worms, larvae, and eggs all at once. Tinctures and capsules are the most common forms available.

Mimosa Pudica from the seed, which is the fat-soluble portion, works really well against parasites. It releases tannins and alkaloids that help kill parasites, and its sticky gel grabs parasites and moves them out of the body.

It works best to take it on an empty stomach, and don't take binders, such as clay, bioactive carbon, or diatomaceous earth, within one hour of taking Mimosa Pudica.

Essential Oils

Neem is a common Ayurvedic aid in preventing and ridding the human body of parasites. Neem also stimulates the liver and kidneys, helping eliminate toxins quickly and optimizing the body's metabolic activities.

Clove destroys parasite eggs

Other Natural Remedies

Other things used to expel worms include an Ayurvedic medicine called vendonga, diatomaceous earth, bentonite clay, pumpkin seeds, garlic, cayenne pepper, goldenseal, sage, thyme, fennel, male fern, cranberry powder, grapefruit seed extract, apple kernel, olive leaf extract, apple seeds, red clover blossoms, vitamin C, wheatgrass juice, grapes and grape juice, echinacea, metabolic enzymes.

Well of Life's Purify 360

ParaPurify helps eliminate parasites from your body naturally. It supports digestive, colon, immune, and liver health, promotes a balanced inflammatory response and detoxification, and provides antioxidant support. It contains potent anti-parasitic natural Ingredients, including:

Organic Mimosa Pudica: Works its way through the intestinal walls, pulling out parasites, toxins, heavy metals, biofilms, and other unwanted elements to provide immune and digestive support.

Organic black walnut hull powder: Black walnut contains juglone, which has been shown effective at expelling parasites from the body.

Fulvic mineral powder: This nutrient-rich soil-based compound supports detoxification, parasite removal, digestive health, and immune health.

Humic acid powder: This mineral-rich substance made from humus supports intestinal health and detoxification.

Organic triphala powder: This staple of Ayurvedic healing nourishes the digestive tract, supports colon cleansing and detoxification, supports a healthy inflammatory response, and provides antioxidant benefits.

Organic neem leaf powder: Another Ayurvedic healing nutrient that supports parasite removal, detoxification, immune function, gastrointestinal health, and liver and skin health.

Organic wormwood herb powder: A natural herb containing compounds such as artemisinin, that help cleanse the body of harmful organisms such as parasites. Also supports liver and digestive health.

Additional ingredients include organic clove powder, organic aloe vera extract, and organic garlic extract.

Expert Insights

Dr. Jay Davidson

Now the next thing that doesn't get a lot of attention but it should is parasites. Parasites have been implicated with a lot of toxicity issues in chronic infection and the reason why is mold spores will live inside of parasites. Parasites are sponges for heavy metals. Parasite epidemic that's happening and it's across the globe, it's happening in First World countries like the United States of America.

Parasite epidemic is there because of the toxicity epidemic. Parasites are absorbing heavy metals and the body is like, thank you, I'll allow you to be here. But now we get the downside and the toxicity that's produced, the bile toxins that are produced, from these parasites. So parasites absorb heavy metals. They're houses for mold spores. So even if you clean up your environment, remove the mold, you can still be dealing with mold illness because of parasites.

And then the last piece is bacteria and viruses. Now I mentioned earlier that Chlamydia Pneumoniae, Borrelia Burgdorferi, Herpes Simplex Virus 1, have all been implicated with brain conditions such as Alzheimer's. That these chronic infections can actually be contributing to these brain disorders. Well, these chronic infections will live inside of parasites. It's been well-documented that Lyme disease will live safely within parasites. It's been documented that viruses will live safely within parasites.

So when we're looking at protocol, we have to look at not only what the sources are but we gotta make sure that we're nailing the order, that we're doing it in the right order otherwise you're gonna hit a wall and you're gonna get frustrated.

Drainage is first. Drainage comes along with you for the journey. Then we're getting to parasites because pretty much parasites can house a lot of things. Once we start clearing parasites out, then we want to support detoxification.

When we're looking at detoxification, you know, years ago I went through chelation of heavy metals for a couple of years and not doing parasites ahead of time. I basically hit a wall and I only got so far because I did it in the wrong order. So trust me. Listen. You have to do this in the right order.

Now things are available that are more cutting-edge to allow to detoxify these heavy metals and pesticides safely. Like bio-active carbons. These things have been a game changer, especially for kids, actually safe for kids, you only have to take it twice a day, you can take it with or without food ... It makes it a lot easier.

And then the last piece we're looking at is chronic infection. Chronic infection gets a lot of attention, right? Lyme disease by itself has gained a lot of publicity and I think rightfully so. However, because of its publicity, people want to jump right to it. Or heavy metals, right? Oh, I have heavy metal toxins, I wanna jump right to it.

Well, don't miss out on supporting drainage. Don't miss out on clearing out parasites. You'll be amazed at the things that you see come out of you.

I was eating dinner with a friend, Dr. Todd Watts, and he was showing me pictures of stuff that came out of people. And I'm like, what is that? And he's like, this is bio-film, these are parasites. I mean, this is just stuff that has literally been, you know, bogging up colons and small intestines of these clients that I've been working with. And I said, what are you doing? He said, Oh, I'm giving them the Mimosa Pudica seed. I was like, what? Mimosa Pudica seed. What's that?

And I started taking it and about 16, 17 days later in, my stomach started rolling and I started feeling like, hmm, this doesn't feel right. And the next thing you know, I go to the bathroom, I go to wipe and I'm like, that didn't feel right. I look down and there's these two roundworms hanging out of me into the toilet. And they were dead. It was at that point my mind started racing. My daughter and my wife happened to be in the hotel room that we were at and I yelled at my wife, I'm like, Heather get over here, you have to see this. My daughter comes running over, At the time, she was about only 3-years-old. And she's like, Dad, why do you have string hanging from your butt? I'm like, Heather, get over here.

And I continued to ... I grabbed some toilet paper, grabbed on to them, slowly pulled them out, flushed the toilet and my mind just started racing. I said, wait a minute. If I, relatively healthy guy, have these worms in me, who else does? And I started implementing them with my chronic Lyme disease clients. And that was one of the biggest breakthroughs that I saw. And it's because that parasite step is the one that I was missing clinically.

So, remember, drainage, parasites, that unlocks everything. Then we can get into the heavy metals and toxins. Then we can go to clear the chronic infection. These are really important pieces to the journey.

As far as depression, that's something that has unfortunately ran in my family. It's an area that I have worked with clients quite a bit with. And it's tough. That emotion, if you want to label it a condition or a disease, I would be very cautious. It's so easy to just take on, like, that name or that label.

But, I remember watching and reading some older research about Niacin. High doses of Niacin was able to change people's moods and relieve symptom of depression. Where they didn't need the medication anymore. I said, wow. How amazing is that a nutrient could actually nullify a symptom as severe as depression. My mom at the time was on antidepressants and had been on of quite a few years. I said, mom, try some Niacin. Now, the key was flush-free Niacin. If you take regular Niacin, you're gonna get very warm, you're gonna get this flushing effect. Some people feel like they're having a heart attack. You're not.

It's actually healthy for your cardiovascular system. However, in the depression side of it, it's flush-free Niacin. What I recommend to do is find flush-free Niacin where it's sold in at least 500 mg capsules and start with 2 capsules twice day with food. So you're looking at about 2,000 milligrams per day. Do that for a week. If you don't notice any change, then increase it to 3,000 milligrams.

Typically, 3,000 milligrams is that number where we see big changes with though process, but if you don't notice anything of about a week, increase it to 4,000 and keep going. I had a client, she was a nurse, she was on a couple of anti-psychotics. And she was suicidal. She wanted to cut her wrists. She was really bad. This was after the birth of a couple of kids where things really changed. And I told her to take flush-free Niacin and she started taking it.

I saw her again. She's like, not noticing anything. I'm like, increase it. Saw her again. Still not noticing anything. I'm like, increase it. She got up to 8,500 milligrams per day and life completely changed for her. She's like, I'm happy. I don't need my anti-psychotic or anti-depression medication anymore. Like, this is amazing.

And what I find is you might need to get to a higher level before you notice the shift, but you won't have to necessarily stay at that dosing.

But how amazing is that we're simply ... A nutrient could actually change or reduce that symptom. This is such a breakthrough. But it's been documented for years. So it's something that I recommend that you try.

How can you forget about Vitamin D? I mean, Vitamin D seems to be beneficial for everything. But specifically with the brain and Alzheimer's. It's been shown that if you have lower levels of vitamin D, your risk of getting Alzheimer's is 50 or 70% increased. So just by maintaining healthy vitamin D levels, which can literally just mean you're out in the sunshine during the peak day for 10, 20, 30 minutes to absorb, in your body to manufacture, or maybe you're inside most of the time, and you have to take a supplement, or your body doesn't convert sunshine into vitamin D. Increasing vitamin D can be a game changer, so don't forget, don't miss out on such a simple thing like vitamin D3.

Now, when you're checking your vitamin D3, the classic vitamin D3 test is called 25(OH) vitamin D. so 25(OH) that is the inactive form. Your body has to convert the inactive 25(OH) vitamin D into the active 1,25(OH).

So I always recommend, when you're running a test for vitamin D, let's check the inactive, which is the classic one, and let's also check the active one because you could have issues converting inactive to active, or you could be actually having issues of breaking down the active form where if you're looking low on inactive, you could actually be toxic and active, or if you're looking high in inactive, you could actually be low in the active form. So this is really important to understand and to check. Check your 25(OH) and your 1,25(OH) when you're looking at vitamin D.

Macular Degeneration is actually twice as common as Alzheimer's disease. It doesn't get enough attention. Now, when we're looking at the eyes, we have to always go back to what is the source or sources of my eye condition or my eye issues? And it's been documented, that parasites are a key factor of actually causing macular degeneration. So if they're one of the causes of Macular Degeneration, then we have to remove the source. And remember, parasites are one of those keys to unlock. Now, as you're parasite cleansing and you might actually see eye floaters, that's a common symptom that will come about and there's an intimate connection of parasites and the eyes.

We also have to remember that toxicity is a major factor as well, so when it comes down to, "Hey doc, I've been diagnosed with," and fill the fill that condition in, something like Macular

Degeneration. It still comes back to the fundamentals of what's holding us back as a whole? Chronic infection and chronic toxicity, but if you were to say, "Hey, Dr. Jay, I've been diagnosed with Macular Degeneration." First thing that would come into my mind is we need to work at parasite. We have to work at clearing out the parasite infection.

But remember the massive amount of clearing out, once you kill parasites, it's got to have a pathway to move, so that's where we have to support the drainage pathways. Have to make sure that your colon is moving. Have to make sure the liver bile duct is supported, have to make sure that the lymphatic system is moving so that the brain can drain the debris.

The lymphatic system is two times as much fluid as the cardiovascular system. It's vitally important to the body. It's an important area because that's where a lot of our immune system function is at, the white blood cells going after chronic infection. However, once you actually kill something like a parasite, it's got to move somewhere. So let's say you have parasites in your brain. Let's say you have parasites that are affecting the eyes. Well, once you kill them, then how does your body clear it out? In my understanding, is that the glymphatic system, which is the brain drainage, has a direct link to the lymphatic system, so anything that gets detoxed or killed will, oftentimes, get dumped into the lymphatic system via the brain drainage, which will then end up into the digestive tract. So we have to make sure that the drainage pathways are moving in order to safely detox and also clear out the chronic infection of the brain. So don't think of the brain is separate. Think of it is all connected and we need to support all the pieces of it.

My wife, Heather, nearly died after my daughter was born. She had Lyme disease when she was seven years old, and on her 30th birthday she gave birth to our daughter, Lila, and two months in, was one of the toughest times in our life. Her body was literally shutting down. She couldn't manufacture milk anymore. Wasn't able to eat, basically reacting to everything and then developed even worse anxiety.

Two years before my daughter was born, we had signs that something wasn't right. All of a sudden my wife developed anxiety and specifically around the idea of flying. Now she grew up flying from Wisconsin to Florida once a year with her family to go to Disney world and to hit the theme parks up and they would travel, and flying was never something she was scared about. But a couple of years before my daughter was born, all of a sudden she couldn't travel to seminars, just the thought of flying on an airplane just caused this emotion inside of her that was so fearful.

She's like, "Nope, can't." So if we went anywhere, we had to drive. So she didn't travel much and then when my daughter was born, everything amplified. Everything got worse, and it was like, "Wow," we had these signs and symptoms, but it had to get so bad where we really looked at it and said, "What's the cost, what are the causes of what's going on?" And what we found out with her was chronic infection, chronic toxicity. She had some mold exposure, that had happened multiple times that kept amplifying the situation and then also a parasite infection.

*And I really believe that there's such an intimate link of infection with anxiety. There's a book called *Your Brain On Parasites* and it specifically documents how parasites can actually manipulate our thoughts, can manipulate our personality, can manipulate the way that we process world. So the next time you're like, "Wow, why am I having these thoughts?" It might not be you, it actually might be the critters inside of you. And so I feel like it's important to understand that so that you're gentler on yourself.*

Supplements to Remove Toxins From Your Body & Brain

Well Of Life's Toxibinder

While it's impossible to completely avoid heavy metals and toxic exposures, you can take a big step to reduce the toxic overload in your body by using Well of Life's doctor-formulated ToxiBinder.

ToxiBinder promotes detoxification of chemicals and heavy metals, reduces free radical damage by increasing antioxidant defenses, supporting the liver, kidneys, and immune health, and it promotes energy. The ToxiBinder contains the following organic ingredients:

Humic and Fulvic Acid Powder: These bioactive compounds help chelate or bond with toxic and inorganic metals to remove them from the body. They also work as powerful free radical scavengers.

Organic Cordyceps Mushroom: Promotes the excretion of water-soluble toxins via the kidneys. Also offers support for immune health.

Organic Silymarin: This powerful herb helps detoxify the liver and provides potent antioxidant protection.

Organic Uva Ursi Leaf Powder: Used traditionally to support liver and kidney health

Organic Yucca Root: High in antioxidants to defend against free radical damage and support immune health.

Organic Dandelion Root: Helps cleanse the liver and fights free radical damage.

Organic Rhodiola Rosea: Adaptogenic herb used in traditional healing to detoxify the body, increase energy, and offer antioxidant protection.

Lipase: Digests fats and plays a role in liver detoxification.

Conclusion

There are so many harmful toxins that we're exposed to on a daily basis - we can't even include them all here. And these toxins accumulate in our bodies over time, causing symptoms of disease to manifest. When we don't effectively detox our bodies from this toxic build-up, we start experiencing chronic disease.

Mental illness is a very common symptom of toxicity in the body - which goes undiagnosed the majority of the time. Neurodegenerative disease like Alzheimer's also manifests as a result of the accumulation of toxins in the body.

However, whether it's parasites, mold exposure, heavy metal toxicity - the same protocols work to effectively remove these from the body and restore health. We've included these protocols in this eBook. Remember that they work best with consistency and in combination with healthy lifestyle factors such as frequent exercise, adequate sleep and very importantly, excellent nutrition.