# Detox Your Life - Environmental Toxins and How to Minimize Exposure (Part 1) Transcript

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## Introduction to Detox and Doctor Talks

It's important to remember that our bodies are detoxifying around the clock through organs like the liver, gut, kidney, colon, lungs, lymph, and skin.

These systems work hard to eliminate toxins, but they don't always function at peak efficiency. For instance, over 100 million Americans suffer from suffer from liver disease that compromises liver function.

That's from the American Liver Foundation. Many turn to supplements like activated charcoal for detox, which can help remove certain toxins, particularly metals.

However, there's no single pill to counteract environmental exposures. Instead, we need to focus on two core actions to support our body's natural detoxification process.

Welcome to Doctor Talks, the podcast where every episode leads to a healthier you. Join us as we navigate the world of optimal health. Uncovering groundbreaking strategies to conquer chronic disease.

In each episode, we'll bring you the latest insights from leading health experts, medical innovators, and wellness warriors. If you're seeking to transform your health journey, or if you're looking for answers to burning questions, you've come to the right place.

Get ready to unlock the secrets of lifelong health and vitality. This is Doctor Talks, real talk from real doctors on the issues that matter to you most.

Welcome to Detox Your Life. My name is Doctor Julia Ward and I'm so excited to spend the next few weeks learning about ways to optimize your health by minimizing exposure to environmental chemicals.

By now, you've likely seen news articles or stories about things like toxic chemical spills, cancer causing chemicals in hairspray, sunscreens and deodorants, water contamination, and the toxic effects of air pollution.

There is no question we're living in toxic times.

## Environmental Toxins and the Need for Action

Most of the news articles, headlines and TV segments on this topic focus on the dangers associated with these toxic chemicals but rarely provide clear, actionable steps for people to take.

The result is that people are anxious and overwhelmed. If that's you, you're not alone. This anxiety is one of the reasons I wanted to offer this program over the next few weeks.

We're going to calm that anxiety and leave you with clear, actionable steps to systematically lower your toxic exposures, all without turning your life upside down.

In today's session, we're going to do two things will lay the foundation for just how important this work is by zooming out and looking at the bigger picture.

When it comes to environmental toxicant exposures. Then we'll zoom in to talk about some of the most common exposures to toxicants that happen through our food, primarily looking at chemicals that you won't find on any ingredient label.

Here are some recent examples of environmental disasters in the US. Another example of how toxins can adversely affect our health was just discovered near my home in Houston.

A state study found alarmingly high cancer rates in a 250 square mile area along the San Jacinto River floodplain, where toxic waste pit waste pits contaminated with dioxins have polluted the environment for decades.

The San Jacinto Waste Pits Superfund site contains dioxins, which the EPA classifies as highly toxic. These chemicals cause cancer, disrupt hormones, and damage the immune, reproductive, and developmental systems.

Between 2013 and 2011, leukemia rates in this region, home to more to more than 330 residents, were more than three times the state average, with significantly higher cases of lung, cervical and lymphoma cancers.

This case underscores the urgent need for environmental cleanup to prevent further harm. So what effects do these chemicals have on all of this? All of us.

All of these symptoms, as well as things like infertility and cancer. Before we dive in, I'd like to share a bit about who I am, what drives my work, and why I'm so passionate about empowering both women and men to feel their best by eliminating the root cause of chronic inflammation, enhancing gut health, and balancing hormones.

I was raised in California, have been happily married for 30 years, and in the proud parent of five wonderful kids growing up in a family with deep ties to the oil and gas industry.

My father was a chemical engineer. I'd been aware of chemical exposures all my life. This background inspired my exploration into environmental toxins.

And what I discovered is eye opening. We are continuously exposed to low levels of toxins that contribute to chronic inflammation and other health challenges.

My journey in understanding toxins isn't solely about preventing disease. It's about empowering people to reduce chronic inflammation, boost safe energy, and improve overall life vitality.

By lowering our toxic burden, we create the space for our bodies to heal and thrive. Thank you for listening, and I hope that this inspires you to take small, meaningful steps towards a healthier life.

Okay, let's dig in. First, let's start with some context. So we're all on the same page when it comes to chemicals or toxic chemicals. When most people hear environmental toxins or environmental chemicals, they immediately think of major pollutants factory emissions cards, lost oil spills and contaminated soil or water, which are linked to serious health issues like heart disease, cancer and fertility problems.

## Understanding Chronic Exposure and Chemical Policy

These are the out there exposures occurring in our broader environment, yet we often overlook the small amounts of toxins we encounter every day through our food, cookware, cleaning products, personal care items, and even the air in our homes.

These are the in here exposures more within our control than those from the external sources. While we can't eliminate every exposure, we can make informed choices about everyday items and behaviors.

This course will delve into practical strategies to reduce these daily toxic exposures and protect our health. Most people tend to associate environmental toxins or toxic chemicals with acute exposures that trigger dramatic symptoms like vomiting, seizures, or severe skin reactions.

Incidents that, while possible, are quite rare. Today, however, I will focus on chronic exposures. These are low level everyday exposures that typically don't cause immediate symptoms, but can contribute over time to serious health issues such as heart disease, infertility, allergies, learning disabilities, obesity, cancers, and immune system

problems.

While it may seem that tiny amounts of chemicals from everyday products like shampoo, laundry detergent or perfume are insignificant, research shows that even these low level exposures, especially from hormone disrupting chemicals, can have a major impact on our health.

We'll explore specific examples in this course. Now let's zoom out to look at the bigger picture before diving back in. Worldwide, about 350,000 chemicals and mixtures are in use and not all are harmful.

Many have made our lives safer and easier. In this course, we're not demonizing chemicals. Instead, we're focusing on reducing exposure to those known or suspected to harm our health.

Remember, everything is a chemical, but our concern is with those that can contribute to health issues. In the United States, the CDC's National Health and Nutrition Examination Survey, or Nhanes, measures our chemicals in our bodies and has detected metabolites of over 200 different substances.

This doesn't mean that every detected chemical is harmful, but it does show that chemicals from everyday products easily migrate into our bodies, and that many of these substances are nearly ubiquitous.

Have you ever assumed that a product being on the market means that its ingredients have been thoroughly tested and proven safe? These studies challenge that notion by revealing the widespread presence of chemicals in our bodies.

The assumption here in the United States is it products for sale have been adequately tested for safety before going to market. Unfortunately, that's not the case.

The primary policy that regulates most of the chemicals in commerce, the Toxic Substances Control Act, first passed in 1976. Never required it. In 2016, the TCA was updated for the first time in 40 years, requiring the EPA to review safety data for about 20 chemicals at a time, with over 40,000 chemicals already in use and roughly 2000 new ones introduced each year.

It could take centuries to fully assess their safety. While the law has changed. We still lack full assurance the products on the shelves are safe. An EPA graphic illustrates this complex review process, and many chemicals can even be exempt from safety checks.

Meanwhile, Americans continue to be exposed to low levels of chemicals from thousands of sources every day. Not all chemicals are linked to disease, but many are.

Thousands of chemicals have connected low level toxic exposures to serious, chronic health issues, from hormonal imbalances like infertility and early menopause to metabolic problems such as insulin resistance and obesity.

There's also strong evidence linking toxins to cardiovascular disease, neurological conditions like Alzheimer's and Parkinson's, various cancers, immune system dysfunction, and even behavioral issues including brain fog, anxiety and depression.

With the full economic cost, while the full economic cost of these exposures is still being determined, the available figures are concerning. For example, a 2016 study estimated that exposure to just seven commonly encountered hormone disrupting chemicals cost the US $340 billion in health care expenses and lost wages almost twice the cost seen in the European Union, where chemicals are more strictly regulated.

Additionally, a 2022 study found that treating disease is linked to PFAs chemicals. We'll discuss these in week two, cost up to 62.6 billion. Not everyone is exposed to toxins equally.

Beyond occupational risks, low income communities, and especially black and brown neighborhoods often face disproportionately higher levels of toxic chemicals compared to more affluent, predominantly white areas.

Babies in utero are extremely vulnerable to environmental chemicals, which can cause irreversible harm from neurodevelopmental issues and birth defects to higher risks of heart disease, cancer, and metabolic disorders.

Later in life.

## Detox Pathways and Core Health Principles

A landmark 2009 study, the Environmental Working Group, tested umbilical cord blood from ten babies and found nearly 300 manmade chemicals, including 180 carcinogens, 217 neurotoxins, and 208 reproductive toxins with many chemicals overlapping in their toxic effects.

Follow up studies have revealed similarly concerning levels, highlighting the long term impact of early life exposures. When people first learn about environmental chemicals, they often ask about detox protocols.

It's important to remember that our bodies are detoxifying around the clock through organs like the liver, gut, kidney, colon, lungs, lymph, and skin.

These systems work hard to eliminate toxins, but they don't always function at peak efficiency. For instance, over 100 million Americans suffer from suffer from liver disease that compromised liver function.

That's from the American Liver Foundation. Many turned to supplements like activated charcoal for detox, which can help remove certain toxins, particularly metals.

However, there's no single pill to counteract environmental exposures. Instead, we need to focus on two core actions to support our body's natural detoxification process.

So number one, turn down the volume on toxic exposures. We do that by reducing exposures in as many places as possible. It means changing the products we use and the behaviors we engage in in ways that can minimize that exposure.

The goal here isn't zero exposure. It's not possible for us to have zero exposures, but we can lower our exposures. And that's our goal. The second core focus is to turn up the volume on our body's innate ability to metabolize and detoxify.

This means supporting our organs of detoxification, making sure that you're pooping, and that you're eating nutrient dense foods that will provide the liver with the nutrients needed to facilitate detoxification, and also to stay properly hydrated, to sweat and to sleep.

Over the next few weeks, will be focused on systematically turning down our exposure. And we're going to start with the foods we eat. Before we begin.

Keep these thoughts in mind. This isn't about perfection or eliminating every toxic exposure. It's impossible. And striving for zero exposure can create stress, which is toxic as well.

Instead, focus your every day on your everyday choices, considering your total exposure, rather than stressing over every unavoidable instance. Do the best you can and remember that best varies for everyone.

Our goal is to leave you feeling informed and empowered so you can avoid the unnecessary anxiety and overwhelm. Take your time. This isn't a race to create the perfect lotus home overnight.

Some changes you can implement immediately while others might take might take months or even years. Our goal is to empower you to make small, meaningful changes in the products you use and the daily in your daily habits.

Remember, everyone is at a different stage and wherever you are is perfect. In this series, we'll first explore the exposures and related issues and then discuss practical ways to minimize them so you understand why each step

is important.

Okay, so there are three primary ways that toxic substances can enter our bodies. Ingestion absorption and inhalation. We'll be talking about all three throughout this course.

## Food as a Major Source of Toxic Exposure

But today we'll look through the lens of ingestion. Food is our main source of toxicant exposure. Even careful label reading won't eliminate all risks, as many approved ingredients like artificial food dyes and certain preservatives have been linked to harm, even in small amounts.

These ingredients will be listed on the products. Therefore, we can easily decide if we want or don't want to purchase them. But what about chemicals that are present in foods that will never appear on an ingredient label?

The distinction here is with intention. Ingredients are intentionally used in the product in the production of a food, whereas a contaminant is not intentionally used and was never intended to be consumed.

But it happens anyways. What we're going to be talking about here are contaminants. We'll start by talking about pesticides. Although we do technically have a label of sort that can help us here, I'm talking about the USDA organic label.

There's some more we should know. Outside of occupational exposures, which we won't cover in this course. Food is our main source of pesticide exposure.

The CDC notes that we ingest organic phosphorous insecticides through treated foods, and our diet directly affects the level of pesticide metabolites in our bodies.

Throughout human history, we've used pesticides. Before the 1930s, natural botanicals like hemlock, sulfur, and olive pits, as well as inorganic compounds like salt, arsenic and copper were common.

Even these weren't entirely safe, as substances like arsenic are toxic. In the 1930s and 40s, synthetic pesticides emerged, starting with organochlorine like DDT, followed by organophosphates, many of which are still in use today.

Our reliance on pesticides is staggering. Over the past 20 years, global pesticides use use has doubled from just under 2.5 million tons to over 4 million tons.

When we plot the rate of disease over time, we often see a near exact overlap in the increase of not only pesticides specifically, but synthetic chemicals as a whole.

While it's important to note that correlation does not equal causation. We do have tens of thousands of studies in both animals and humans to show that clear associations and in some cases, direct causal links to disease.

Globally, over half of the 4 million tons of pesticide used are herbicides like glyphosate, which is roundup. Glyphosate is especially harmful because it acts like an antibiotic, killing the beneficial bacteria in our gut.

Without these good bacteria, our bodies may struggle to produce neurotransmitters that affect mood and B vitamins that produce energy. Pesticides is a broad term that covers herbicides, insecticides, rodenticides, and more.

While farm workers experienced much higher exposure, everyone encounters low level exposures in their everyday lives because chemicals are rarely tested on humans.

Most research is done on animals. However, surveys like the Nhanes gives us valuable data on pesticide levels in people. Scientists use this data in epidemiological studies to examine links between exposure and health outcomes

when human health effects mirror those found in animal studies.

It suggests a strong connection between pesticide exposure and these issues.

## Pesticides in Produce and Organic Choices

Epidemiological studies show that even non occupational background level pesticide exposure is linked to serious health issues, including diabetes, obesity, insulin resistance, oxidative stress, inflammation, decreased sperm quality, developmental neurotoxicity, ADHD, autism spectrum disorder, childhood leukemia, thyroid dysfunction, and more.

The research is vital because it challenges the common belief that only high doses of pesticides are harmful. Even the low levels we encounter daily, such as those in food, can contribute to a wide range of health problems beyond just cancer.

Pesticides aren't fully monitored for all potential health effects, even though thousands of studies confirm harm. For example, the European Union has flagged over 50 pesticide active ingredients as endocrine disruptors.

Yet in the U. S., despite a 1996 directive to screen for these effects, this testing still has not been implemented. While chronic low level pesticide exposure can affect everyone, the most vulnerable are babies in utero.

Small children and women of childbearing age. When a pregnant person is exposed, not only is she affected, but so is the fetus and even the future germ cells impacting up to three generations at once.

In utero exposure can lead to irreversible lifelong health issues. Babies, in particular are more exposed because they drink, eat, and breathe more per pound than adults.

And their behaviors like crawling in hand to mouth activity, increase their contact with toxins. As for whether pesticides can be washed off, the answer is sometimes, and it depends.

Many pesticides are systemic, meaning they're absorbed by the plant from the soil and cannot be simply washed away. We'll revisit this point later. While there is evidence that conventionally grown produce may expose us to pesticides, it's crucial to remember if you must choose between organic vegetables and no vegetables, choose conventionally grown produce.

Most Americans don't eat enough vegetables, and the health benefits far outweigh the risks of pesticides exposure online. There's a lot of fear mongering that paints pesticides in a black and white terms.

The truth, however, lies in the gray area. Choosing organic is an extra step to reduce toxic exposures and protect both you, both your health and the environment, including farm workers and ecosystems.

But increasing your overall consumption of fruits and vegetables should remain the top priority. Next, let's discuss animal foods like seafoods, meats and dairy.

While there are many options on the ideal diet, vegan, keto, paleo, carnivore and more extreme approaches are rarely best. A balanced diet is key. Keep in mind that diets high in animal protein and fat may increase exposures to certain chemicals.

So let's start with seafood. Seafood is a nutrient dense, heart healthy choice that contributes to longevity. Many of the world's longest lived people include include this in their diets.

It's especially vital for pregnant individuals due to its role in fetal brain development. However, the topic is complex, so we'll focus on the most important considerations.

## Seafood, Meat, and Dairy Contaminants

Let's begin with farmed seafood, which now makes up a large portion of what sold globally due to overfishing and the efficiency of controlled fish farming like intensive land animal farming.

Fish farming faces ethical and practical issues such as overcrowding, which can spread disease and lead to infestations like sea lice, often treated with pesticides or in salmon.

HSM eye a disease caused by a virus. Farmed fish are raised in enclosed ocean pens and fed commercial diets that vary by species. Carnivorous fish typically receive ground fish with added fats and oils, while omnivorous fish like tilapia are fed corn, soy, or even unconventional ingredients.

Diets based on corn or soy can increase pro-inflammatory omega six fatty acids and reduce the beneficial omega three fatty acids. Fish raised on high fat fishmeal can accumulate dangerous chemicals like PCBs and dioxins.

Although PCBs were banned over 30 years ago, they still persist in the environment, especially in animal foods. Dioxins, which result from industrial processes and incineration, are also a significant concern.

The World Health Organization states that 90% of dioxin exposures come from animal foods. The 1984 Michigan Maternal Infant Cohort Study found that children of mothers who consumed moderate to high levels of PCB contaminated fish, both in the six years before and during pregnancy, experienced developmental and cognitive deficits.

Mercury is a major concern in seafood. While all fish contains some mercury, high mercury fish, typically larger and older pose the greatest risk. This is due to bioaccumulation, where toxins build up in an organism over time, and bio magnification, where toxin levels increase as they move up the food chain.

For example, a small fish may have a little mercury, which then concentrates in a medium fish that eats it. And even more so in a large fish that consumes the medium fish, ultimately exposing us to higher levels when we eat them.

Methylmercury, primarily found in seafood, is linked to many health issues at high exposure levels. It's half life in the human body is about 2 to 4 months, meaning it takes that long for the level to drop by half without further exposure.

The CDC identifies seafood as our main mercury source. Navigating seafood consumption is all about balance. A single serving of farm raised fish isn't likely to cause harm.

And if the choices between farm raised fish or none at all, the benefits of eating fish still outweigh the risks. I'll offer more guidance on managing seafood choices later in the session.

Methylmercury is mainly a seafood concern, but PCBs and dioxins affect land animals as well. Because these chemicals persist in the environment and are fat soluble.

Higher fat foods tend to accumulate more toxins. PCBs have even been found in polar bears in the Arctic, suggesting that land animals near industrial areas are similarly at risk.

PCBs and dioxins fall into the category of chemicals referred to as pops or persistent organic pollutants. Pops are fat soluble chemicals, which means that they are absorbed into fat.

Foods like high fat dairy, cheese and butter can have more concentrated amounts of these chemicals. One study found that 11% of daily PCBs intake came from milk and 30% from cheese and butter, which makes sense since cheese and butter are just concentrated dairy.

Another concern with meat and dairy is the use of antibiotics. While antibiotic use in human medicine has remained steady since 2009, the National Resources Defense Council reports that sales for livestock increased by 11.3% from 2017 to 2019.

Now nearly double for those those for human medicine. This is concerning because it fosters antibiotic resistant bacteria, which are responsible for over 2.8 million infections and between 35,000 and 162,000 deaths in the U. S.

each year. In conventional dairy farming, cows aren't given pesticides directly, but their non-organic feed introduces pesticide residues into the milk.

A 2019 study found that conventional milk contain pesticides, antibiotics and growth hormones, none of which were present in organic milk.

## Practical Steps to Reduce Toxic Exposure

Additionally, organic dairy generally offers a slightly better nutrient profile with higher levels of vitamin E, iron, and omega three and six fatty acids.

Let's end on a positive note. Meat, fish, and dairy can be healthy parts of your diet, whether they're wild, caught, organic, or conventional. If you're not following a specific dietary plan, it's fine to choose conventional options over having none at all.

But if you're aiming to minimize toxic exposures and optimize your health, organic options add an extra layer of benefit. Now let's shift to some action steps.

I know all this information can feel overwhelming, but that's usually because we're not sure where to start. So let's break it down and get to work. The first step, as your budget allows, is to prioritize organically grown fruits and vegetables.

We don't need to detox our bodies from pesticides because modern pesticides are non persistent and don't build up. The best approach is to reduce exposure by choosing organic over conventional foods.

In fact, studies show that switching to a mostly organic diet, even if it's not 100% organic, can lower pesticide levels in your body by 80 to 90% in just 3 to 7 days.

You may have seen headlines claiming there's no difference between conventional and organic produce. While vitamin and mineral content is similar, rich research shows that organic crops have higher levels of beneficial antioxidants.

As organic foods have grown in popularity, so have fruit and veggie washes that claim to remove pesticides. While these products might reduce some pesticides, they're not cost effective.

Instead, a simple soak in baking soda or vinegar used separately has been shown to be a more reliable and affordable way to keep produce clean. Keep in mind, many pesticides are inside the plant and no amount of washing method, can remove them all.

When choosing seafood, opt for species lower on the food chain. Smaller fish accumulate fewer toxins than larger, longer lived ones. For the best nutritional benefits and the lowest toxicity, remember to smash salmon, mackerel, anchovies, sardines, and herring.

Including these in your diet means you're making a healthy choice on two fronts. Lastly, when selecting animal meats, opt for organic and pasteurized options whenever your budget allows.

In closing, remember this process isn't about perfection. Focus on what you do every day, and don't be hard on yourself for occasional lapses. We do the best we can with what we have.

No single item will make you sick. Our goal is to gradually lower our overall exposure over time. Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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