

Environmental Toxins Core Concepts

Hey, everybody. In this presentation, we're going to cover core concepts related to environmental toxins. We're exposed to a myriad of things living in the modern world, from the air we breathe to the couches we sit on to the mattresses we sleep on to the products we put on our skin, and all of these chemicals that we're exposed to on a daily basis impact our health.

This is another major difference between modern life and the environment that our ancestors lived in. We live indoors, which not only traps air and particles inside for much of the year, but many of the items that we bring into our homes are also full of chemicals and off-gas these chemicals. Think about the things in your home for a moment. The walls with paint. You bought furniture and mattresses that off-gas chemicals. You wash yourself with soaps and shampoos, many of which can be fragranced and contain chemical cleansers, and you may eat foods that are sprayed with pesticides. You drink water that contains heavy metals and other contaminants, and the list goes on and on.

Researchers have found over 200 environmental chemicals in the cord blood of newborns, which is quite an alarming statistic, and this is perhaps a better indicator than any of the toxic burden that Americans and people living in the industrialized and nonindustrialized world are facing.

Exposure to environmental toxins can wreak havoc on the body. There are potent neurotoxins such as lead that when we're exposed to it, particularly during important developmental times, can cause irreversible neurological damage. There are toxins that interfere with cholesterol and glucose metabolism. There are toxins that lead to insulin resistance; that can cause oxidative stress; that can lead to obesity and other metabolic problems; that can disrupt our endocrine system and affect thyroid production, cortisol production; and toxins, of course, that are carcinogenic, so they can have a wide range of effects from relatively mild to life-threatening and even fatal.

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Despite knowing that many of the chemicals found in our environment and the products we use on a daily basis are indeed toxic, the majority of chemicals we come into contact with are not evaluated for safety. They are, in other words, innocent until proven guilty. A company can release

chemicals into our environment without first proving that they are safe. This is one of the craziest policies of the industrialized world. In fact, according to the Cosmetic Ingredient Review Panel, 89 percent of the 10,500 ingredients used in personal care products have not been evaluated for safety. These are products that we put on our skin, and in many ways, the products we put on our skin are even more dangerous than what we eat because, from an evolutionary perspective, there were toxins in our ancestral environment that we had to protect ourselves from, so the gut barrier evolved to protect us from toxins, whereas there were very few toxins that we would have been exposed to via the skin in our ancestral environment, so our skin barrier is not as effective at keeping things out. The things that we put on our skin are arguably more dangerous in some ways than what we consume orally.

This is a pretty scary thing, in my opinion. One way to think about it is that we're performing a large, uncontrolled experiment on ourselves without the population's explicit permission or even knowledge. So far, the results of that experiment are not promising.

While we can't avoid all the chemicals we're exposed to in everyday life, we can certainly choose safer options more often to reduce our overall toxic burden. I think it's really vital that we educate our patients on this topic because toxic exposure can have an extremely negative impact on health outcomes. Many patients, as I mentioned, have no idea that they are being experimented on, if we use that analogy, so making them aware of this is a good first step to motivating change.

I do want to be clear that it's impossible to avoid all exposure to these chemicals, and unfortunately, it's just a fact of modern life. You may notice that some patients will tend to get caught up in this topic and get extremely stressed out about the chemicals that they are exposed to on a daily basis and take some rather extreme measures. I think it's important to remind them that the body does have an innate capacity to detoxify, and when we support those detoxification systems, we should be able to handle some mild exposure to toxins. Of course, too much stress can cause more problems than it solves for many patients and would actually decrease our ability to detoxify environmental toxins, so be on the lookout for patients who fit this description, as they may need more coaching to find the right level of effort to reduce their toxic load without increasing their stress burden.

While many of your patients will have heard that toxins aren't good for them and will likely be aware of the big ones such as lead and mercury, they may be less aware of chemicals that don't get a lot of airplay in the media. Changing their lifestyle to reduce toxic burden can be time consuming and sometimes costly, so it's important not to rush them through it. Start with one area of their life—food is always a good place to start—and then work your way through to their personal care products, their water, etc. It's easy to get overwhelmed by what you need to change in your life to reduce toxic burden, but if you take it step by step, there is a lot less chance of overwhelm happening and a lot greater chances of success.

Okay, in the next presentation, I'll go over basic recommendations for reducing toxic burden. Thanks for watching.