

Module 8 Resources

Toxins

- Healing the brain requires avoiding toxins and things in our environments that are harmful to our mental health. The word “toxin” gets used a lot and can lead to a lot of unnecessary anxiety. And it can be very depressing to think about how our environment is increasingly contaminated with toxins, from lead in water to persistent organic pollutants (POPs) that linger in our environments for decades. While toxins rarely are the primary cause of depression and anxiety, everyone with a brain should try to decrease the burden of toxins on their brain. That toxins can ramp up inflammatory processes and harm our mental health is increasingly clear.
- The most common sources of toxins for most people are food and food packaging, along with beauty and personal care products.
- The average person consumes about 100,000 specks of microplastics everyday. Early data suggest that these can cause inflammation in the gut and oxidative stress. See more information below on plasticizers. An easy first step is to limit plastic containers and never microwave or heat food in plastic. Use glass storage containers at home. Learn more about the [possible health effects of microplastics](https://www.nature.com/articles/d41586-021-01143-3).
<https://www.nature.com/articles/d41586-021-01143-3>
- Cook at home more often than eating out.
- Filter your water. Tap water is generally safe, but with more reports in the news of lead exposure from old pipes and more awareness about the importance of hydration, a home water filter can be an economical way to improve the quality of your water. From whole house filters, to various personal size filters, there is an option that will work for you.
- Eat organic when you can. Learn which kinds of produce are most likely to be contaminated with pesticides to determine where organics are more important to prioritize. The Environmental Working Group (EWG) has a great list of their “dirty dozen” and “clean fifteen” which is a great way to start. [Dirty Dozen List](#)
- Check your Lab tests: If you’ve been having chronic unexplained mental health symptoms that have not responded to treatment, then you may consider getting your blood tested for certain heavy metals such as lead, mercury, or other toxins. Talk to your healthcare provider if you have concerns.
- Beyond your food, remember that cleaning products in your home, laundry detergent, and personal care products such as makeup are all items to pay attention to and make smart choices. If you use makeup on a regular basis, consider using cleaner makeup products. One resource that many find helpful is the [think dirty app](#). Based on a recent study from [Notre Dame](#), avoid make-up with (PFAS). According to the Environmental Working Group, women use an average of 12 products a day containing **168 different chemicals**. Men use fewer products, but still put on an average 85 chemicals on their bodies every day.
- Makeup: [The Toxic Twelve Chemicals and Contaminants in Cosmetics](#)
- Skin care: <https://www.ewg.org/skindeep/>

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- Personal care: <https://www.ewg.org/areas-focus/personal-care-products>

Plasticizers (BPA, Phthalates)

- Plastic is part of modern life, but we can still take steps to reduce our exposure to some of the harmful chemicals in plastic. Many plastics contain molecules that are classified as “endocrine disruptors” meaning they can interfere with our body’s hormonal regulation often by mimicking natural hormones like estrogen.
- Don’t microwave food in plastic containers because this releases the harmful chemicals in your food. Try to use glass containers like Pyrex when you heat and store food. You can find all shapes and sizes of these at home stores such as Bed, Bath, & Beyond, or The Container Store.
- Look for BPA-free cans and use fresh, dried, or frozen beans and vegetables instead of canned versions.
- Buy a reusable stainless steel water bottle instead of plastic. You’ll save a lot of money over the course of the year.
- Don’t buy Teflon-treated pans or any other kitchenware with industrial stain-resistant treatments.

Pesticides

- Pesticides are chemicals used in farming and agriculture to kill insects and other pests that destroy crops. This is one reason people choose to buy organic. While the health effects are debatable, much conventionally grown produce has pesticide residues.
- Talk to Your Farmer: One easy fix is to know your farmer and ask questions about how he or she applies chemicals to crops. That’s one of the great reasons to go to the farmer’s market - meet farmers! Many small farms can’t afford to become USDA certified, and some may use various chemicals in their agricultural practices. Most are eager to talk about this and share their knowledge. Support local farms that practice sustainability, using only minimal applications of pesticides — if any at all.
- Grow your own food. If you don’t have a yard, start with a pot of herbs in your kitchen window.
- Grow a chemical free lawn.
- Get involved in local politics and help inform people of the way potentially dangerous chemicals are applied in your community.

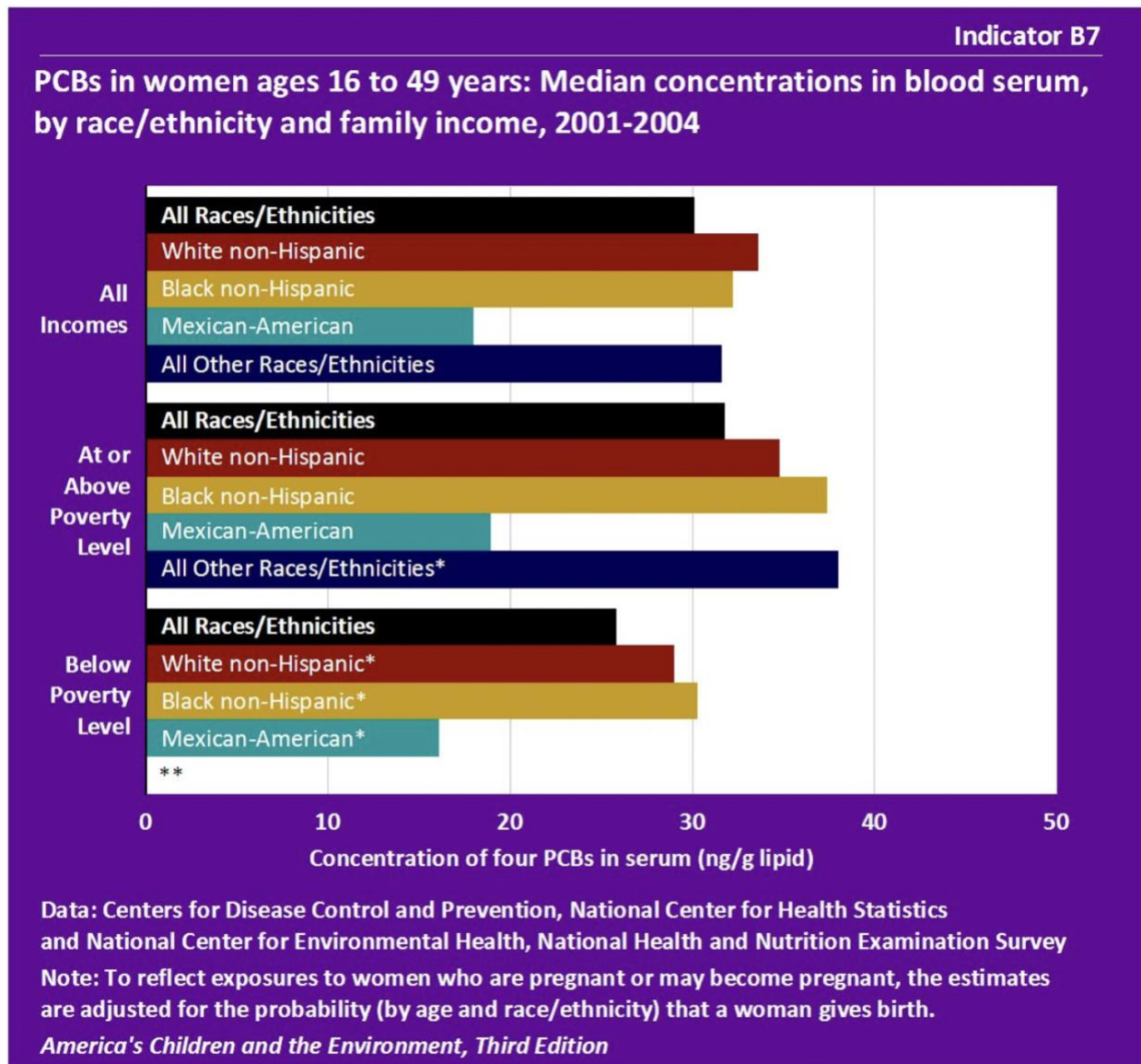
PCBs

- Polychlorinated biphenyls (PCBs) were manufactured from 1929 until production was banned in 1979 by the Toxic Substances Control Act (TSCA). They have spread throughout the United States and the world. Levels are now detected in every human.
- [PCBs are everywhere](#), but the good news is that levels in the environment are slowly decreasing. With some care you can greatly reduce your exposure. PCBs travel in fat.

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Industrially produced meats have higher concentrations than those that were raised sustainably. One of the most important ways to avoid this chemical is by eating lower on the food chain, which means sardines, shrimp, crabs, and shellfish. Only eat farmed fish if you know where it came from. Farmed salmon is one of the highest sources of PCBs.

- PCBs settle in sediment so avoid bottom feeders like catfish. Choose grass-fed over industrial-fed meat. Before eating fish caught in local rivers or lakes, check dietary guidelines from your state's Fish and Game Department of Natural Resources.



[PCBs per the EPA](#)

"They remain widely distributed in the environment due to their persistent nature. PCBs are present in fish, meat, poultry, dairy products, and breast milk, so dietary intake is an important pathway of exposure. Breast-feeding infants are exposed to PCBs in the milk of mothers with previous exposure. PCBs can also transfer prenatally from mother to fetus. Recent findings

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suggest that the presence of PCBs in indoor dust and indoor air may also constitute an important exposure pathway for some portion of the population.”

Artificial Food Coloring

- The research on food colorings and mental health is not conclusive, but one thing is clear: food coloring doesn't help your mental health.
- Don't eat processed food.
- Be serious about reading ingredient lists.
- Don't buy things you can't pronounce, and look for recognizable real foods that are natural colorants like paprika and turmeric.

Antibiotics: How to decrease your exposure

- Buy meat from animals that are raised naturally and sustainably, which means that they spend most of their life outdoors, at pasture.
- Don't buy farmed salmon or shrimp because FDA inspectors routinely find antibiotic residues on these imports.
- Buy your meat from a farmer who you know and will explain his or her practices.
- Tell the politicians that represent your state to support legislation banning the blanket use of antibiotics in livestock production.

[Environmental immune disruptors, inflammation and cancer risk](#)

[Phthalates in Food: How to Reduce Your Exposure](#)