

Toxins in your Home

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Share Guide holistic health magazine (www.ShareGuide.com)

The average American is exposed to hundreds of toxic chemicals every day. Many of us realize this and take steps to protect ourselves: we eat organic food, drink filtered water, avoid prescription drugs, and use air filters in our homes. But there are a lot of hidden contaminants that you may have never heard of--so here's a list of some of the most insidious and/or less publicized toxic chemicals. This list is not presented in any specific order, and is by no means comprehensive; unfortunately that would take up an entire magazine or website of its own.

Perfluorinated Chemicals (PFOs)

PFOs are used to manufacture Teflon (the coating on your non-stick pans). They are also in stain-resistant coatings for furniture, carpets, and clothing and are a breakdown product of chemicals used to coat food packaging, including fast food like McDonald's. PFOs are broadly toxic. They don't break down in the environment, and are considered to be persistent over geologic time scales. They nearly universally pollute human blood and have a half-life in the body of more than four years.

Brominated Flame Retardants (BFRs)

BFRs (also known as PBDEs) are routinely added to consumer products to reduce fire-related injury and property damage. These chemicals have been linked to thyroid hormone disruption, permanent learning and memory impairment, behavioral changes, hearing deficits, delayed puberty onset, fetal malformations, and possibly cancer. The San Francisco Bay Area is considered a hotspot for exposure to bromine-based chemicals. These chemicals can be found in the bodies of people and animals more than 20 years after exposure.

Dry Cleaning Chemicals

Over 95% of dry cleaners use the toxic chemical and probable carcinogen perchloroethylene (Perc) as the primary cleaning solvent. Short-term exposure can cause dizziness, fatigue, headaches, sweating, incoordination, and unconsciousness. Long-term exposure can cause liver and kidney damage. Once you bring dry-cleaned clothes home, they continue to off-gas Perc into the air, so if you must dry clean your clothes air them out before putting them away.

Plastic Softeners (Phthalates)

Polyvinyl-chloride plastic softeners (phthalates) are added to plastics to make them soft and malleable. They are ubiquitous--in shower curtains, children's toys, shampoo bottles, raincoats, and even perfumes (to help them adhere to the skin). These industrial chemicals are linked to birth defects in the male reproductive system and can damage hormonal development in children. They can also damage the liver, kidneys, and lungs. The presence of phthalates is of primary concern in toys, as children are much more vulnerable to toxic exposure. The European Union has banned the use of phthalates in children's toys. Although not yet banned in the U.S., the good news is that Toys "R" Us has banned them from all products sold in their stores.

Toxic Cosmetics & Personal Care Products

There are hundreds of cosmetics and bodycare products in your supermarket and even your natural food store that contain known or possible carcinogens, mutagens, and reproductive toxins. According to the

Environmental Working Group, 60% of the products they tested contained endocrine disruptors, and a third had ingredients suspected of being carcinogenic. The European Union has much stronger requirements than the U.S. and you may be surprised to know that cosmetics and bodycare are not subject to FDA authority. According to The Environmental Working Group, cosmetics and personal care products may be the main routes of exposure for Americans to many harmful chemicals.

Of major concern are sunscreen (contaminated with the toxic chemical oxybenzone); nailpolish (contaminated with the chemical dibutyl phthalate or DBP, which has been linked to cancer); and many soaps and shampoos (containing the carcinogenic petrochemical ethylene oxide, which produces 1,4-Dioxane, a very toxic contaminant).

The chemical 1,4-Dioxane is especially disturbing because this toxin has been found in several brands of supposedly "organic" bodycare--not USDA Certified Organic but products claiming to be at least 70% organic and thus allowed to use the word "Organic" in their name. This includes several products made by Nature's Gate, Jason, Kiss My Face, Giovanni and Desert Essence and others. There is currently a lawsuit in process filed by Dr. Bronner's and the Organic Consumers Association (OCA) in an attempt to get this chemical removed, or at the very least change the labeling, so that consumers are not fooled into thinking a product is organic and safe when it's not.

Leaching Plastic Water Bottles

Water sold in plastic bottles may be contaminated with Bisphenol A (BPA), a xenoestrogen chemical. This includes hard plastic lexan bottles made with polycarbonate plastics and identified by the #7 recycling symbol and many plastic baby bottles and drinking cups. If you taste plastic, you are drinking it, so get a different bottle. The type of plastic bottle in which water is sold is normally a #1, and is only recommended for one time use--so do not refill it. (The #2 HDPE high density polyethylene, #4 LDPE low density polyethylene, or #5 PP polypropylene water bottles are fine, so read what it says on the bottom of the bottle.)

BPA can leach from the above mentioned plastic bottles and is a known endocrine disruptor, disturbing the hormonal messaging in our bodies. Synthetic xenoestrogens are linked to breast cancer and uterine cancer in women, decreased testosterone levels in men, and are particularly devastating to babies and young children. BPA has even been linked to insulin resistance and type 2 diabetes.

Toxic Household Cleaners

There are many, many toxic chemicals in cleaners--in bathroom disinfectants, car waxes, window cleaners, furniture polish, drain cleaners, oven cleaners, and dish detergent. Many of these products contain chlorine in a dry form that is highly concentrated. It irritates the skin, the eyes, and the respiratory system, and is the #1 cause of child poisonings, according to poison control centers. Some cleaners contain hydrochloric acid, a highly corrosive irritant to both skin and eyes that can damage your kidneys and liver.

Furniture polish and car waxes contain petroleum distillates, chemicals that can cause skin and lung cancer; entry into the lungs may cause fatal pulmonary edema. Carpet cleaners may contain perchlorethylene, a known carcinogen, and ammonium hydroxide, a corrosive that's damaging to eyes, skin and respiratory passages.

Bathroom cleaners often contain sodium hypochlorite, a corrosive that irritates or burns skin and eyes, and causes fluid in the lungs, which can lead to coma or death. They also contain formaldehyde, a highly toxic known carcinogen. Drain cleaners can contain trichloroethane, an eye and skin irritant and nervous system depressant; it can also damage your liver and kidneys.

Although some of the chemicals mentioned in this article are hard to avoid, it is not difficult to make your own

cleaners. If you are not keen to do this, you can purchase green and nontoxic cleaners at many local stores. They may cost a little more money, but it's surely worth it!

References: Environmental Working Group (ewg.org); *Exposed* by Mark Schapiro ©2007, Chelsea Green Publishing; Environmental Health Perspectives (ehponline.org); Grinning Planet (grinningplanet.com) and Consumer Law Page (consumerlawpage.com).