Chemical Exposure Linked to Escalating Healthcare Costs (and How You Can Reduce Your Risks)

Video Source: eriefloors

By Dr. Mercola | mercola.com

While the World Health Organization estimates that 1 in 4 deaths are related to living and working in a toxic environment[1,2,3,4] – with air pollution being the greatest contributor—your diet, personal care, and common household products likely pose the most immediate risk to your and your family's health.

Related Article: Toxic Air Pollution Another Big Problem With Fracking

Repeated tests have confirmed that those who eat primarily organic foods tend to have far lower levels of toxins in their system. Your choice of household goods, building materials, and furniture can also play a role, as many contain toxic chemicals like flame retardants and formaldehyde.

Do You Have Toxic Flooring in Your Home?

In fact, according to a recent report[5] by the National Center for Environmental Health at the U.S. Centers for Disease Control and Prevention (CDC), and the Agency for Toxic Substances and Disease Registry, formaldehyde in certain laminate floors may pose a greater health risk than previously

suspected.

Not only does the report say that everyone exposed can experience some adverse health effects, the lifetime cancer risk is also higher than previously estimated. These issues are specifically associated with laminate wood flooring produced in China and sold by Lumber Liquidators.

The company announced it stopped selling this type of flooring last year, but if you already have it installed in your house, it may pose a hidden, long-term health risk to everyone in your home. According to CNN:[6]

"The lifetime cancer risk increased from the previous estimate of 2 to 9 extra cases for every 100,000 people to between 6 and 30 extra cases per 100,000 people…

Individuals who have this type of flooring should take steps to reduce exposure, including opening windows daily to get fresh air, using exhaust fans and reducing other sources of formaldehyde, such as tobacco smoke.

Anyone with the floors who is experiencing symptoms such as eye irritation and breathing difficulty should seek medical attention. Professional air testing should be considered if symptoms are persistent."

On March 22, 2016, Lumber Liquidators Inc. paid a $2.5 million settlement to the California Air Resources Board[7] over charges that the company "failed to take reasonable prudent precautions to ensure those products met such limits designed to protect public health."

Toxic Burden Becoming Evident in

Health Statistics

Health statistics suggest the toxic burden is becoming too great for children and adults alike, and warnings have been issued by a number of different organizations, agencies, and health experts around the world.

- Dr. David Bellinger, a professor of Neurology at Harvard Medical School estimates Americans have lost a total of 16.9 million IQ points due to exposure to organophosphate pesticides.[9]
- A recent report[10,11] by the International Federation of Gynecology and Obstetrics[12] warns that chemical exposures now represent a major threat to human health and reproduction.
- An Endocrine Society task force also recently issued a new scientific statement[13,14] on endocrine-disrupting chemicals, noting that the health effects of hormone-disrupting chemicals are such that everyone needs to take proactive steps to avoid them.
- One in 5 cancers are thought to be due to environmental chemicals, and according to recent studies, not only can miniscule **amounts of chemicals amplify each other's adverse effects when combined,**[15]this even applies to chemicals deemed "safe" on their own.

Basically, the analysis[16] found that the *cumulative effects* of *non-carcinogenic* chemicals can act in concert to synergistically produce carcinogenic activity—a finding that overturns and more or less nullifies conventional testing for carcinogens.

Chemical Exposure Costs Billions of

Dollars in Healthcare Costs

As reported by National Geographic,[17] "Researchers conclude they are 99 percent certain that hormone-altering chemicals are linked to attention problems, diabetes, [and] other health problems."

According to recent research,[18,19,20] exposure to endocrine-disrupting chemicals costs the European Union (EU) €1.4 billion ($1.6 billion) a year in women's health care costs alone, for the treatment of uterine fibroids, endometriosis, and related health problems.

When other health issues are included, such as infertility and male reproductive dysfunctions, birth defects, obesity, diabetes, cardiovascular disease, and neurobehavioral and learning disorders, the medical expenses associated with endocrine-disrupting chemicals rise to a whopping €157 billion ($178 billion) annually.

That's more than the combined proposed 2016 budgets for the U.S. Department of Education, Department of Health and Human Services, National Park Service, and Environmental Protection Agency put together.

As noted by Science Daily:[21]

"Linda Birnbaum, the leading environmental health official in the U.S. government, called the new findings, which include four published papers, "a wake-up call" for policymakers and health experts. If you applied these [health care] numbers to the U.S., they would be applicable, and in some cases higher," says Birnbaum…"

Endocrine-Disruptors and Human Health

A number of common household chemicals are endocrine disruptors, meaning, they alter the normal function of your hormones. These are referred to as "endocrine disrupting chemicals" (EDCs). A 2013 Environmental Working Group (EWG) report[22] identified many of the best-known hormone wreckers; 12 of the worst are listed in the following table.

Bisphenol-A (BPA)	Dioxin	Atrazine	Phthalates
Perchlorate	Fire retardants	Lead	Mercury
Arsenic	Perfluorinated chemicals(PFCs)	Organophosphate pesticides	Glycol ethers

Phthalates and bisphenol-A (BPA) have perhaps received most of the attention over the past several years. In the European healthcare cost study above, they specifically looked at the link between phthalates and endometriosis, while uterine fibroids were associated with exposure to diphenyldichloroethene (DDE). The researchers estimate that 20 to 39 percent of uterine fibroids and endometriosis are caused by exposure to these specific chemicals.

Small but repeated EDC exposures can mimic your natural endocrine system, and this is why many experts believe there is no safe level of exposure for EDCs. The effects of in utero and early exposure to EDCs can now be seen among children and young women:

- Children are entering puberty at younger and younger ages. In 2010, the average age of the onset of puberty was 10.5 years for girls—four years younger than in 1860, when it was 16.6 years,[23] and hormone-disrupting chemicals are likely the cause.[24,25]

- Early-onset of menopause is striking ever younger women. This effect was demonstrated in animal studies decades ago, and is now turning out to hold true in humans as well.

Greatest Healthcare Expense Linked to Developmental Problems

The most problematic and most costly effect of EDCs is their effect on brain development and neurological function. According to the EU's report, healthcare costs for neurological effects alone total at least $146 billion per year. As reported by National Geographic:[26] "Evidence linking the pesticides and flame retardants to neurological effects was the strongest, showing 'near certainty of causation.'" Strong evidence also exists for:

- BPA (found in hard plastics, the lining of cans, and paper receipts)
- Phthalates (found in soft plastics and vinyl products)
- DDE (a breakdown product of DDT. Since it lingers in the environment, exposure still occurs via food even though DDT is no longer in use)
- Organophosphate pesticides
- Brominated flame retardants (PBDEs, found in older furniture and foam cushions)

BPA, DDE, and phthalates appear to be most strongly linked to obesity and diabetes. Phthalates are also linked to male[27] and female gynecological effects, while flame retardants and organophosphate pesticides have the strongest neurological effects. When you consider that the average person is likely exposed to all of these in any given day, plus any number of other chemicals, it becomes evident that human health is under tremendous strain—even *before* birth.

Related Article: Beware: A Hospital Stay is 10 Days More Likely To Kill You Than a Car Accident

A 2005 landmark study[28] found a total of 287 chemicals from pesticides, consumer products, food packaging and environmental waste, including BPA, flame-retardants, PCBs, and DDT in the umbilical cord blood of infants born in the U.S.. Prenatal exposure to chemicals such as these have been linked to everything from abnormal fetal development, diminished intelligence, behavior problems, infertility, abnormal sexual maturation, metabolic dysfunction, and cancers later in life.[29,30]

Many Replacement Chemicals Are Just As Dangerous

In the June 2015 issue of Chemical & Engineering News, three articles[31] examined phthalates and possible replacement chemicals. Unfortunately, many of the replacements are still within the phthalate family of chemicals, and while they may appear to have a less hazardous profile, this really does not address the problem—it simply hides it for a while, until more research becomes available.

A perfect example of this is bisphenol-A (BPA), which many manufacturers have simply replaced with bisphenol-S (BPS). Lo and behold, BPS produces many of the same health effects as BPA—including reproductive problems and cancer. This is why I changed my recommendation to look for BPA-free plastics, as such labels may be completely meaningless in terms of safety. Glass is by far your safest alternative.

Most recently, research[32] suggests BPS triggers fat cell formation. Interestingly, cells exposed to the *smallest* and the *largest*amounts of BPS accumulated the most amount of fat. Intermediate or "moderate" amounts resulted in the least

amount of fat accumulation in the cells. According to Medical Daily:[33]

"The researchers attributed this anomaly to the fact that tiny amounts of endocrine-disrupting chemicals can interfere with the functioning of hormones, since small changes in hormone levels are designed to trigger adjustments in metabolism, respiration, heart rate, and other bodily functions, while moderate amounts are less triggering."

Chemical Bill Protects Chemical Industry By Gutting Chemical Regulations

Crazy enough, as warnings about chemical exposure mount, the U.S. government is going *backward* when it comes to protecting public health. The Toxic Substances Control Act of 1976 has been criticized as weak and broken, and legislation has been created to update this outdated law. Alas, the updates actually weaken it even further! In a recent article, the Environmental Working Group lists a number of problems with H.R. 2576, including the following:[34]

- First of all, a last-minute clause sneaked into the bill (section 7c) would shield Monsanto from liability for polychlorinated biphenyls (PCB) pollution and/or damage to human health.

Considering the fact that Monsanto is currently battling no less than seven lawsuits by U.S. cities over PCB contamination,[35] and 700 lawsuits on behalf of people who claim their exposure to PCBs caused non-Hodgkin lymphoma,[36] this "immunity rider" could easily be worth many billions of dollars for Monsanto. The clause would also prevent states from passing their own laws and regulations relating to PBCs.

- It also infringes on state rights to address chemical safety for other chemicals. Once the federal government issues regulation on a chemical, this bill would prevent individual states from taking any additional action. It also does not define the scope of this restriction. As noted by EWG: "That means that federal action on formaldehyde in flooring, for instance, could block states from regulating the chemical in cleaning products."
- Funding for the Environmental Protection Agency (EPA) would come from congressional appropriations rather than from industry fees, which would severely hamper the EPA's ability to assess the safety of chemicals.

Moreover, companies are allowed to request EPA safety reviews, and the bill does not put a cap on the number of industry-requested assessments that may be submitted, which would further hamper the EPA's ability to perform chemical safety assessments.

Another point to consider is this: In June 2015 a House panel approved a bill that cuts EPA funding by 9 percent[37] —$718 million—in 2016. This is a significant reduction, especially when you consider the EPA's funding has already been reduced by 20 percent since 2011.

- The bill also allows companies to keep certain chemicals secret when performing health and safety studies, which effectively render such studies useless. Moreover, the EPA would only be allowed to reevaluate a trade secret claim once every 10 years, regardless of any safety concerns that may arise in the meantime.
- Both the House and Senate bills also provide a gigantic loophole by exempting chemicals used in replacement parts from EPA regulations.

Tips to Help You Avoid Toxic Chemicals

It’s quite clear that the U.S. government is falling short when it comes to protecting you from the onslaught of toxic chemicals that may have devastating generational effects. Although no one can successfully steer clear of ALL chemicals and pollutants, you can certainly minimize your exposure by keeping a number of key principles in mind.

Eat real food, with a focus on locally grown, fresh and organic whole foods. Processed and packaged foods are a common source of chemicals such as BPA and phthalates. Wash fresh produce well, especially if it’s not organically grown.	Choose grass-pastured, sustainably raised meats and dairy to reduce your exposure to hormones, pesticides, and fertilizers. Avoid milk and other dairy products that contain the genetically engineered recombinant bovine growth hormone (rBGH or rBST).
Rather than eating conventional or farm-raised fish, which are often heavily contaminated with PCBs and mercury, supplement with a high-quality krill oil, or eat fish that is wild-caught and lab tested for purity, such as wild caught Alaskan salmon.	Buy products that come in glass bottles rather than plastic or cans, as chemicals can leach out of plastics (and plastic can linings), into the contents; be aware that even “BPA-free” plastics typically leach other endocrine-disrupting chemicals that are just as bad for you as BPA.
Store your food and beverages in glass, rather than plastic, and avoid using plastic wrap.	Use glass baby bottles.

Replace your non-stick pots and pans with ceramic or glass cookware.	Filter your tap water for both drinking AND bathing. If you can only afford to do one, filtering your bathing water may be more important, as your skin absorbs contaminants. To remove the endocrine disrupting herbicide Atrazine, make sure your filter is certified to remove it. According to the EWG, perchlorate can be filtered out using a reverse osmosis filter.
Look for products made by companies that are Earth-friendly, animal-friendly, sustainable, certified organic, and GMO-free. This applies to everything from food and personal care products to building materials, carpeting, paint, baby items, furniture, mattresses, and others.	Use a vacuum cleaner with a HEPA filter to remove contaminated house dust. This is one of the major routes of exposure to flame retardant chemicals.
When buying new products such as furniture, mattresses, or carpet padding, consider buying flame retardant free varieties, containing naturally less flammable materials, such as leather, wool, cotton, silk, and Kevlar.	Avoid stain- and water-resistant clothing, furniture and carpets to avoid perfluorinated chemicals (PFCs).

Make sure your baby's toys are BPA-free, such as pacifiers, teething rings and anything your child may be prone to suck or chew on—even books, which are often plasticized. It's advisable to avoid all plastic, especially flexible varieties.	Use natural cleaning products or make your own. Avoid those containing 2-butoxyethanol (EGBE) and methoxydiglycol (DEGME)—two toxic glycol ethers that can compromise your fertility and cause fetal harm.
Replace your vinyl shower curtain with a fabric one.	Replace feminine hygiene products (tampons and sanitary pads) with safer alternatives.
Switch over to organic toiletries, including shampoo, toothpaste, antiperspirants, and cosmetics. EWG's Skin Deep database[38] can help you find personal care products that are free of phthalates and other potentially dangerous chemicals.	Look for fragrance-free products. One artificial fragrance can contain hundreds—even thousands—of potentially toxic chemicals. Avoid fabric softeners and dryer sheets, which contain a mishmash of synthetic chemicals and fragrances.

Read more great articles at mercola.com