


MONTHLY MEMO:

ENDOCRINE DISRUPTING CHEMICALS & THEIR EFFECTS ON YOUR BODY



what are endocrine disrupting chemicals?

Endocrine Disrupting Chemicals (EDCs) are natural or human-made chemicals that may mimic, block, or interfere with the body's hormones, which are part of the endocrine system. The evidence is growing that EDCs add to health disorders throughout the life-course & increase incidences of noncommunicable diseases. These include cancer, urinary & reproductive system diseases, infertility, cardiovascular & respiratory diseases, allergies, neurodevelopmental & congenital defects like autism & ADHD, as well as overall endocrine (hormonal) disruption.

What do EDCs target in the body?

Endocrine glands, distributed throughout the body, produce the hormones that act as signaling molecules after release into the circulatory system. The human body is dependent on hormones for a healthy endocrine system, which controls many biological processes like normal growth, fertility, & reproduction in both females &

males. Hormones act in extremely small amounts, & minor disruptions in those levels may cause significant developmental & biological effects.

How can EDCs cause infertility?

In the past 50 years, there has been declines in sperm counts, earlier puberty in girls worldwide, & genital malformations in people & animals. At the same time, the annual global production of plastics, which contain EDCs, has grown from 50 million tons to 300 million since the 1970s & continues to increase. EDCs block connections between vital reproducing hormones (estrogen & testosterone) & their corresponding receptors, or they mimic hormonal activity, thereby tricking a hormone receptor into action. For men, sperm counts in certain regions of the world including the United States have declined by as much as 50 percent over the last half century. EDCs can also affect the duration of fertility.

Early life exposure to DDT, a synthetic toxic chemical, has shown earlier onset of puberty & lengthened menstrual cycles in women. Lead, another reproductive toxicant, may shorten a woman's reproductive lifespan. Even at low levels, lead changes reproductive hormones in pre-pubescent girls & healthy premenopausal women.

When do we encounter EDCs?

Endocrine disruptors are found in many everyday products, including some cosmetics, food & beverage packaging, toys, carpet, & pesticides. Some chemicals that act as flame retardants may also be endocrine disruptors. Contact with these chemicals may occur through air, diet, skin, & water. EDCs cannot be completely avoided or removed; however, you can make informed choices to reduce exposure & risk of any potential health effects by choosing a certain lifestyle.

What are the 6 most common EDCs?

Class	History of use	Health outcomes
Bisphenols	Used in plastics, food packaging, & thermal paper	Reproductive disorders, obesity, neurodevelopmental disorders
Phthalates	Used in plastics, personal care products, & some medications	Reproductive disorders, asthma, obesity, neurodevelopmental disorders
Pesticides	Used in agriculture & insect control	Reproductive disorders, cancer, neurodevelopmental disorders
Polychlorinated biphenyls (PCBS)	Used in electrical equipment, industrial applications, paints, plastics, & adhesives	Reproductive disorders, hormonal disruption, neurodevelopmental disorders
Polybrominated diphenyl ethers (PBDES)	Used as flame retardants in electronics & furniture	Neurodevelopmental disorders, thyroid disorders, cancer
Parabens	Used as preservatives in personal care products & some foods	Hormonal disruption, reproductive disorders, cancer



How can we ban EDCs?

Speaking to lawmakers, discussing the effects of EDCs within our communities, & pushing for bills that ban the use of these chemicals will help us find a resolution to this crisis.

Want to advocate? Reach out to: advocacy@endocrine.org

How can we manage the effects of EDCs?

Food & Water

- Trim the fat & skin from meat & drain the fat while cooking
- Wash fruits & vegetables with water, vinegar, & baking soda
- Don't microwave plastic food containers
- Avoid plastic containers designated #3, #6, & #7
- Reduce consumption of canned & processed foods
- Use glass, porcelain, or stainless-steel containers for hot food & drinks
- Prepare more meals at home & emphasize fresh ingredients
- Consider using a water filter
- Purchase organic produce, meat, & dairy products
- Replace older non-stick pans with newer ceramic-coated pans
- Eat a diversified diet with plenty of variety to create a healthy immune system

Exercise & Activity

- Check air quality in your area at <https://airnow.gov>
- Avoid outdoor exercise when pollution levels are high
- Avoid exercise near high traffic areas, choose routes away from busy roads & vehicles

Personal Care

- Read labels & avoid products containing phthalates
- Choose products labeled "Phthalate-Free", "BPA-Free", & "Paraben-Free"
- Avoid fragrances & opt for cosmetics labeled "no synthetic fragrance" or "scented only with essential oils"
- Wash your hands often, especially before preparing & eating food
- Minimize handling of receipts & thermal paper

Around the Home

- Replace & discard old fluorescent bulbs & deteriorating construction materials from older buildings
- Minimize burning wood or trash
- Use hand-powered or electric lawn care equipment instead of gas-powered alternatives
- Avoid smoking all together, yes.. nicotine has many endocrine disruptors
- Plant trees, which filter out airborne gases & particulate matter
- Purchase everyday household items that are "BPA Free"

Keep up with us!



Email us if you need us:
wrho.ou@gmail.com



Get access to more content on our Instagram: @wrhoou



Lastly, don't miss out on our TikTok & all of the back to school content we have planned for you: @ou.wrho