

Our Bodies

Our Environments

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Like other chemicals EDCs can remain in the environment for a long time if persistent and bioaccumulative.

Chemicals meet many of our daily needs. From the products we buy, to the environments we live and work in, every day we are faced with choices. The best way to protect yourself, your family and the environment is to make informed decisions.

The World's Response

Several United Nations Conventions protect humans and wildlife by controlling the use and trade of chemicals. These include the Stockholm Convention, the Basel Convention, the Rotterdam Convention, the Minamata Convention, and the Montreal Protocol. Some chemicals known or suspected to disrupt endocrine activity are covered by these Conventions.

The Strategic Approach to International Chemicals Management (SAICM), a policy framework for the sound management of chemicals, is helping governments around the world to take action to control the production, use and disposal of EDCs.

Things We Buy

Consumer products that may contain EDCs



Things we grow

Agricultural exposure to EDCs



Places We Work and Live

Indoor exposure to EDCs



Things We Make

Industrial exposure to EDCs



For further information contact:

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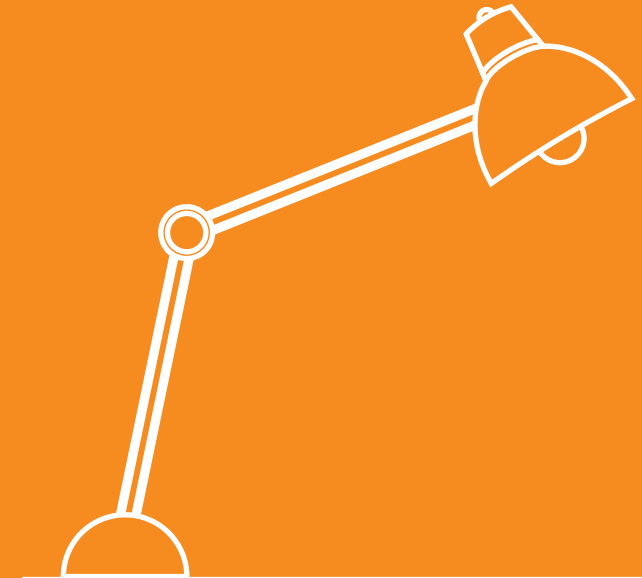
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Places We Work and Live

Indoor exposure to EDCs



EDCs in paints – the case of tributyltin (TBT)

TBT may be present in wood preservatives, pesticides and antifouling paints applied to hulls of ships, affecting coastal areas.

Paint containing TBT was banned after it was found to affect the reproductive function of molluscs, including the formation of an 'imposex' or male sex organ in female sea snails.

The affected mollusc populations recovered after the ban. However, low-level exposure to TBT continues from paint flakes and other residue that have settled into the seabed and waterways.

In rodent studies, TBT was found to enhance weight gain by disrupting thyroid function and reprogramming key parts of the endocrine system that govern metabolism, energy levels and appetite. Scientists have hypothesized that exposure to TBT during critical periods of development may be a contributing factor to obesity in humans, in addition to fatty diets and lack of exercise.

TBT is listed in the Rotterdam Convention as a chemical that requires "prior informed consent" before import.



EDCs in our working environments

1.



Office supplies, floors, and furniture could contain brominated flame retardants.

2.



Manufacturing and recycling of electrical and electronic equipment can increase exposure to PCBs, lead and brominated flame retardants.

3.



Construction materials such as treated wood, flooring, sealants, lacquers and paints may contain or be treated with potential EDCs, including phthalates and pentachlorophenol.

4.



The inappropriate disposal and incineration of wastes, pharmaceuticals and medical supplies may contaminate the environment, for example, by introducing pharmaceuticals into wastewater and releasing dioxins through combustion.

What to do

Reducing your exposure



AT WORK AND HOME

1. Label all hazardous materials and containers clearly, and store chemicals and equipment treated with chemicals in conformity with safety guidelines from your local government.
2. Post safety data sheets in clear view and follow training instructions for safe handling of materials.
3. In the workplace, let staff representatives and union leaders know if you have any concerns about exposure to hazardous chemicals.
4. Wash hands regularly and wear appropriate protective gear and clothing.
5. Ventilate indoor spaces and vehicles, and vacuum to remove dust .
6. Request the purchasing department or human resources to limit items in the office containing harmful chemicals.
7. Contact local authorities for proper cleaning and disposal and do not burn hazardous chemicals or pharmaceuticals containers.
8. Shower or change clothes after work. If contaminated, wash clothing separately from the rest of the laundry.
9. When you are pregnant and preparing a space for your baby, make sure furniture is free from brominated flame retardants. If the room or furniture needs paint, make sure that the paint does not contain lead.

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Things we grow

Agricultural exposure to EDCs



Places We Work and Live

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Things We Make

Industrial exposure to EDCs



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Things We Make

Industrial discharges of EDCs



EDCs in coolants and insulating fluids - polychlorinated biphenyls (PCBs)

PCBs have been widely used in industry as insulators, lubricants, flame retardants, plasticizers and ink solvents. Animal studies have shown that PCBs are linked to cancer and other serious health problems, including effects on the immune system, reproductive system, nervous system and endocrine system. Studies of the impacts in humans have suggested an association with cancer and other effects.

The Stockholm Convention on persistent organic pollutants (POPs) aims to phase out PCB use by the year 2025.



EDCs in manufacturing and waste recycling

1.



The production and recycling of lacquers, paints, adhesives, paper, sealants, rubber, glass, cables, electronics, plastics, chemicals, textiles, leather and metals may involve flame retardants and solvents including known or potential EDCs such as BPAs, phthalates, furans, dioxins, PBDEs and PCBs.

2.



Combustion of fossil fuels, waste, wood as well as other incineration processes can form POPs, release arsenic, and polycyclic aromatic hydrocarbons (PAHs).

3.



Waste incineration and open burning of products containing brominated flame retardants, can emit POPs such as dioxins and PCBs, which are EDCs, into the environment.

4.



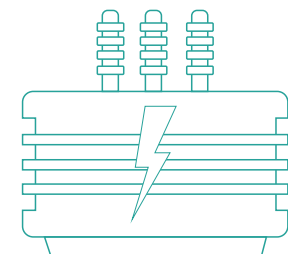
Electronics and products dumped in landfill sites can leach harmful chemicals into the environment.

What to do Reducing your exposure



AT WORK AND HOME:

1. Follow all instructions for handling hazardous materials.
2. Avoid inhalation of fumes and exposure to potentially harmful chemicals, especially during pregnancy.
3. Use appropriate personal protective equipment when using potentially harmful chemicals.
4. Clean work areas with vacuum cleaner or by wet brushing floors and surfaces.
5. Work with union leaders and management to design safer manufacturing processes that reduce and eliminate exposure to hazardous chemicals.
6. Contact local authorities for proper cleaning and disposal of all containers that store potentially harmful chemicals.
7. Contact local authorities for drop-off locations to recycle all electrical and electronic appliances that have reached their end of life.



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Things We Grow

Agricultural exposure to EDCs



United Nations
Environment Programme

Vinclozolin, a pesticide affecting reproduction

Vinclozolin is a pesticide previously used worldwide on oilseed crops, vines, fruits and vegetables. At high dose, the chemical was found to affect the reproductive functions of rabbits and rodents, with effects that include lowered testosterone levels in males and deformities of the sex organs. Vinclozolin was also linked to reduced egg laying and fertility in birds. It is known to produce tumors in rats, and is thought to potentially cause cancer.

The pesticide was widely used in Europe until a 2007 ban. In the US, the chemical was voluntarily cancelled by the registrant in 2014 and is currently being phased out. These restrictions have reduced the quantity of vinclozolin emitted to the environment.



EDCs used in agriculture

1.



Food crops treated with some pesticides, insecticides, fungicides and herbicides may expose humans who consume those foods to atrazine, vinclozolin and persistent organic pollutants (POPs), some of which are EDCs or potential EDCs. Livestock may be treated with insecticides and veterinary pharmaceuticals. Humans can be contaminated when in direct contact with these animals.

2.



Spraying pesticides can contaminate soil, surface and groundwater and the air, resulting in exposure to people and wildlife.

3.



Inappropriate disposal or incineration of obsolete pesticide stocks and their containers can result in long-lasting contamination of the environment.

What to do

Reducing your exposure



IN THE KITCHEN

1. Wash produce with safe water before you cook and eat.
2. Cook food thoroughly at safe temperature.
3. Avoid consuming food grown in and around industrial waste areas.



IN YOUR GARDEN OR FIELD

1. Learn about agro-ecology and other natural solutions to grow foods without chemicals. Favor non-chemical pest management approaches as far as possible, for example, by adopting companion planting that can use the natural properties of some plants to protect other plants from pests.
2. If using fertilizer and pesticides, purchase the appropriate amount of pesticides needed for use, label with waterproof marker to avoid accidental ingestion or use, and store in a secure location.
3. Use protective gloves, masks and clothing when handling any pesticides. Avoid spraying pesticide on windy days.
4. Never reuse pesticide containers to store other materials, especially food and water.
5. Change clothes worn when applying chemicals before having contact with family, especially children.
6. Contact local authorities, the UN FAO or CropLife International for the correct cleaning and disposal of pesticide containers. Never discharge pesticides to river or waterways.

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EDCs have long-term impacts

In the 1950-60s, doctors prescribed a potent estrogenic drug, diethylstilbestrol (DES), to women to prevent miscarriages and for a number of routine gynecological issues. Many girls exposed to DES in the womb later developed vaginal and breast cancers, and were more likely to have endometriosis. Boys exposed to DES in the womb had a greater incidence of undescended testes and cysts of their reproductive organs.

The long period between the initial exposure of babies, and the effects that only began to appear in their adolescence, meant that people did not immediately note the link with DES. Only after experimental work in administering DES to mice was the link between DES and reproductive cancers established. The case of DES alerted scientists that children in the womb could be affected by EDCs, even while their mothers appeared healthy, and that health risks from EDCs are particularly high during critical periods of fetal development.

Although banned since the 1970s, the effects of DES continue to appear in the grandchildren of the mothers who used it.

Products that may contain EDCs

Chemicals are contained in many products that we use every day, and provide many benefits, but we need to stay informed about their potential harm. As the science evolves, we need to take into account new information about exposure levels and impacts of various chemicals, including potential EDCs.

1.



Plastic products such as milk and water reusable bottles, children's toys, kitchen utensils and anti-grease cookware may contain lead, and cadmium and polyfluorinated compounds.

2.



Bedding and pillow covers, carpets, furniture, and textiles could contain brominated flame retardants and water and stain repellants. Electrical and electronic device may also contain brominated flame retardants.

3.



Household cleaning products such as soaps, disinfectants and air fresheners may contain potential EDCs.

4.



Personal care products including toothpaste, sunscreen, hand sanitizers, antiperspirants, cosmetics, shampoos and nail polish may contain potential EDCs, such as triclosan, phthalates, phenols and parabens.

What to do

Reducing your exposure



IN THE STORE

1. Read labels and ingredient lists to avoid chemicals known to be harmful, and look for environmental quality assurance certifications you can trust. They are a good way to reduce your overall chemical exposure, and they promote consideration of the environmental impacts of certain products.

2. Use fabric shopping bags to avoid the leaching of chemicals from plastics and additional plastic waste in the environment.
3. Ask retailers and manufacturers about the chemical additives in personal care products, furnishings and home wares, so that they know the public is seeking greater choice. Also ask local consumer groups to consider EDCs as an issue – they may research specific products and request more information from the manufacturers.
4. Where possible, avoid purchasing furniture treated with brominated flame retardants, or perfluorooctane sulfonate (PFOS).



AT HOME

1. Cook and store food using ceramic, glass or stainless steel utensils.
2. If using plastic storage containers, allow hot liquids and foods to cool before storing, and avoid reusing worn-out plastic containers.
3. Replace torn and worn-out covers of foam-filled products like car seats, mattresses and pillow covers.
4. Clean your home regularly, check air filters and maintain good ventilation. Open your windows when weather allows.
5. Keep chemicals, paints, solvents and glues in safe storage. Label them with waterproof permanent pen, or store them in the original containers, out of reach of children.
6. Use a respiratory mask, or cover your nose and mouth, when doing home repairs that emit dust and particles.
7. If using strong cleaning products and household chemicals, do so when children are not around.
8. Take old and unused pharmaceuticals, household chemicals and electronics to appropriate waste disposal centers.
9. When you are pregnant and preparing a space for your baby, make sure furniture is free from brominated flame retardants.

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