COMMON EDCs AND PRODUCTS THAT CONTAIN THEM

Bisphenol A (BPA)	Used in the production of polycarbonate plastics and epoxy resins utilized in food containers and cans, water bottles and jugs, plastic parts of kitchen tools, receipts, CDs, cell phones and dental products as well as in relining of water pipes etc. There are other bisphenols (BPS, BPF, BHPF etc.) which might also be EDCs, these are now used as substitutes for BPA.
Phthalates (ex. DEHP, BBP, DBP, DINP, DIDP, DIBP, DEP, DHP, DCHP, DNOP)	Used in soft PVC plastic e.g. flooring and other building and construction materials, plastic toys, food packaging materials, electronic equipment, wood finishes, detergents, adhesives, printing inks, and to a lesser extent in cosmetics, nail polish and perfume etc.
Perflouroalkyl substances (PFASs)	Used as stain and water repellents in building materials, waterproof clothes and shoes, carpets, paper products, as well as in non-stick cookware, food packaging, firefighting foams, lubricants and oils etc.
Alkylphenols: nonylphenol and octylphenol with their etoxylates	Used in cleaning products both for household and industrial use (for example car wash facilities), paints and varnishes as well as in production of textiles and plastics.
Halogenated flame retardants (PBDE, PBB, OPFR)	Used in furniture such as mattresses, couches, armchairs and other upholstered products, various plastic materials and electronic equipment e.g. computers, cables, screens, TVs
Organotin compounds (TBT, MBT etc)	Used as fungicides and stabilizers in plastic materials as well as in antifouling paint for boats, although a number of the applications have been discontinued, organotin compounds might still exist in older products.

HOW TO MINIMIZE OUR EXPOSURE TO EDCs?

- Choose alternatives to plastic where possible, especially with regard to food products packed in plastic
- Always avoid plastics coded with these symbols and those designated “PC” or “polycarbonate”, especially if they are in contact with food or is to be used by small children

- Choose “PVC-free” or at least “Phthalate-free” products
- Avoid old stuffed and soft plastic toys
- Avoid non-stick cookware, as these often contain perfluorinated compounds. Discard them if the surface is scratched or starts to give off flakes.
- Consume less household chemicals especially products labelled as “antibacterial”
- Avoid articles that have a strong chemical odour
- Choose products without fragrance for personal care and cleaning products
- Select products with few ingredients, since this yields less potentially harmful substances
- Choose products with certified eco-labels such as the EU-ecolabel. A text which states “ecologic” or similar without a certification is no guarantee for anything

The EU regulation (REACH) entitles consumers to know whether the products they buy contain chemicals which are registered as substances of very high concern. These substances have severe and often irreversible effects on human health and the environment. A consumer can send a letter to a supplier and request information on a given product. The supplier is obliged to respond to a private consumer within 45 days and provide the requested information.

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EUROPEAN UNION
NonHazCity

ENDOCRINE DISRUPTING CHEMICALS (EDCs)

YOU CAN TAKE ACTION!

NonHazCity

WHY SHOULD WE AVOID EDCs?

Endocrine disrupting chemicals (EDCs) are substances that can interfere with our endocrine system by mimicking naturally occurring hormones. This may lead to a range of adverse health effects. These chemicals were intended to provide specific qualities to different products but they may also exhibit unintended side effects in the form of endocrine disruption. EDCs can be emitted to the environment during the production phase as well as during the use of articles and chemical products. These substances do not have safe exposure limits since they are effective even at very low doses; some EDCs may also accumulate in living organisms.

EDCs can interfere with our endocrine system in the following ways:

- They can mimic the actions of naturally produced hormones in our body.
- They can reduce the production of hormones or influence their release from endocrine glands.
- They can reduce the action of hormones by speeding up their metabolism.

Foetal development, infancy and early childhood are particularly vulnerable periods in human development since exposure to EDCs can exert effects during development that may not become evident as health problems until many years later.

POTENTIAL SOURCES OF EXPOSURE TO EDCs

The products and articles we surround ourselves with as well as other sources in the indoor and outdoor environment contain EDC compounds. Due to this, we are exposed to EDCs in different ways, for example:

- We are in direct contact with different objects that contain EDCs and absorb these substances through skin and by inhalation.
- We are exposed to EDCs through the consumption of food and water, since EDCs are ubiquitous in the environment due to unintended release from industry and use of articles and chemical products. EDCs can also migrate to food and water from packaging and storage containers.
- EDCs are transferred to babies through breast milk and to unborn children via the bloodstream through the placenta. This is a particularly alarming fact, since the immune and endocrine systems of small children and foetuses are under development.

EDCs have been found in many different product groups such as plastic materials, cosmetics and personal care products, cleaning products, paints, cookware, office supplies, toys, furniture, clothing and many others.

EFFECTS ON HUMAN HEALTH AND NATURE

Altered functions of the endocrine system may result in a variety of health effects in both humans and wildlife. EDCs are strongly suspected to hamper reproductive functions, as well as exert developmental, neurological, and immune system effects:

- Health problems in humans associated with EDCs include different types of cancer, heart diseases, neurodevelopmental delays in children, obesity, memory problems, diabetes, overall weakened immune responses and others.
- EDCs have been shown to affect wildlife populations, where the aquatic life is the most vulnerable group, particularly those animals that are on the top of food chain. Health effects in wildlife associated with EDCs include adverse effects on fish reproduction and development, including the feminisation or masculinisation of marine and fresh water animals. This has been observed in sites where effluent from wastewater treatment plants enter surface waters.

Some EDCs accumulate in the body or environment and are persistent, while others degrade rapidly. There is still some scientific uncertainty concerning the link between EDCs and health problems. This is due to the fact that the time between exposure and actual health problem is long, making it hard to exclude other factors that have an influence on our health. However, all indications so far point to EDCs being a potential health and environmental risk. National environmental agencies therefore work to strengthen the European chemicals legislation by suggesting specific regulations for EDCs as well as advising the general public to avoid EDCs.