

ENDOCRINE-DISRUPTING CHEMICALS (EDCS): A GLOBAL HEALTH CONCERN

HEALTH EFFECTS FROM EDCS COST THE US

\$340 BILLION PER YEAR
BY EDC TYPE



THE EDC REGULATORY ENVIRONMENT NEEDS BETTER LAWS, POLICIES, AND TESTING STRATEGIES TO PROTECT THE PUBLIC

	US	EU	Rest of the World
Where we are now:	EPA implements screening, testing and research programs to evaluate possible endocrine effects associated with the use of a chemical, but current testing strategies may not capture sensitive effects on the endocrine system	Europe is currently implementing criteria to define and regulate EDCs in the context of biocides and pesticides laws, yet these laws do not apply to other sectors of the economy	Over 120 countries, through a UNEP/WHO program on chemicals management, agreed to a resolution on the need to raise awareness and provide up-to-date information on EDCs
Opportunities for Improvement:	Academic scientists need to be included in regulatory decision making	The EU Commission needs to update its EDC strategy with new scientific information that's emerged in the past few years	International groups recognize that there needs to be more information sharing between different governments and organizations and more involvement from countries outside of the EU and US

FIVE RECOMMENDATIONS FOR POLICYMAKERS

1. Design regulations to protect the most vulnerable populations like fetuses, children, pregnant women, adolescents, and the elderly, from irreversible effects.
2. Address health issues related to EDCs with intergovernmental actions, including additional funding for research on EDCs. The Endocrine Society supports the cooperative actions described in the Strategic Approach to International Chemicals Management Endocrine Disrupting Chemicals Workplan for 2016-2020.
3. Include endocrine scientists with the right expertise in the hormonal systems and biological mechanisms for each endpoint in all processes related to governing EDC assessments.
4. Incorporate the most sensitive endpoints for EDCs into regulatory strategies. The current battery of classical guideline studies is insufficient.
5. Use systematic review in chemical assessments and to identify EDCs. Evaluate studies using the same criteria and make them publicly available for added transparency.

WHAT YOU NEED TO KNOW: HORMONES AND EDCS

WHAT ARE EDCS

Endocrine-disrupting chemicals (EDCs) are chemicals that mimic, block, or interfere with hormones in the body's endocrine system.

- Over 1,000 chemicals may be EDCs.
- Biomonitoring studies show that EDCs are present in nearly everyone.
- Research shows that EDCs have effects on human health at low exposure levels.
- EDCs have been linked to adverse health outcomes in children and adults including respiratory problems, certain cancers, metabolic issues, diabetes, obesity, cardiovascular problems, alterations in sperm quality and fertility, abnormalities in sex organs, endometriosis, early puberty, altered nervous system function, immune function, neurological and learning disabilities, and more.
- The timing of EDC exposure is important. Exposure during pregnancy and early childhood can lead to adverse effects such as growth and developmental issues.

WHAT ARE SOME OF THE MOST COMMON EDCS?



Plastics – Bisphenol A (BPA), phthalates



Personal care products – Phthalates



Children's products – Lead, phthalates, cadmium



Pesticides – Dichlorodiphenyltrichloroethane (DDT), methoxychlor, chlorpyrifos



Clothing – Perfluorochemicals (PFCs)



Antibacterials – Triclosan

