

Regulating endocrine disruptors linked to cancer

Earlier this year, a report commissioned by the European Parliament's Committee on Petitions (PETI) reviewed the scientific evidence on endocrine disruptors, chemicals that can interfere with endocrine system function, assessing the extent to which Europeans are exposed to these chemicals and their effects on human health. The report noted that endocrine disruptors have been linked to several cancers, including breast, prostate, vaginal, and thyroid cancers. It estimated that exposure to endocrine disruptors costs the EU €163 million each year.

The authors stressed the importance of accelerating the development of tests for endocrine disruption. They listed several areas of research that should be prioritised, including the epigenetic effects of endocrine disruptors, their activity across generations, and dose-response functions.

It is virtually impossible for Europeans to avoid contact with endocrine disruptors, the study states. They are found in food, food contact materials, cleaning products, cosmetics, furnishings, toys, and drinking water.

Some chemicals are addressed by specific regulation. Bisphenol A has been linked to breast and prostate cancer. It is used in materials that come into contact with consumables, such as water tanks and the inner coating of food and drink cans. The EU has banned the use of bisphenol A in baby bottles and in food containers for infants and young children.

"The EU is the only place in the world where there is legislation on endocrine disruptors as a whole," said Andreas Kortenkamp (Brunel University, London, UK). "But only for two sectors: pesticides and biocides, and with inadequate implementation of test methods." For industries such

as cosmetics, drinking water, food additives, food contact material, and toys, the EU has not established a working definition of endocrine disruptors, issued any guidance, or imposed any testing requirements.

Kortenkamp points out that one major research challenge is the lack of good animal models for the cancers that have been linked to endocrine disruptors. It is also tricky to find methods that take into account combined exposures. The PETI report characterised the testing requirements for pesticides and biocides as insufficient or needing reinforcement. "Endocrine disruption testing under these regulations is not mandatory," explains Kortenkamp. "One thing the EU could do immediately is to properly implement testing using the existing, internationally validated assays."

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For the study requested by the PETI committee see [http://www.europarl.europa.eu/RegData/etudes/STUD/2019/608866/IPOL_STU\(2019\)608866_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2019/608866/IPOL_STU(2019)608866_EN.pdf)