

Endocrine disruptors may increase risk of endometrial cancer

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Table full of cosmetic products. Credit: University Of Granada

Research [published](#) in the journal *Environmental Health Perspectives*, has revealed a link between environmental pollutants and endometrial cancer.

The research was carried out by the UGR, IDIBELL, the Catalan Institute of Oncology and the Biohealth Research Institute in Granada (ibs.GRANADA), and the collaborative study involved scientists and doctors from Bellvitge University Hospital and the Biomedical Research Networking Center for Epidemiology and Public Health (CIBERESP).

Endometrial cancer is a type of tumor that develops on the inner lining of the uterus. It accounts for more than 5,000 new cases of cancer in Spain each year and has a major impact on women's health. Moreover, the incidence of this type of cancer is increasing, partly due to population aging. As it is a hormone-dependent cancer, estrogens can play a role in its development and progression.

The study examined the relationship between [endometrial cancer](#) and exposure to mixtures of environmental pollutants that can disrupt hormone function. This class of chemicals, also known as endocrine disruptors, act as xenoestrogens and are found in many [industrial products](#), including pesticides and herbicides, as well as in cosmetics and other everyday consumer products.

Using advanced chemical analysis techniques and biological testing, the researchers assessed the total hormonal burden in the blood of more than 300 women with and without endometrial cancer. "The use of these biological tests helps us understand the negative impact of chemical mixtures," explains Marieta Fernández, a UGR professor and researcher at the Biohealth Research Institute in Granada (ibs.GRANADA) and CIBERESP.

The results show a link between exposure to endocrine disruptors and an increased risk of developing endometrial cancer. "Interestingly, we saw the effect with moderate doses of xenoestrogens, but not with high doses, similar to what was observed with endogenous hormones," adds Laura Costas, a researcher at IDIBELL and the Catalan Institute of Oncology.

"Since this is a hormone-dependent cancer, this relationship is probably linked to the nature of the tumor itself. Therefore, we also want to study whether the presence of xenoestrogens leads to a worse pathological evolution in women who already have the disease," says Costas, who is also a researcher at CIBERESP.

The research sheds light on the negative impact of [endocrine disruptors](#) on human health and has significant implications for public health. It also highlights the need to consider the combined effects of chemical mixtures when assessing environmental risk.

More information: Laura Costas et al, Total Effective Xenoestrogen Burden in Serum Samples and Risk of Endometrial Cancer in the Spanish Screenwide Case–Control Study, *Environmental Health Perspectives* (2024). [DOI: 10.1289/EHP13202](https://doi.org/10.1289/EHP13202)

Provided by University of Granada

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