

Exposure to endocrine disruptors leaves for both mother and the baby under threat.

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Introduction

Cosmetics, plastic containers, furnishings, toys, and infant bottles all contain them. Endocrine disruptors, or substances that mess with our hormones, are everywhere around us. However, the public is unaware of their severe impacts on human health. A rising number of studies have shown that exposure to certain environmental pollutants during pregnancy can cause both the mother and the fetus to have medium and long-term health concerns [1].

This is what a team of researchers from the Institute National de la Recherche Scientifique (INRS), University TELUQ, and Queen's University discovered after conducting a thorough review of the literature on more than a dozen of the most common Endocrine Disruptors (EDs), as well as a few whose effects are less well-known. They concentrated on chemicals that have been linked to changes in the reproductive system, metabolism, and mammary gland development during pregnancy.

The goal was to demonstrate that endocrine disruptors influence not just one, but two people during pregnancy. Professor Isabelle Planet, main author of the study and researcher in environmental toxicology at INRS, says, we sought to highlight the co-sensitivity of the mother and her kid to these environmental pollutants that are everywhere. She is also the co-founder and co-director of the Intersect Oral Centre for Endocrine Disruptor Analysis (ICEDA) [2].

Placenta defense

Pregnancy is a complicated process that causes both the mother and the child to undergo significant physiological changes. Various hormones and signaling mechanisms control this stage of life. As a result, it is a particularly vulnerable window of opportunity to contamination from outside sources.

Researchers highlighted the role of the placenta and its vulnerability to EDs by combining current studies. During pregnancy, the placenta regulates mother physiology and fetal growth. It creates hormones that are required during pregnancy. Any change in its functioning has a short-, medium-, and long-term impact on the mother's and her child's health. A faulty placenta can result in health problems later in life, such as diabetes, obesity, and other chronic disorders [3].

Perinatal life, which includes pregnancy, is a critical stage of development since it is at this time that systems are

established that will be beneficial throughout the child's and mother's lives. As a result, EDs' change of the placenta can have undetectable consequences that are only noticed later in life Professor Cathy Vaillancourt, co-author of the study and an expert on the impact of environmental factors on the endocrinology of the human placenta, explains. She is also the director of RISUQ and a member of the ICEDA scientific committee.

Early maternal exposure to specific endocrine disruptors has also been discovered to impair the development of mammary glands in unborn newborns, according to the researchers. As adults, they are more prone to get breast cancer as a result of this. Bisphenol a (BPA), which is found in some food-grade plastics, and diethylstilbestrol (DES), a synthetic estrogen that has been widely used in women for menopause treatment or to reduce the risk of pregnancy problems, are examples of this [4].

Endocrine disruptor exposure has also been related to an increased risk of prostate cancer

Many women believe they are aware of endocrine disruptors and their harmful consequences on their health, Plante says, but few adopt lifestyle modifications. Some women, for example, cease wearing makeup when pregnant but continue to color their hair or apply lotions and creams to their bodies.

Thousands of molecules are suspected of interacting with hormone receptors or hormone synthesis, but hundreds of thousands more are undoubtedly present. As a result, researchers focused on well-known compounds as well as lesser-known ones, such as those found in the liquids produced by fracking water during oil exploration.

As scientists, we want to emphasize those pregnant women and women planning to have children are especially vulnerable to endocrine disruptors. They must be informed about the dangers that these toxins pose to their health, as well as the health of their future kid "Professor Planet comes to a conclusion [5].

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