



Hidden danger: Contaminants in food are a source of endocrine disrupting chemicals

All these diseases are linked to the endocrine system, hormones and hormonal regulation in our body. The hormones keep our body in balance, maintaining homeostasis (regulation of internal conditions to keep them stable), and guiding growth and development. The current epidemic of diseases suggests that the balance of our endocrine system has been disrupted.

The Endocrine Society describes EDCs as "an exogenous [non-natural] chemical, or mixture of chemicals, that interferes with any aspect of hormone action". One of the early papers on the phenomenon was by Dr Theo Colborn in 1993. "The evidence is now overwhelming that prenatal exposure can lead to irreversible disorders," Colborn told *TIME* in a 2007 story. This would explain "the pandemic of endocrine-related diseases we are seeing, especially in the northern hemisphere. One out of three children born today will develop diabetes—and it is one out of two if you are a minority. Thyroid problems are everywhere."

The Endocrine Society was the first to take a public stance on EDCs with the 2009 publication of its scientific statement. The same year, the American Medical Association adopted a policy calling for improved regulatory oversight of EDCs based on "comprehensive data covering both low-level and high-level exposures".

"There is good reason to suspect that increasing chemical production and use is related to the growing incidence of endocrine-associated disorders over the past 20 years, including male reproductive problems, early female puberty, cancers, and neurobehavioural disorders," said Endocrine Society member Andrea C. Gore, lead author of a guide documenting the threat posed by EDCs after it was published last year.

EDCs are mostly man-made and found in pesticides, metals, additives or contaminants in food and personal care products. Human exposure to EDCs occurs via ingestion of food, dust and water, inhalation of gases and particles in the air, and through the skin. EDCs can also be transferred from a pregnant woman to a foetus or a child through the placenta and breast milk.

Today, smoking remains the single biggest cause of cancer in the world and it kills one person every 15 minutes. However, EDCs and its effects are more ubiquitous than that of tobacco.

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GUEST COLUMN

New culprit

Endocrine disrupting chemicals interfere with the body's hormonal system and cause major diseases, including cancer

BY NALINI RAO

Move over tobacco, cancer now has a new partner called EDC or endocrine disrupting chemicals. As an oncologist practising for the past 30 years, I have noticed a couple of striking trends. First, the number of cancer patients has been increasing continuously over the past two decades. Second, and much more alarming, is the fact that in the past three or four years, the age of the patients has come down drastically. I now get patients who are in their 20s and 30s whereas earlier they would be in their 50s and 60s.

What is causing this shift in demographics? Initially, cancer was considered to be a disease of old age. Then we learnt that it was caused by 'lifestyle', that is years of abuse of the body by a cancer-producing substance like tobacco or alcohol. But the cancer patients I get today are not old; nor have they abused any substance long enough for it to produce cancer.

In the time frame when the number of cancer cases grew, other diseases like diabetes, infertility, obesity, thyroid problems, autism and attention deficit disorders have also shown a steady growth. Is there a link between these diseases?