

Women's Health and Chemical Exposures

WE NEED WOMEN'S EQUITY FOR A TOXICS-FREE WORLD

Chemicals are common ingredients in most of the products we consume, they are used from the production stage, they last throughout the use of products, and once disposed, they can remain in the environment long after, if not forever.

Chemicals are literally found everywhere: at our workplaces (from factories, office buildings, hospitals, agricultural settings), at schools, at home (in electronics, furniture, clothing, household cleaning and personal care products, and many other products), and in urban and rural environments across the globe. We are at a point where we can no longer escape chemicals. Thousands of chemicals are known to have toxic impacts on our ecosystem and health, and thousands more have never been safety tested. Already, there is data showing the human health impacts of many highly toxic chemicals such as persistent organic pollutants (POPs) and endocrine disrupting chemicals (EDCs). Also, we are usually exposed to a concoction of different chemicals, yet there has been virtually no testing for combined effects from chemical exposures, which may have even more harmful impacts. There is also very limited research on the magnitude of their impact on different genders. Men and women face different social determinants due to different gender roles. They are exposed and impacted differently to waste and chemicals.

In 2015, the United Nations Member States adopted the 2030 Agenda for Sustainable Development, which includes 17 Sustainable Development Goals (SDGs) that can serve as the blueprint to achieve a better and more sustainable future for all. While there is no separate goal to achieve sound management of chemicals and wastes, this is essential for reaching most of the goals. Gender Equality is a separate goal (Goal 5) but is also a prerequisite for reaching most of the other goals, so it is imperative to achieve this in order to achieve other SDGs. All people, regardless of gender identity, must have the same rights, responsibilities, and opportunities to participate in the work toward management of chemicals and wastes, which is vital to achieve the majority of the 2030 SDGs.



WHAT ARE POPs?

POP_s are toxic chemical pollutants that contaminate the environment in all regions of the world. POP_s accumulate in the body tissues of wildlife and people; they cause human disabilities and diseases; and they disrupt sensitive ecosystems. In 2002, a global treaty called the Stockholm Convention on Persistent Organic Pollutants was adopted by the world's governments to protect human health and the environment from POP_s. Some common examples are: DDT.

Read more about POP_s at:
<https://ipen.org/toxic-priorities/what-are-pops>.

WHAT ARE EDCs?

EDCs are defined as: "an exogenous [non-natural] chemical, or mixture of chemicals, that interferes with any aspect of hormone action." Hormones are natural chemicals produced in cells within endocrine glands, which are located throughout the body.

They are widely used in many consumer products and are known to have severe health impacts which can be different for different genders.

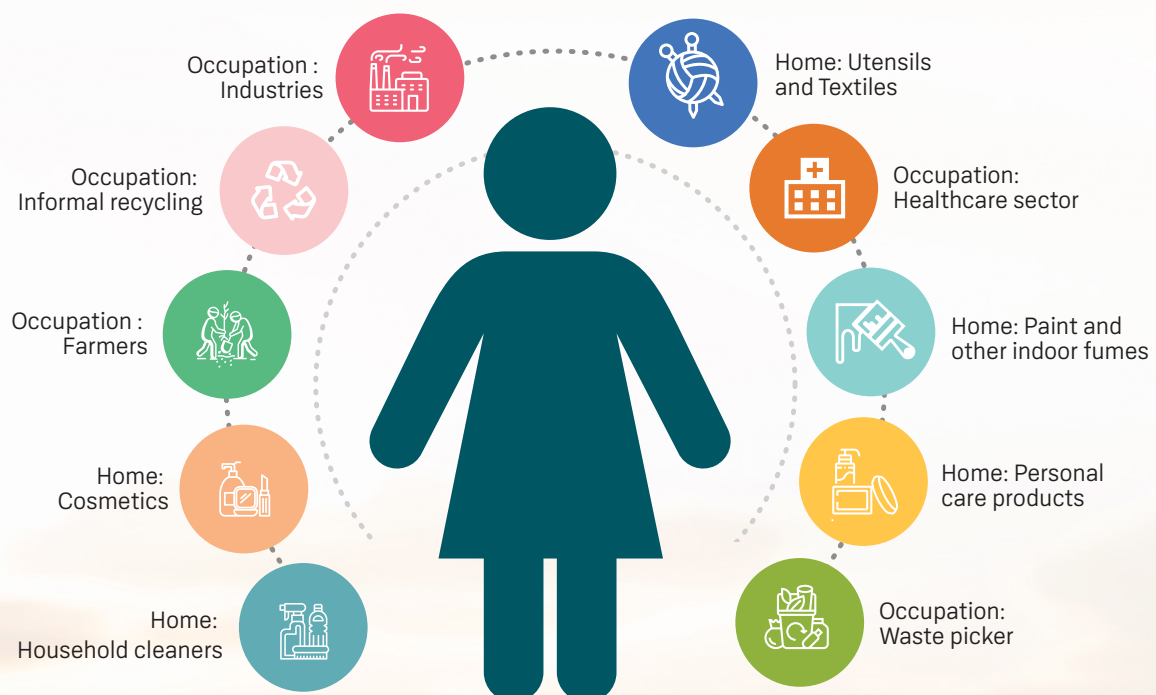
Read more about EDCs at www.ipen.org.

Women are differently susceptible to chemical exposure and health outcomes primarily because of their physiology, biological makeup, types of occupational exposures, exposures to chemicals in personal care and household products, and their social situations. They are particularly vulnerable during critical windows of development: in utero, early childhood, adolescence, pregnancy, lactation, and menopause. The risks also vary: biological factors – notably size, physiological, hormonal, and enzyme differences between women and men, and between adults and children – also influence susceptibility to health problems from exposure to toxic chemicals. Cross-generational studies have shown that the burden of chemicals may not only affect women's health but can be passed on from generation to generation when the mother is exposed during pregnancy or lactation.

WHY TALK ABOUT WOMEN AND CHEMICALS?

Women and men

- Have different physiological and biological makeup
- Face different social determinants and have different social roles
- Are differentially exposed based on the occupation and social situations
- Are differentially impacted during critical windows of development





Cultural norms may also impact women and girls' vulnerabilities to chemicals. Only about 10% of the estimated 13,000 chemicals used in beauty and hygiene products have been safety tested. A 2017 study concluded that women of color, independent of socio-economic status, face higher risks of exposure to higher levels of such chemicals as a result of using products such as skin-whiteners and hair products, which often contain toxic substances, including heavy metals such as mercury and lead.¹

Women often may not even know when they are being exposed to hazardous chemicals, especially from workplace exposures. Studies have found that women in jobs with potentially high exposure to carcinogens and EDCs have an elevated risk for breast cancer. These jobs included agriculture, automotive, plastics manufacturing, food canning, and metalworking, with the risk of premenopausal breast cancer highest for automotive plastics and food canning workers.³

In the agricultural sector, where the use of highly hazardous pesticides is common, more than 40% of the work in developing countries is done by women and girls.⁴ In many cases they may lack the education and tools they need to protect themselves from the harmful impacts of pesticides. Since women are usually taking care of their children, children can also suffer from pesticide exposure from the early stages of development through childhood, with harmful effects on their growth and development.

Women also make up most of the workforce in the textile sector, electronics sector, and the healthcare sector and may be exposed to a cocktail of chemicals at work. These are very chemical-intensive occupations that use thousands of chemicals, many of them hazardous.



There are a vast number of studies from all regions of the world showing the presence of pesticide residues in the blood, breast milk, and umbilical cord blood of women working in agriculture.²

1 Zota & Shamasunder, 2017, The environmental injustice of beauty: framing chemical exposures from beauty products as a health disparities concern, American Journal of Obstetrics & Gynecology, Vol 127(4):418
2 <https://ipen.org/documents/women-chemicals-and-sdgs>
3 <https://ipen.org/documents/women-chemicals-and-sdgs>
4 <https://www.brsmeas.org/default.aspx?tabid=7965>

In many developing countries, this workforce is not provided with protective gear, are not informed about the harmful chemicals that they are being exposed to, and are usually overworked and less paid than their male counterparts. There are documented cases of women suffering from cancers, reproductive disorders, congenital anomalies, and many other harmful and even deadly health conditions due to occupational exposures.

A 2006 study reviewed more than 32,000 worker files over more than 30 years from the multinational corporation IBM, looking at the workers' ultimate cause of death, and finding several specific cancers and other causes of death that were significantly elevated compared to the general US population. Results showed excesses of brain, kidney, and pancreatic cancer, along with melanoma, in male manufacturing workers, and for female workers, higher-than-expected numbers of deaths from kidney cancer, lymphoma, and leukemia. The authors concluded that the increases in cancer mortality was because the IBM factory workers were "more likely to be exposed to solvents and other chemical exposures in manufacturing operations."⁵

CONCLUSIONS AND RECOMMENDATIONS

The issue of women and chemicals needs more scientific and policy attention and some key action points should be taken into account. Firstly, emphasis on the importance of women's equal participation in chemicals management. Secondly, the need to prioritize the protection of women as a group highly susceptible to adverse effects from chemical exposure.

To achieve this, a number of immediate steps should be taken:

- 1** Increasing the availability of information in the public domain about product information on chemical additives and their health effects and further establish policies and systems to support the substitution of hazardous chemicals with safer products.
- 2** Documentation and availability of sex and gender- disaggregated data on effects of chemicals.
- 3** Formulation of policies focusing on phasing out hazardous chemicals with an especially high impact on women.

It is important for the producers to take responsibility of the products they produce and the impacts it has on the environment and human health, particularly vulnerable groups. As consumers we should exercise our right to know and demand for information disclosure and substitution of hazardous chemicals with safer alternatives.

⁵ Richard W Clapp, 2006, Mortality among US employees of a large computer manufacturing company: 1969–2001, Environmental Health volume 5, Article number: 30 (2006)