Chemical pollution – a women’s perspective

We are facing a toxic challenge

Study after study shows that harmful chemicals are found all over the world and in our bodies. They are found in our blood, in umbilical cords\(^1\) and in placentas, meaning that new-borns start life already contaminated by a mixture of chemicals.

Many of these chemicals can have serious health impacts. Some have been linked to cancers, reduced fertility\(^2\) and decreased IQ in children\(^3\). We are also exposed to multiple chemicals at the same time\(^4\), making up a toxic cocktail.

Women are disproportionately impacted by harmful chemicals due to biological, social and occupational factors.

What leads to this disproportionate impact?

Biological factors

Physiological, anatomical and other biological factors make women more vulnerable to exposure to harmful chemicals:

- **A different hormone system**, with higher levels of oestrogen. Therefore, they are more sensitive to chemicals that mimic oestrogens, such as those used in plastics\(^5\). Increased concentrations of oestrogens are related to reproductive diseases, such as endometriosis, and breast cancer\(^6\). Breast cancer is the most common type of cancer\(^7,8\) and one in eleven women will develop it during their lifetime\(^9\).

- **A higher percentage of fat tissue** than men. Women have a greater capacity to store bioaccumulative chemicals – those that accumulate in fatty tissues and remain in the body for decades\(^10\).

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1 Environmental Working Group (Sept. 2022), [Pregnant with PFAS: The threat of ‘forever chemicals’ in cord blood](https://www.ewg.org/health-toxics/pregnant-with-pfas-threat-forever-chemicals-cord-blood)
4 CHEM Trust (March 2022), [CHEMICAL COCKTAILS. The neglected threat of toxic mixtures and how to fix it](https://chem.org.uk/wp-content/uploads/2022/03/CHEMICAL-COCKTAILS.pdf)
6 Ibid.
7 WHO (26 Mar. 21), [Breast cancer](https://www.who.int/news-room/fact-sheets/detail/breast-cancer)
9 Europa Donna (The European Breast Cancer Coalition), [Statistics](https://www.europadonna.org/)
• Women and girls are more likely to suffer from iron deficiency\textsuperscript{11}, which can lead the body to absorb more toxic metals such as lead\textsuperscript{12} and cadmium\textsuperscript{13}.

• Pregnancy and motherhood are particularly critical periods\textsuperscript{14}: exposure during these times has been linked to preeclampsia, gestational diabetes and breast cancer\textsuperscript{15}. Chemicals can also pass into the placenta\textsuperscript{16} and disrupt the development of foetuses. Mothers can pass chemicals to their babies via breast milk\textsuperscript{17,18}. However, breastfeeding babies is acknowledged to be the best option for their health\textsuperscript{19}.

• Osteoporosis is more common among women\textsuperscript{20} and this disease has been linked to exposure to certain chemicals\textsuperscript{21}.

Social and occupational factors

Certain products primarily used by women and girls can contain harmful chemicals, including:

• Make-up and cosmetics\textsuperscript{22} – on average, women apply nine different cosmetics per day and 15 per week\textsuperscript{23}.

• Menstrual products – these are used for long hours and for several days in a row. They can contain substances linked to cancers and reproductive disorders, hormone disruptors, allergens, pesticide residues and other harmful chemicals\textsuperscript{24,25,26}.

• Cleaning products – these can contain endocrine disruptors and substances linked to respiratory disorders\textsuperscript{27}. Exposure occurs via contact with the skin or via inhalation\textsuperscript{28}. Women still do the majority of housework, including cleaning (e.g. 72% in France\textsuperscript{29}).
Some chemicals might not be on the ingredients list. The term “fragrance” or “perfume/parfum” can hide a mix of hazardous chemicals, as companies are not obliged to disclose them\textsuperscript{30}. This is the case for 20 well-known brands of perfume tested in a recent study\textsuperscript{31}.

Many jobs that involve direct contact with hazardous chemicals such as beauty salon workers, cleaners and cashiers\textsuperscript{32} are done predominantly by women\textsuperscript{33,34}. For example, women working in nail care salons can be exposed to carcinogens and hormone-disrupting chemicals\textsuperscript{35}.

What can be done?

The REACH regulation is the main EU chemicals safety law. It was introduced in 2006 to better protect people, wildlife, and the environment from harmful chemicals, while enhancing competitiveness and innovation.

But we are facing a chemical pollution challenge and REACH is not up to the task.

A REACH reform was promised for 2022, but has been politically delayed in the Commission.

Every month of delay adds to the toxic chemicals in our environment and in our bodies.

We need a revised REACH to better protect our health and environment, and to keep up with the companies that want to innovate and are asking for certainty.

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Check out the CHEM Trust website and subscribe to our newsletters for more information.

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\textsuperscript{30} Tegengif, KEMI, Kom op tegen Kanker (2022), What’s that smell?
\textsuperscript{31} Ibid.
\textsuperscript{32} CHEM Trust, Till Receipts: Avoiding endocrine disruptors at the checkout
\textsuperscript{33} Eurostat (7 Mar. 2018), Jobs still split along gender lines
\textsuperscript{34} EEB, WECF (Jul. 2021), Why the European Green Deal needs ecofeminism, p. 124
\textsuperscript{35} ANSES (26 Oct. 2017), Opinion on the risk assessment of occupational exposure to products used for nail care and decoration