

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 cords¹ 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 fertility² and decreased IQ in children³. We are also exposed to multiple chemicals at the same time⁴, 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 plastics⁵. Increased concentrations of oestrogens are related to reproductive diseases, such as endometriosis, and breast cancer⁶. Breast cancer is the most common type of cancer^{7,8} and one in eleven women will develop it during their lifetime⁹.
- 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 decades¹⁰.

¹ Environmental Working Group (Sept. 2022), [Pregnant with PFAS: The threat of 'forever chemicals' in cord blood](#)

² WECF (2016), [Women and Chemicals. The impact of hazardous chemicals on women](#), p. 20

³ CHEM Trust (March 2017), [No Brainer. The impact of chemicals on children's brain development](#)

⁴ CHEM Trust (March 2022), [CHEMICAL COCKTAILS. The neglected threat of toxic mixtures and how to fix it](#)

⁵ EEB, WECF (Jul. 2021), [Why the European Green Deal needs ecofeminism](#), p. 124

⁶ Ibid.

⁷ WHO (26 Mar. 21), [Breast cancer](#)

⁸ H. Lynn (Jan. 2007), [Politics and Prevention: Linking breast cancer and our environment](#)

⁹ Europa Donna (The European Breast Cancer Coalition), [Statistics](#)

¹⁰ EEB, WECF (Jul. 2021), [Why the European Green Deal needs ecofeminism](#), p. 124

- Women and girls are more likely to suffer from **iron deficiency**¹¹, which can lead the body to absorb more toxic metals such as lead¹² and cadmium¹³.
- **Pregnancy and motherhood** are particularly critical periods¹⁴: exposure during these times has been linked to preeclampsia, gestational diabetes and breast cancer¹⁵. Chemicals can also pass into the placenta¹⁶ and disrupt the development of fetuses. Mothers can pass chemicals to their babies via breast milk^{17,18}. However, breastfeeding babies is acknowledged to be the best option for their health¹⁹.
- **Osteoporosis** is more common among women²⁰ and this disease has been linked to exposure to certain chemicals²¹.

Social and occupational factors

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

- **Make-up and cosmetics**²² – on average, women apply nine different cosmetics per day and 15 per week²³.
- **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^{24,25,26}.
- **Cleaning products** – these can contain endocrine disruptors and substances linked to respiratory disorders²⁷. Exposure occurs via contact with the skin or via inhalation²⁸. Women still do the majority of housework, including cleaning (e.g. 72% in France²⁹).

¹¹ The Conversation (Jun. 2022), [Pourquoi le fer est indispensable à notre santé](#), section « Carence et anémie : qui est touché? »

¹² K. Yangho (Mar. 2018), [Effect of iron deficiency on the increased blood divalent metal concentrations](#) in L. Rodrigo, Iron Deficiency Anemia

¹³ H. M. Meltzer et. al. (Jul. 2010), [Low iron stores are related to higher blood concentrations of manganese, cobalt and cadmium in non-smoking, Norwegian women in the HUNT 2 study](#), *Environmental research*

¹⁴ J. Varshavsky (Mar. 2020), [Heightened susceptibility: A review of how pregnancy and chemical exposures influence maternal health](#), *Reproductive Toxicology*

¹⁵ Ibid.

¹⁶ L. Salto Mamsen (Mar. 2019), [Concentrations of perfluoroalkyl substances \(PFASs\) in human embryonic and fetal organs from first, second, and third trimester pregnancies](#), *Environment International*

¹⁷ M. Schlumpf (Nov. 2010), [Exposure patterns of UV filters, fragrances, parabens, phthalates, organochlor pesticides, PBDEs, and PCBs in human milk: Correlation of UV filters with use of cosmetics](#), *Chemosphere*

¹⁸ I. Serrano (Jul. 2021), [Concentrations of perfluoroalkyl substances in donor breast milk in Southern Spain and their potential determinants](#), *International Journal of Hygiene and Environmental Health*

¹⁹ World Health Organisation, [Health topics, Breastfeeding](#)

²⁰ NHS (13 Oct. 2022), [Osteoporosis - Causes](#)

²¹ [HBM4EU Newspaper](#) (Apr. 2022), p. 18

²² EEB, WECF (Jul. 2021), [Why the European Green Deal needs ecofeminism](#), p. 125

²³ Cosmetics Europe (2022), [European Consumer Perception Study 2022](#), p. 2

²⁴ ECHA blog, [Chemicals in feminine hygiene products](#)

²⁵ WEN (2018), [Seeing red menstruation & the environment](#)

²⁶ B. Desmedt (May 2020), [Sensitizing fragrances in absorbent hygiene products](#)

²⁷ WECF (May 2018), [Chez les femmes en particulier, l'usage de produits ménagers impacte la santé respiratoire](#)

²⁸ Ø. Svanes (May 2018), [Cleaning at home and at work in relation to lung function decline and airway obstruction](#)

²⁹ CESE (Mar. 2021), [Crise sanitaire et inégalités de genre](#), p. 20

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 them³⁰. This is the case for 20 well-known brands of perfume tested in a recent study³¹.

Many **jobs that involve direct contact with hazardous chemicals** such as beauty salon workers, cleaners and cashiers³² are done predominantly by women^{33,34}. For example, women working in nail care salons can be exposed to carcinogens and hormone-disrupting chemicals³⁵.

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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³⁰ Tegengif, KEMI, Kom op tegen Kanker (2022), [What's that smell?](#)

³¹ Ibid.

³² CHEM Trust, [Till Receipts: Avoiding endocrine disruptors at the checkout](#)

³³ Eurostat (7 Mar. 2018), [Jobs still split along gender lines](#)

³⁴ EEB, WECF (Jul. 2021), [Why the European Green Deal needs ecofeminism](#), p. 124

³⁵ ANSES (26 Oct. 2017), [Opinion on the risk assessment of occupational exposure to products used for nail care and decoration](#)