



Study: Elevated Levels of Toxic Chemicals Found in Menstrual Pads and Disposable Diapers

By Carla Burns (EWG)

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Many brands of menstrual pads and disposable diapers contain elevated levels of chemicals linked to developmental and reproductive harm, according to a [recent study](https://doi.org/10.1016/j.reprotox.2019.01.005) published in the journal *Reproductive Toxicology*.

The study, by a team from the University of Illinois at Urbana-Champaign, looked at 11 brands of menstrual pads and four brands of disposable diapers sold in the U.S. and several European and Asian nations. The brands, which were not identified, were tested for four kinds of phthalates and three kinds of volatile organic chemicals, or VOCs.

Babies and women of reproductive age – the groups that most use these products – are particularly susceptible to exposure to chemicals that may harm developmental and reproductive health. The researchers noted: “As sanitary pads and diapers are in direct contact with external genitalia for an extended period, there is a probability that a considerable amount of VOCs or

phthalates could be absorbed into the reproductive system.”

[\(https://www.ewg.org/skindeep/\)](https://www.ewg.org/skindeep/) Two phthalates – di-n-butyl phthalate, or DBP, and di-2-ethylhexyl phthalate, or DEHP – were detected in all of the brands of diapers and pads tested. Both are **classified by California regulators** [\(https://www.p65warnings.ca.gov/fact-sheets/di-n-butyl-phthalate-dbp/\)](https://www.p65warnings.ca.gov/fact-sheets/di-n-butyl-phthalate-dbp/) as reproductive and developmental toxicants. **European authorities** [http://ec.europa.eu/health/ph_risk/committees/sccp/documents/out287_en.pdf\)](http://ec.europa.eu/health/ph_risk/committees/sccp/documents/out287_en.pdf), also classify them as

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toxic to reproduction, noting that exposure to DBP may cause harm to the developing fetus. The highest concentration of DBP detected was much higher than what is found in common plastic goods, such as packaged film and plastic cups.

The researchers also detected potentially harmful VOCs in the products tested. Xylene was found in all 11 of the menstrual pad brands tested, toluene in nine, and methylene chloride in two. Toluene and xylene were detected in all four diaper brands tested. Exposure to these and other VOCs have been linked to dizziness, skin irritation and allergic reactions, and even damage to kidneys and the central nervous system, according to the **Environmental Protection Agency** [https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality\)](https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality) and the **Centers for Disease Control and Prevention** [https://www.cdc.gov/niosh/topics/indooenv/chemrelated.html\)](https://www.cdc.gov/niosh/topics/indooenv/chemrelated.html).

Previous research has detected toxic chemicals in diapers. Recently, ANSES, the French agency for food, environment and occupational health and safety, tested French diapers and found a **number of hazardous chemicals** [https://www.anses.fr/en/system/files/CONSO2017SA0019EN.pdf\)](https://www.anses.fr/en/system/files/CONSO2017SA0019EN.pdf), including formaldehyde and glyphosate. Formaldehyde is a VOC that has been classified as a known human carcinogen. Glyphosate is a pesticide classified as a probable human carcinogen

ANSES [https://www.anses.fr/en/content/anses-recommends-improving-baby-diaper-safety\)](https://www.anses.fr/en/content/anses-recommends-improving-baby-diaper-safety)’ risk assessment showed that the concentration of many of the detected chemicals could pose a threat to infant health. Because of these results, the agency recommended that manufacturers of disposable diapers stop using fragrance in their products, since it can include a number of skin-sensitizing components along with other ingredients of concern.

[\(https://www.ewg.org/childrenshealth/\)](https://www.ewg.org/childrenshealth/) The Food and Drug Administration does not currently classify baby diapers as a medical device. Diaper manufacturers do not have to disclose ingredients on packages, and diapers do not have to be tested to be proven safe for infants to wear. Menstruation management products, such as pads and tampons, are considered medical devices, but the FDA does not require manufacturers to disclose ingredients to consumers.

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To avoid these and other potentially harmful chemicals in diapers and menstrual products, **EWG recommends** [https://static.ewg.org/ewg-tips-sheets/EWG-5TipsSaferCosmeticsKids.pdf\)](https://static.ewg.org/ewg-tips-sheets/EWG-5TipsSaferCosmeticsKids.pdf) that you choose those without fragrance, plastic components or both. If you are not sure whether your product is made with ingredients of concern, contact the manufacturer to see if it contains phthalates or fragrance. If you are concerned about pesticides, consider an organic menstrual product or organic diapers.

AREAS OF FOCUS:

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Toxic Chemicals [\(/areas-focus/toxic-chemicals\)](/areas-focus/toxic-chemicals)

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