

# Preterm birth risk increases for pregnant women exposed to phthalates

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The odds of preterm delivery appear to increase for pregnant women exposed to phthalates, chemicals people are exposed to through contaminated food and water and in a variety of products including lotions, perfumes and deodorants, according to a study published by *JAMA Pediatrics*.

Prematurity is a leading cause of infant death and the effects of environmental exposures on preterm birth (defined as fewer than 37 weeks of gestation) are understudied. Exposure to the chemicals by [women](#) has previously been associated with disrupted thyroid hormone levels, endometriosis and breast cancer, according to the study background.

Kelly K. Ferguson, M.P.H., of the University of Michigan School of Public Health, Ann Arbor, and colleagues examined the association between phthalate exposure during pregnancy and preterm birth. The study, which was conducted at Brigham and Women's Hospital, Boston, included 130 women with preterm birth and 352 control participants with researchers analyzing urine samples during pregnancy for levels of phthalate metabolites.

The study results indicate an association between increases in some phthalate metabolite concentrations in urine during pregnancy and higher odds of preterm birth.

"Our results indicate a significant association between exposure to

phthalates during pregnancy and preterm birth, which solidifies prior laboratory and epidemiologic evidence. Furthermore, as exposure to phthalates is widespread and because the prevalence of [preterm birth](#) among women in our study cohort was similar to that in the general population, our results are generalizable to women in the United States and elsewhere. These data provide strong support for taking action in the prevention or reduction of phthalate exposure during [pregnancy](#)," the study concludes.

In a related editorial, Shanna H. Swan, Ph.D., of the Icahn School of Medicine at Mount Sinai, New York, writes: "Further support for a causal relationship between prenatal phthalate exposure and spontaneous [preterm delivery](#) would come from a study that obtained biomarkers, not only of [phthalate exposure](#), but also uterine inflammation, and showed these to be related in cases of spontaneous preterm delivery but not among those delivered preterm for a variety of medical indications. Ferguson et al have elegantly presented the rationale for such a study.

"Moreover, they have contributed the first robust study suggesting that [phthalates](#), pervasive in the environment of prenatal women, may be important contributors to the unknown and other causes of preterm delivery," Swan concludes.

**More information:** *JAMA Pediatr.* Published online November 18, 2013. [DOI: 10.1001/jamapediatrics.2013.3699](https://doi.org/10.1001/jamapediatrics.2013.3699)  
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