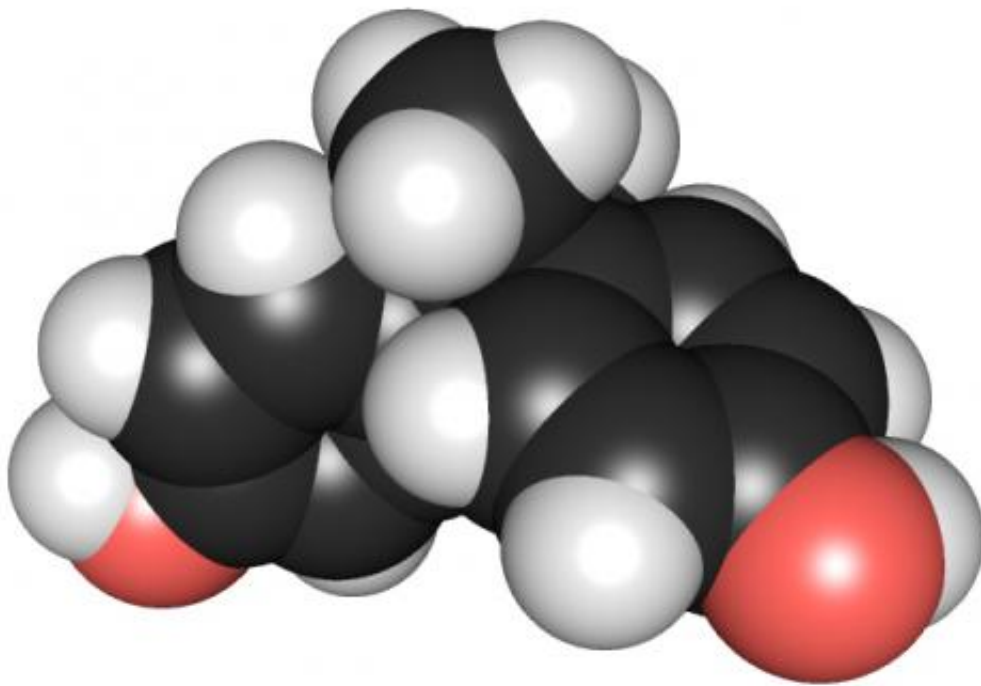


Common plastics chemical BPA linked to preterm birth

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3D chemical structure of bisphenol A. Credit: Edgar181 via Wikimedia Commons

Higher concentrations of the common plastics chemical and environmental pollutant Bisphenol A, or BPA, in a pregnant mother's blood may be a contributing factor in preterm births, according to a new study from The University of Texas Medical Branch at Galveston.

The new study, led by Ramkumar Menon, assistant professor in the department of obstetrics and gynecology at UTMB, in collaboration with Winthrop University Hospital and Kaiser Permanente Southern California, found that pregnant women with higher levels of BPA in their blood were more likely to deliver their babies early compared with women with lower levels of BPA.

The investigators analyzed blood samples from pregnant women when they were admitted to the hospital for labor and delivery and from the [amniotic fluid](#) of the fetus collected during labor. These samples were obtained by the Nashville Birth Cohort Biobank. The study was recently published in *The Journal of Maternal-Fetal & Neonatal Medicine*.

"Women are continuously exposed to BPA because it's used in the construction and coatings of food containers and its release into food is increased by microwave or other heat sources," Menon said. "In fact, BPA is so widely used that nearly all women have some level of exposure."

BPA is structurally similar to the female hormone estrogen and binds to estrogen receptors within the body, including those responsible for inflammation. Abnormal inflammation increases the risk of a number of pregnancy complications including water breaking early and [preterm birth](#). This is the first study to investigate the role of BPA blood levels on risk of preterm birth.

"Widespread use of BPA in materials of our daily life and our findings that all patients have some level of exposure suggests that contact with these materials is unavoidable," Menon said. "This suggests that a better understanding of how BPA may alter maternal physiology is needed to minimize the risk of adverse pregnancy outcomes."

The team is currently conducting studies using cells from [pregnant](#)

[women](#)'s uteruses and fetal membranes to document these molecular pathways and identify potential targets for intervention.

More information: Faranak Behnia et al. High bisphenol A (BPA) concentration in the maternal, but not fetal, compartment increases the risk of spontaneous preterm delivery, *The Journal of Maternal-Fetal & Neonatal Medicine* (2016). [DOI: 10.3109/14767058.2016.1139570](https://doi.org/10.3109/14767058.2016.1139570)

Provided by University of Texas Medical Branch at Galveston

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