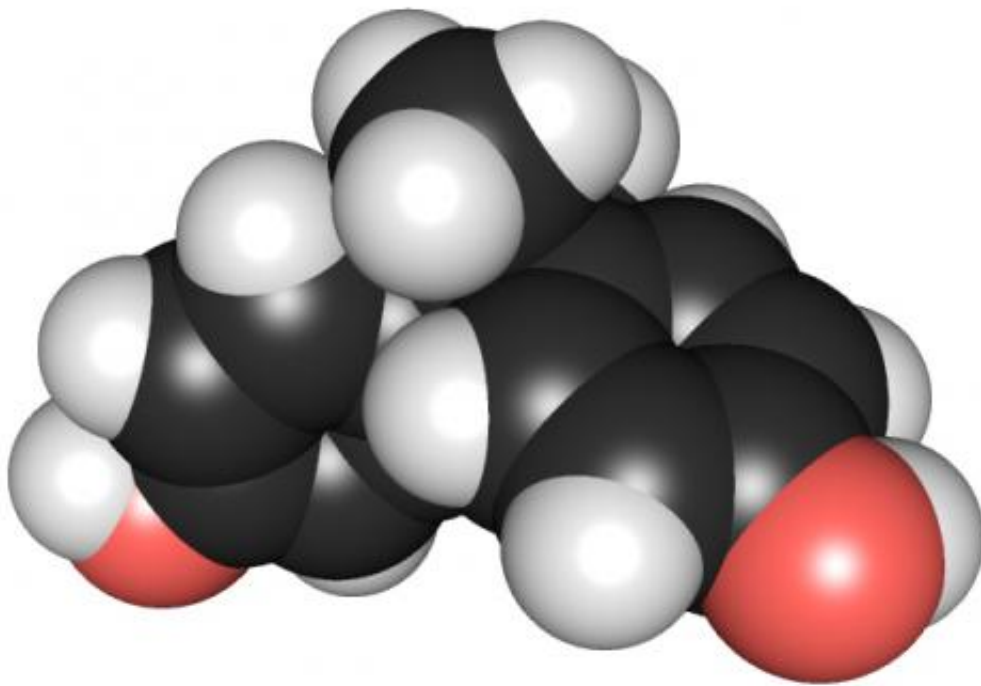


Can prenatal exposures to BPA impact ovarian function?

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

While previous studies have shown the adverse health effects of prenatal exposure to the industrial chemical bisphenol A (BPA), there is little evidence surrounding effects specifically on ovarian function. A new study now finds there is sufficient data to raise concerns regarding

exposure and ovarian performance.

Detectable in [surface water](#) and soil sediments, BPA is used in many [industrial processes](#) (epoxy resins, polycarbonate plastic production) and in the lining of food cans. While the greatest exposure is dietary from canned foods and plastic containers, skin exposure is a secondary route of smaller exposure.

According to the researchers, ovarian development and function represents a complex coordination of processes, starting early during prenatal development. Early aberrations have the potential to carry through the female reproductive lifespan.

To examine whether a prenatal environmental exposure can pose a real threat to human ovarian function, researchers from Boston University School of Medicine (BUSM) performed a literature search in PubMed (from 2000 to June 2018), to examine existing literature surrounding prenatal exposure to BPA.

"We found there is mounting evidence for the effects of these exposures in the prenatal period, a particularly vulnerable time of development," explained corresponding author Shruthi Mahalingaiah, MD, MS, assistant professor of obstetrics and gynecology at BUSM. "Whether there are causative associations with human ovulation disorders needs to be further studied."

The researchers believe their findings are particularly relevant since there are implications for both fetal and women's health. "Understanding the effect that BPA exposure has on ovarian outcomes may contribute to the treatment approach taken for diseases and disorders in which ovarian dysfunction is a manifestation such as infertility, [polycystic ovary syndrome](#) and premature ovarian failure," added Mahalingaiah, an obstetrician/gynecologist at Boston Medical Center.

The researchers hope their study raises awareness to the lasting effects that harmful prenatal exposures may have and that additional studies looking at the long-term effects of endocrine disrupting chemicals in diverse populations will be undertaken.

These findings appear in the journal *Reproduction*.

More information: Hannah Mathew et al, Do Prenatal Exposures Pose a Real Threat to Ovarian Function? BPA as a Case Study, *Reproduction* (2019). [DOI: 10.1530/REP-17-0734](https://doi.org/10.1530/REP-17-0734)

Provided by Boston University School of Medicine

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