

Exposure to low doses of BPA alters gene expression in the fetal mouse ovary

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A study posted today (Wednesday, August 25) at the online site of the journal *Biology of Reproduction* reports that exposure of pregnant female mice to the endocrine-disrupting chemical bisphenol A may produce adverse reproductive consequences on gene expression in fetal ovaries as early as 12 hours after the mother has first been exposed to the chemical.

Bisphenol A (BPA) is a chemical used in plastics for making some baby and water bottles, linings of food and beverage cans, and other human consumer products.

The mice in this study were given BPA at doses thought to be equivalent to levels currently being experienced by humans.

The research, conducted in the laboratory of Dr. Patricia A. Hunt at Washington State University (WSU) in Pullman, showed that BPA exposure affects the earliest stages of egg production in the ovaries of the developing mouse fetuses, thus suggesting that the next generation (the grandchildren of the females given BPA) may suffer genetic defects in such biological processes as mitosis and [DNA replication](#).

In addition, the WSU research team noted that their study "revealed a striking down-regulation of mitotic/cell cycle genes, raising the possibility that BPA exposure immediately before meiotic entry might act to shorten the reproductive lifespan of the female" by reducing the total pool of fetal oocytes.

Future studies in Dr. Hunt's laboratory will focus on genetic changes produced over a range of [BPA](#) exposure.

Provided by Society for the Study of Reproduction

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