

Prenatal exposure to endocrine-disrupting chemicals linked to liver injury

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Prenatal exposure to endocrine-disrupting chemicals is associated with

increased liver injury in childhood, according to a study published online July 6 in *JAMA Network Open*.

Vishal Midya, Ph.D., from the Icahn School of Medicine at Mount Sinai in New York City, and colleagues conducted a prospective cohort study using data collected from April 1, 2003, to Feb. 26, 2016, from [mother-child pairs](#) from the Human Early-Life Exposome project, which involved six ongoing prospective birth cohort studies from six European countries. Data were included from 1,108 mothers and their singleton children. The associations of liver injury or cytokeratin 18 (CK-18) levels with each endocrine-disrupting chemical group measured in maternal blood or [urine samples](#) collected in pregnancy were estimated using Bayesian weighted quantile sum and Bayesian kernel machine regression.

The researchers found that with the Bayesian weighted quantile sum method, the odds of liver injury were increased per exposure-mixture quartile increase for [organochlorine pesticides](#), polybrominated diphenyl ethers (PBDEs), perfluoroalkyl substances, and metals. The odds of [liver injury](#) were reduced in association with high-molecular-weight phthalates and phenols. Higher CK-18 levels were associated with a one-quartile increase in polychlorinated biphenyls and PBDEs. For all endocrine-disrupting chemicals, Bayesian kernel machine regression showed associations in a similar direction as Bayesian weighted quantile sum and indicated a nonlinear association between phenols and CK-18 levels.

"These results advance the current limited understanding of pediatric nonalcoholic fatty liver disease etiology and support the need for more investigation in this area," the authors write.

One author disclosed financial ties to the biopharmaceutical industry.

More information: [Abstract/Full Text](#)

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