

Gestational exposure to urban air pollution linked to vitamin D deficiency in newborns

September 13 2012

Gestational exposure to ambient urban air pollution, especially during late pregnancy, may contribute to lower vitamin D levels in offspring, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology and Metabolism (JCEM)*. According to study authors, this could affect the child's risk of developing diseases later in life.

Recent data have demonstrated that maternal [vitamin D deficiency](#) during pregnancy may have an influence on the development of asthma and allergic diseases in offspring. A number of factors may influence vitamin D supply in women. Exposure to high levels of air pollution has been suggested as a contributor to vitamin D deficiency in adults and children.

"We investigated the associations between gestational exposure to urban air pollutants and vitamin D cord blood serum level," said Nour Baïz, MAsc, of Intitut National de la Santé et de la Recherche Médicale (INSERM) in Paris, France who led the study. "Our findings show for the first time, that exposure to ambient air pollution comparable to current [World Health Organization](#) standards might contribute to vitamin D deficiency in newborns."

In this study, researchers investigated the associations between gestational exposure to urban air pollutants and 25-hydroxyvitamin D cord blood serum level in 375 mother-child pairs. Maternal exposure to urban levels of nitrogen dioxide and particulate matter less than 10 micro

meters during the whole pregnancy was a strong predictor of low vitamin D status in newborns. The association between gestational exposure to air pollutants and vitamin D deficiency in newborns was strongest for third-trimester exposures.

More information: The article "Gestational Exposure to Urban Air Pollution Related to a Decrease in Cord Blood Vitamin D Levels" is slated to appear in the November 2012 issue of *JCEM*.

Provided by The Endocrine Society

Citation: Gestational exposure to urban air pollution linked to vitamin D deficiency in newborns (2012, September 13) retrieved 4 May 2024 from <https://medicalxpress.com/news/2012-09-gestational-exposure-urban-air-pollution.html>

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