

Exposure to traffic-related air pollution linked to autism

January 8 2013



Exposure to traffic-related air pollution, including nitrogen dioxide and particulate matter less than 2.5 and 10 micrometers in diameter, during gestation and the first year of life is associated with a significantly increased risk of autism, according to research published in the January issue of *JAMA Psychiatry*.

(HealthDay)—Exposure to traffic-related air pollution, including nitrogen dioxide and particulate matter less than 2.5 and 10 micrometers in diameter (PM_{2.5} and PM₁₀), during gestation and the first year of life is associated with a significantly increased risk of autism, according to research published in the January issue of *JAMA Psychiatry*.

In an effort to examine the association between traffic-related air pollution, air quality, and autism, Heather E. Volk, Ph.D., M.P.H., of the University of Southern California in Los Angeles, and colleagues conducted a population-based, case-control study involving 279 children with autism and 245 control children with typical development.

Compared with control children, the researchers found that children with autism were significantly more likely to live at residences with the highest quartile of traffic-related air [pollution exposure](#) during gestation and the first year of life (adjusted odds ratios, 1.98 and 3.10, respectively). Specific exposure to nitrogen dioxide and PM_{2.5} and PM₁₀ were also significantly associated with autism during gestation and the first year of life.

"Exposures to traffic-related air pollution, PM, and [nitrogen dioxide](#) were associated with an increased risk of autism," the authors write. "These effects were observed using measures of air pollution with variation on both local and regional levels, suggesting the need for further study to understand both individual pollutant contributions and the effects of pollutant mixtures on disease."

Two authors are employees of Sonoma Technology; one author disclosed [financial ties](#) to [British Petroleum](#).

More information: [Abstract](#)
[Full Text \(subscription or payment may be required\)](#)
[Editorial \(subscription or payment may be required\)](#)

Copyright © 2013 [HealthDay](#). All rights reserved.

Citation: Exposure to traffic-related air pollution linked to autism (2013, January 8) retrieved 3 February 2024 from <https://medicalxpress.com/news/2013-01-exposure-traffic-related-air-pollution-linked.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--