

AUTISM AND AIR POLLUTION GO TOGETHER

Autism, a severe developmental disorder that begins within the first three years after conception, is considered a global concern. The causes of autism are not well understood. Now, results from a study published online today, June 18, in the scientific journal “Environmental Health Perspectives” show that women exposed to **air pollutants** during pregnancy are up to twice as likely to have an autistic child than those living in areas with low air pollution.

What is autism? The American Psychiatric Association defines autism as a disorder characterized by deficits in social interactions and communication skills, as well as the presence of stereotypic and repetitive behaviors. According to the Autism Research Institute “Most autistic children look like other kids, but do puzzling and disturbing things which are markedly different behaviors from those of typical children. In less severe cases on the spectrum (Pervasive Developmental Disorder (PDD) or Asperger’s Syndrome), children usually have speech and might even be intellectually gifted, but they have one or more “autistic” social and behavioral problems.

The study has been carried out by researchers at the Harvard School of Public Health.

The researchers examined data from Nurses' Health Study II, a long-term study that began in 1989 (you can read more about the Nurses' Health Study II [here](#)). Based at Brigham and Women's Hospital, it involves 116,430 nurses from 14 U.S. states. The researchers studied 325 women who had a child with autism and 22,000 women who had a child without the disorder and examined the associations between autism and levels of pollutants at the time and place of birth. To estimate women's exposure to pollutants while pregnant, the researchers used air pollution data from the U.S. Environmental Protection Agency (EPA), while adjusting for the influence of factors such as income, education, and smoking during pregnancy. The results show that exposures to diesel, lead, manganese, mercury and methylene chloride while pregnant were significantly associated with development of autism spectrum disorder. The correlation between mercury and diesel was particularly high.

For most pollutants, associations were stronger for boys (279 cases) than girls (46 cases) and significantly different according to sex.

Senior author Marc Weisskopf, associate professor of environmental and occupational epidemiology at the Harvard School of Public Health, said, "Our results suggest that new studies should begin the process of measuring metals and other pollutants in the blood of pregnant women or newborn children to provide stronger evidence that specific pollutants increase risk of autism."

A better understanding of this can help to develop interventions to reduce pregnant women's exposure to these pollutants.”



However, it would be wise to consider alternative explanations for the apparent association of autism and air pollution found in this study. For example, all women involved in the study were nurses – may be taking a look at occupational exposure is not a bad idea. At the same time, we can expect nurses to have easier access to medical care and therefore to accurate diagnosis. May be diagnosis of autism, because of easier access to health care, is more frequent in a group consisting of nurses as compared to the general population – if this is the case, then interpretation of results should be adjusted to take into consideration such a factor. According to the World Health Organization (WHO) “Despite the high burden of autism and other developmental disorders in children and adolescents, these conditions have been widely neglected by policy makers and public health experts, particularly in low- and middle-income countries.

As a consequence, children and families in need have often poor access to services and do not receive adequate treatment and care. Greater investments in advocacy, awareness, research, and services and human resource development are needed.”
Hopefully, this study will raise awareness and will be just a step in the research ladder that will lead to the prevention and treatment of autism.

Source: <http://theglobalfool.com/autism-and-air-pollution-go-together/>