

Pollution Exposure Associated With ADHD in Children

The study says that infants who were highly exposed to traffic pollution were likely to develop ADHD

By JASON KOEBLER

Infants who are more heavily exposed to pollution from car traffic are more likely to develop attention deficit hyperactivity disorder, a new National Institutes of Health study suggests.

Children who lived in areas with high levels of “traffic-related air pollution” when they were a year old were significantly more likely by age 7 to have ADHD than children who lived in less polluted areas. The study, published Tuesday in NIH’s Environmental Health Perspectives, was conducted by researchers at Cincinnati Children’s Hospital Medical Center and researchers at the University of Cincinnati.

The study is the latest to suggest that pollution may play a role in the developing brain. Previous studies found that particulate matter associated with pollution can find its way into the brain, and that people who are exposed to high levels of air pollution might develop brain swelling. Children exposed to high levels of traffic pollution have also shown decreased memory performance and decreased scores on cognitive tests, and some studies suggest that pollution may play a role in the development of autism.

ADHD is estimated to affect close to 10 percent of children in the United States between 4 and 15 years old. Scientists aren’t exactly sure how the disorder develops in children, but it’s believed to have a strong genetic component. The authors of Tuesday’s study suggest that the genetic component is much stronger than any potential pollution-related component, because the findings were limited only to those children whose mothers had more than a high school education.

The disorder has been shown to disproportionately affect those in lower income groups, and people with ADHD often have trouble in school and holding a job, which the study’s authors say helps explain why pollution is associated with higher levels of ADHD only in those with highly-educated mothers. Those with mothers who hadn’t studied beyond high school may have been more likely to have ADHD themselves, which might explain the overall higher incidence of ADHD in lower-income families.

“Lower school achievement in mothers is associated with maternal ADHD and this predisposition to ADHD symptoms is a stronger predictor of hyperactivity in their children than is [pollution] exposure,” they write.