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C8 exposure linked to ADHD in children

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CHARLESTON, W.Va. -- Children exposed to higher levels of C8 are at an increased risk of developing attention deficit hyperactivity disorder, according to a scientific paper published this week.

The study, by researchers at Boston University and the Harvard School of Public Health, also found higher risks for children exposed to other similar perfluorinated chemicals.

Attention deficit hyperactivity disorder, or ADHD, is one of the most common neuro-developmental disorders in children. Kids diagnosed with it are often inattentive, impulsive and hyperactive.

Researchers compared parental reports of ADHD diagnosis from Centers for Disease Control Data and blood samples for the chemicals. They found that, for example, for every additional 1 part per billion of C8 in the blood, children faced a 12 percent increased risk of ADHD.

Author Kate Hoffman and other scientists previously presented portions of their results last year at the annual meeting of the International Society of Environmental Epidemiology in Ireland. The complete paper was published Tuesday in the peer-reviewed journal Environmental Health Perspectives.

C8 is another name for perfluorooctanoic acid, or PFOA. C8 and other PFCs have been widely used in nonstick coatings, stain-resistant fabrics and food package coatings.

Around the world, researchers are finding that people have C8 and other PFCs in their blood. Evidence continues to mount about the dangers of these chemicals, even at very low levels -- and at levels the general public may be exposed to -- but U.S. regulators have yet to set federal standards for emissions or human exposure.

Scientists are still sorting out how humans have been exposed to PFCs. Previous studies have focused on drinking water, Teflon pans, food and food packaging and household dust as potential routes.

In West Virginia, PFCs have become a major issue because the water supplies for thousands of Parkersburg-area residents have been contaminated with the toxic chemical from DuPont Co.'s nearby Washington Works plant. C8 exposure has been linked to a variety of health problems, including liver damage, immune problems, developmental abnormalities, birth defects and high cholesterol.

Previous animal studies have found some connections to problems with neurological development. But only one previous study, published in 2008, assessed the potential for neurotoxic effects in humans. That study found an association between PFC exposure and a delay in the age at which children could sit without support.

The new ADHD study concluded that, "given the extremely prevalent exposure to PFCs" follow-up studies on the potential relationship are needed.

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