

Common plastics chemicals linked to ADHD symptoms

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Phthalates are important components of many consumer products, including toys, cleaning materials, plastics, and personal care items. Studies to date on phthalates have been inconsistent, with some linking exposure to these chemicals to hormone disruptions, birth defects, asthma, and reproductive problems, while others have found no significant association between exposure and adverse effects.

A new report by Korean scientists, published by Elsevier in the November 15th issue of [Biological Psychiatry](#), adds to the potentially alarming findings about phthalates. They measured urine [phthalate](#) concentrations and evaluated symptoms of attention-deficit/hyperactivity disorder ([ADHD](#)) using teacher-reported symptoms and computerized tests that measured attention and impulsivity.

They found a significant positive association between phthalate exposure and ADHD, meaning that the higher the concentration of phthalate metabolites in the urine, the worse the ADHD symptoms and/or test scores.

Senior author Yun-Chul Hong, MD, PhD, explained that "these data represent the first documented association between phthalate exposure and ADHD symptoms in school-aged children." John Krystal, MD, the Editor of *Biological Psychiatry*, also commented: "This emerging link between phthalates and symptoms of ADHD raises the concern that accidental [environmental exposure](#) to phthalates may be contributing to behavioral and cognitive problems in children. This concern calls for more definitive research."

The U.S. Centers for Disease Control and Prevention, in the Summary of their 2005 Third National Report on Human Exposure to Environmental Chemicals, state that "very limited scientific information is available on potential human health effects of phthalates at levels" found

in the U.S. population. Although this study was performed in a Korean population, their levels of exposure are likely comparable to a U.S. population.

The current findings do not prove that phthalate exposure caused ADHD symptoms. However, these initial findings provide a rationale for further research on this association.

More information: The article is "Phthalates Exposure and Attention-Deficit/Hyperactivity Disorder in School-Age Children" by Bung-Nyun Kim, et al. The article appears in *Biological Psychiatry*, Volume 66, Issue 10 (November 15, 2009), published by Elsevier. (www.sobp.org/journal)

Source: Elsevier

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