# The Learning and Developmental Disabilities Initiative: An Analysis of the CDC Biomonitoring Report

## Executive Summary

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The *Third National Report on Human Exposure to Environmental Chemicals* (*Third Report*) was released in July 2005 by the Centers for Disease Control and Prevention (CDC) of the Department of Health and Human Services. Exposures in a sample of the United States (U.S.) population for 148 environmental chemicals were determined from blood and urine specimens. This document summarizes and analyzes findings from this report on the measured chemicals or groups of chemicals that are known or suspected to cause learning or developmental disabilities. For the full summary and analysis of the selected findings presented below, please see LDDI Analysis – CDC Biomonitoring 2005 (six-page PDF document, 41 KB). For the full CDC report (475 pages), please see www.cdc.gov/exposurereport.

### Findings

The summary of the *Third Report* provides results of chemical analysis on the following chemicals or groups of chemicals that are known or suspected neurotoxicants: lead, mercury, nicotine (tobacco smoke), PCBs, phthalates, organochlorine pesticides, organophosphate pesticides, and atrazine.

**Progress made:** Regulation of chemicals such as lead, DDT and the organochlorine pesticide heptachlor has produced dramatic reductions in exposures since the 1960s and 1970s. Median levels of cotinine (a nicotine metabolite) have also shown an encouraging drop since the 1980s. These reductions show real progress in reducing the harmful effects of these chemicals in young children. The inability to detect exposures to the organochlorine pesticides HCB, HCH, mirex and endrin as well as atrazine in the *Third Report* is good news, although because endrin and atrazine are metabolized quickly, lack of detectable levels does not necessarily indicate a lack of exposure.

**Causes for concern:** The continued exposure to several long-banned chemicals, such as PCBs and DDT, indicates how dangerous such highly persistent chemicals can be. Disparities among racial/ethnic groups continue to be a concern, with Mexican Americans, Non-Hispanic Blacks and Non-Hispanic Whites showing different patterns of exposures to several chemicals, especially lead, mercury, cotinine (nicotine) and DDT. Higher phthalate and organophosphate pesticide detection in children than in adults is also a grave concern that urgently needs attention given children's greater biological vulnerability to many chemicals.

### Conclusion

Overall, much more effort needs to go toward studying and preventing these exposures. While action by parents or individuals can prevent some of these exposures, further public policy shifts are needed to protect children from many of these chemicals.

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The Learning and Developmental Disabilities Initiative (LDDI) is a national working group of the Collaborative on Health and the Environment (www.healthandnevironment.org). The Institute for Children's Environmental Health is the national coordinator of LDDI.