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Assessment of developmental toxicant exposures via biomonitoring

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Fetal exposures to a few environmental chemicals (e.g., lead, methylmercury, polychlorinated biphenyls (PCBs), arsenic, nicotine, dioxins, organophosphorus pesticides, and toluene) are linked to various degrees with neurodevelopmental disorders and subclinical brain dysfunction. Our laboratory analyzes human specimens (generally blood and urine) to assess exposure to these and other chemicals in the National Health and Nutrition Examination Surveys (NHANES), which are designed to give information on the U.S. population on a continuous basis, and in studies designed to show associations between concentrations of these chemicals in the fetal compartment as well as in women of reproductive age. Results from the NHANES and these special biomonitoring studies and their association with selected neurodevelopmental effects will be examined.