Executive Summary: Scientific Consensus Statement on Environmental Agents Associated with Neurodevelopmental Disorders

Given established scientific knowledge, protecting children from neurotoxic exposures from the earliest stages of fetal development is clearly an essential public health measure. By reducing environmental factors that may lead to learning and developmental disorders, we will create a healthier environment in which all children can reach and maintain their full potential.

In order to document and provide support to prevent neurodevelopment disorders, the *Scientific Consensus Statement on Environmental Agents Associated with Neurodevelopmental Disorders* was developed by the Collaborative on Health and the Environment's Learning and Developmental Disabilities Initiative (posted at www.healthandenvironment.org/initiatives/learning/r/consensus). This statement is intended as a guide to scientists, medical professionals, policymakers, public health advocates, and the general public in advancing their efforts to address the important individual and social issues raised by learning and developmental disabilities.

This consensus statement outlines the current scientific understanding of the links between environmental factors and learning and developmental disabilities. Environmental agents that we are confident cause learning and developmental disabilities in humans include: alcohol, lead, mercury, PCBs, PBDEs, manganese, arsenic, solvents, PAHs, pesticides and nicotine/environmental tobacco smoke. An overview of the evidence regarding these agents is presented, along with emerging evidence about other potential contributors: endocrine disruptors, fluoride and food additives. The statement also identifies important research areas that hold promise of further advancing our understanding of these links.

With a glossary and more than 200 references, the statement was drafted and reviewed by a committee of scientists and health professionals underscoring the following:

1. The scientific evidence reviewed in this statement indicates environmental contaminants are an important cause of learning and developmental disabilities. The proportion of environmentally induced LDDs is a question of profound human, scientific and public policy significance. Existing animal and human data suggest that a greater proportion is environmentally influenced than has yet been generally realized or than can be demonstrated with scientific certainty.
2. The consequences of LDDs are most significant for the affected individual but also have profound implications for the family, school system, local community and greater society. Despite some uncertainty, there is sufficient knowledge to take preventive action to reduce fetal and childhood exposures to environmental contaminants. Given the serious consequences of LDDs, a precautionary approach is warranted to protect the most vulnerable of our society.

A statement of policy recommendations based on this scientific statement is available for public endorsement. For more information contact Nancy Snow at the Collaborative on Health and the Environment, info@healthandenvironment.org.