

Organophosphate Pesticides & Neurodevelopment: Finding from NIEHS/EPA Funded Children's Environmental Health Centers

Chair:

Bruce Lanphear, Burnaby, B.C, Canada

Aims and short description: Starting in 1998, NIEHS & EPA funded multiple Children's Environmental Health and Disease Prevention Research Centers to examine the influence of organophosphate pesticides in diverse exposure settings on childhood growth and development. Independent birth cohorts were established, and the children from these cohorts were followed prospectively for up to 10 years, with periodic neurodevelopmental assessment. In 2001 and 2004 respectively, the residential use registrations for chlorpyrifos and diazinon were voluntarily cancelled in the United States. In this symposium, we will present the latest neurodevelopmental follow-up data from these Centers, discuss exposure assessment issues, and compare and contrast findings across the cohorts. The epidemiologic data will specifically focus on the latest and most precise estimates of the long-term cognitive impact of prenatal organophosphate pesticide exposure in these cohorts, which include the Bayley Scales of Infant Development and psychometric intelligence testing.

Presentations:

1. Overview of symposium goals
Chair: Dr. Bruce Lanphear
2. Prenatal organophosphate and child neurodevelopment: results from the Mount Sinai children's environmental health and disease prevention research center
Speaker: Dr. Stephanie Engel
3. 7-year neurodevelopmental consequences of prenatal exposure to Chlorpyrifos, a common organophosphate pesticide
Speaker: Dr. Virginia Rauh
4. Results from the CHAMACOS study of Children's Environmental Health
Speaker: Dr. Brenda Eskenazi
5. Exposure assessment past and present
Speaker: Dr. Dana Barr
6. Wrap up—Summary of evidence, strengths, limitations and next steps
Speaker: Dr. Bruce Lanphear