



the H O M E Health Outcomes and Measures of the Environment study

Purpose	To quantify the impact of low-level fetal and early childhood exposures to environmental toxicants (lead, mercury, pesticides, PCBs, environmental tobacco smoke, and alcohol) and child development (cognition, behavior, growth, and hearing). We will also evaluate meconium as a biomarker for fetal exposure and test the effectiveness of home repairs to control lead hazards and injuries in early childhood.
Design	Longitudinal cohort study with a nested, randomized controlled trial.
Intervention	Families will receive either targeted home repairs to control lead hazards (e.g. paint stabilization, water filters), or placement of injury-control measures (e.g. smoke detectors, cabinet guards).
Recruitment	400 pregnant women will be invited to participate during a prenatal visit at around 16 weeks gestation at selected practices in the Cincinnati area.
Time Frame	Recruitment will begin in the fall of 2002 and continue for 2 years. Children will be followed until 36 months of age.
Data Collection	<p><u>Prenatal Period:</u> Biologic samples (maternal blood, urine, and hair) will be collected during prenatal visits. Implementation of lead or injury control and questionnaire administration will occur during home visits.</p> <p><u>Birth:</u> Biologic samples (cord blood, meconium, breastmilk) will be collected.</p> <p><u>During child's first 3 years:</u> Annual visits to home will be used to collect environmental (dust) and biologic (child serum) samples, monitor home intervention, and complete questionnaires. At each visit child will be assessed for growth, and mental and motor development.</p> <p><u>At 36 months:</u> Hearing, cognition and behavioral testing will be done at the study clinic.</p>
Remuneration	All costs of home repair will be covered by the study. Mother will receive payments at visits that total \$300 over the duration of the study. We will provide families with basic information on environmental toxicants.
Funding	This project is part of the newly established Children's Environmental Health Center at Cincinnati Children's and the University of Cincinnati, one of 12 national centers funded jointly by the NIH and EPA.
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