

Children's Environmental Health Institute's Eighth Biennial Symposium
Prenatal Environmental Exposures as a Determinant of Early Childhood and Adult Disease
Speaker Objectives

Opening Keynote Speaker: Day One

Jeanne Conry, MD, *Assistant Physician-in-Chief, North Valley, Kaiser Permanente, Associate Clinical Professor, University of California Davis Health System, Immediate Past President, American College of Obstetricians and Gynecologists, District IX, and Center for Disease Control, member of select panel on Preconception Care, Roseville, CA*

Participants will be able to:

- Describe the benefits of utilizing the precautionary principle model as a means to increase public participation and transparency in the decision making process to prevent environmental health risks to children.
- Recognize the relation between prenatal exposures to environmental toxicants and subsequent increases in neurological, developmental disabilities and, other related health concerns contributing to an increase in learning and behavioral problems.
- Identify opportunities available to educational institutions, government agencies, health organizations, child advocacy groups, elected officials, and the general public to elevate the focus and discussion on the consequences of environmental health risks to pregnant women, infants and young children.
- Relate how engaging public/private partnerships benefit health initiatives and prevention programs focused on preventing environmental health risks to pregnant women, infants and young children.
- Explain the urgent need to develop guidelines for purchasing toxic free products and adopt legislative policies for the removal of known or highly suspected environmental contaminants from children's products.

PANEL: Pediatric Environmental Health Specialty Units of the US Environmental Protection Agency and Agency for Toxic Substances and Disease Registry

Panelists:

Susan Buchanan, MD, MPH, *Director of the Great Lakes Center for Children's Environmental Health, Pediatric Environmental Health Specialty Unit, Clinical Assistant Professor at the University of Illinois Department of Environmental and Occupational Health Sciences, Chicago, IL*

Jennifer Lowry, MD, *Director, Pediatric Environmental Health Specialty Unit; Medical Director, Center for Environmental Health; Professor, Pediatric Pharmacology and Medical Toxicology, Children's Mercy Hospital and Clinics, Kansas City, MO*

Jerome Paulson, MD, FAAP, *Director of the Mid-Atlantic Center for Children's Health and Environment, Professor, Department of Environmental & Occupational Health, Professor, Department of Pediatrics, The George Washington University School of Medicine and Health Science, Washington, DC*

Participants will be able to:

- Describe how the Pediatric Environmental Health Specialty Unit Network uses practices and policies founded on evidence-validated research to improve reproductive health and minimize environmental health risks to children.
- Examine how ongoing epidemiological and toxicological studies have changed our concept of what is an “acceptable exposure”.
- Relate the purpose, design and partnerships involved in the Pediatric Environmental Health Specialty Unit Network educational campaign on environmental factors and children's health.
- Understand how the PEHSU Network can be utilized by health care professionals and the general public for environmental exposures including those during pregnancy.

Each panelist will take 20-30 minutes to speak on an individual topic including general PEHSU background and utilization, past and present efforts on incorporating reproductive health within the PEHSU program, and case discussions related to these efforts based on actual calls to the individual PEHSU.

PANEL: Medical Perspectives

Panelists:

Laura Anderko, PhD, RN, *Robert and Kathleen Scanlon Endowed Chair in Values Based Health Care, Fellow, Center for Social Justice, Robert Wood Johnson Executive Nurse Fellow Alumna, Board Chair, Alliance of Nurses for a Healthy Environment, Professor, School of Nursing & Health Studies, Georgetown University, Washington, D.C.*

Participants will be able to:

- Discuss the impact of environmental exposures on reproductive health, infertility and the development of toxicity to the fetus.
- Explain how the Alliance of Nurses for Healthy Environments promotes healthy people and healthy environments by educating and leading the nursing profession, advancing research, incorporating evidence based practice and influencing policy.
- Identify resources for educating women and their families about the effects of toxins on reproductive health and on offspring, including methods to reduce risks through precautionary action.

Donald Dudley, MD, *Professor and Director, Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, University of Virginia School of Medicine, Charlottesville, VA*

Participants will be able to:

- Discuss how genetics and stage of development during gestation influence prenatal and early childhood susceptibility to disease from environmental health risk exposures.
- Relate that epidemiologic literature associates prenatal exposures to heavy metals, including mercury, lead and arsenic, with increased risk for neurodevelopmental problems, congenital malformations, and miscarriage.

- Explain the importance of undertaking an interdisciplinary research agenda, such as the National Children’s Study, in addressing environmental health risks to children, including community outreach and involvement.

Leslie Myatt, PhD, *Professor, Co-Director, Center for Pregnancy and Newborn Research, Department of Obstetrics and Gynecology, University of Texas Health Science Center, San Antonio*

Participants will be able to:

- Discuss why the National Institute of Child Health and Human Development calls the placenta “the least understood human organ and arguably one of the more important, not only for the health of a woman and her fetus during pregnancy but also for the lifelong health of both.”
- Relate why increasingly, researchers think the mother's external environment and the intrauterine environment she generates via her physiology act via the placenta to affect fetal growth and development and subsequent development of diseases as diverse as metabolic, cardiovascular, neurodevelopmental, behavioral and reproductive in later life in the offspring.
- Describe how the human placenta serves as a diary of exposure to environmental toxins to maternal medical conditions and predicts programming of offspring.
- Review the potential role of epigenetics in mediating programming of the offspring.

Ethics Opening Keynote Speaker: Day Two

Philippe Grandjean, MD, PhD, *Adjunct Professor of Environmental Health, Department of Environmental Health, Harvard School of Public Health, Professor and Chair of Environmental Medicine, University of Southern Denmark, Odense, Denmark; Consultant in Toxicology, National Board of Health, Denmark*

Participants will be able to:

- Examine the public health implications of human exposures to an increasing number of chemicals potentially capable of damaging the developing brain in regard to increased prevalence of neurological/developmental disabilities.
- Analyze conflicting needs of individuals, society and the private sector in regard to the manufacture, use, toxicity testing and regulation of environmental toxicants.
- Compare public policies in the United States and the European Union in protecting the health of children in light of applying the precautionary principle in planning and interpretation of medical research and in development, manufacture, promotion and regulation of industrial products.
- Relate and translate research findings, including strengths and limitations, to possibilities for decision-making to control the manufacture, distribution and sale of children’s products containing contaminants that are suspected or known to constitute health hazards.
- Consider ethical responsibilities at individual and society levels to protect the next generation's brain development from chemical hazards.

Faith Community Perspective

Rev. Fletcher Harper, *Executive Director, GreenFaith, Highland Park, New Jersey*

Participants will be able to:

- Reflect on the importance of engaging faith communities in addressing the connection between increasing environmental health risks and the dramatic increase in neurological and developmental disabilities, asthma, and other related health concerns.
- Explain why faith community administrators must consider environmental health risk exposures to pregnant women, infants and children when planning, renovating and building their facilities.
- Describe ways that faith communities currently participate in cross-discipline discussions with members of the built industry and health professionals on how to work more effectively to leverage efforts to establish good environmental health practices and policies.
- Review model programs and resources available to assist faith communities to support toxic-free healthy environments in their facilities.
- Discuss current opportunities and initiatives for the leadership from faith communities to participate with public and private partnerships to promote healthy environments for children and families.

LUNCH Speaker:

Nikki Drummond, **CCN**, *Founder and CEO of NeuroFit Nutrition, Austin, Texas*

Participants will be able to:

- Review how the increasing prevalence of toxins in food is placing the health and intellect of current and future generations at risk.
- Discuss recent research reinforcing the need to educate expectant mothers on how to avoid exposure risks from environmental toxins in their foods.
- Consider the relationship between food, politics and how seemingly unrelated economic, political and social issues play a significant role in poor nutrition choices for many families.
- Explore” options expectant mothers have to improve their consumption of toxin-free foods.

PANEL: Building Industry Perspectives

Panelists:

Roy Gunsolus, **AIA, ACHA, LEED AP BD+C**, *Principal and Senior Vice President, Director of Sustainable Healthcare, HKS Architects, Dallas, TX*

Participants will be able to:

- Explain how the Health Product Declaration Collaborative, as a customer-led organization, is committed to the Health Product Declaration (HPD) as a means to improve the building industry's performance through transparency, openness and innovation in the product supply chain.

- Describe how architects, builders and project administrators can protect children and families from health risks by incorporating environmentally related health standards and policies in their practices.
- Identify reputable certified rating services for green building materials, products, and avoid entities simply promoting greenwashing.

Shared Objective with Claudia Miller:

- Describe an Environmental Medical Unit (EMU) and how it would be used for research, diagnosis and treatment?

Claudia Miller, MD, MS, *Professor, Occupational and Environmental Medicine Assistant Dean, MD/MPH Program, Vice Chair, Community Medicine, Department of Family and Community Medicine, Director, South Texas Environmental Education and Research (STEER) Program, University of Texas Health Science Center, San Antonio*

Participants will be able to:

- Explain how Toxicant-induced Loss of Tolerance or TILT is a two-step process that is both initiated and, later triggered by environmental exposures.
- Identify the 7 A's (7 chronic medical conditions confronting children's health that have increased in prevalence in recent decades and could be potentially treated in an EMU (Environmental Medical Unit (EMU)
- Relate why indoor air quality is an important health issue, especially for vulnerable populations such as pregnant women, infants and young children.
- Discuss why municipal planners, physicians, and public health officials fail to hold the built environment accountable for exposing pregnant women and children to environmental health risks.
- Summarize methods for reducing unnecessary exposure to harmful pollutants by pregnant women, infants and young children in both public and private buildings.

Roger B. Perales, MPH, *Assistant Director of the South Texas Environmental Education and Research Program, Family & Community Medicine, and Faculty Associate at the University of Texas Health Science Center, Department of Family & Community Medicine, San Antonio, TX*

Objectives:

- Name 5 things expectant parents do that can adversely affect indoor air quality in their homes.
- Describe 6 potential sources of indoor air pollution.
- Explain the advantage of conducting an Environmental House Call to help identify, and educate residents about, potential exposures.
- Identify household products and practices that can reduce unnecessary exposures during pregnancy.