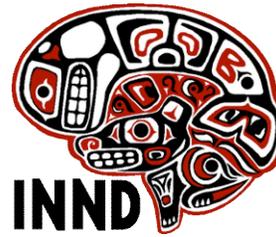


NORTHWEST CHILDREN'S ENVIRONMENTAL HEALTH FORUM 2009

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Northwest Children's Environmental Health Forum 2009

WELCOME

Welcome to the 2009 Northwest Children's Environmental Health Forum! We are pleased to host such a distinguished and diverse group of speakers and participants. Individuals, policymakers, researchers, health care providers, community leaders, students, environmental health professionals, educators, and many others are here today who share the goal of fostering healthy generations of children by eliminating harmful environmental exposures. Two years ago, we formed the Children's Environmental Health Working Group of the Collaborative on Health and Environment-Washington to develop strategies to protect children. We know that strong partnerships and comprehensive approaches are vital to success. This forum is the first step towards our goal.

We thank you for contributing your expertise and wisdom, and we look forward to collaborating with you over the next two days and into the future.

The NWCEHF Steering Committee

ACKNOWLEDGEMENTS

Thank you to all our presenters, moderators and sponsors!

Special Thanks to Steve Gilbert and the Institute of Neurotoxicology & Neurological Disorders

The Steering Committee would like to especially thank Steve Gilbert for hosting the Forum through the Institute of Neurotoxicology & Neurological Disorders. Without this support, the Forum would not be possible.

Thank you to the following people for contributing to the Forum planning and implementation

Dennis Weaver, John Dunn, Judy Louie, Aminta Dang, Stacy Linardic, Katie Peterson, Andrew Burns, Mary Rabourn, Hanady Kader, Margaret Shield, Kathy Davis, Merna Hecht, Trudy Rolla, Angela De La Hoz, Alex LaChance, Nicole Thomson...and others we may have missed. Thank you to the many hands that helped bring this forum to fruition!

And a BIG THANKS to our volunteers

Andy Leung, Caitlyn Steiner, Cynthia Callahan, Debra Pinkney, Edlira Kuka, Emma Johnson, Erica Finsness, Erin Stamper, Jane Mountjoy-Venning, Katie Frevert, Kristi Waddell, Kristy Ivicsek, Lisa Younglove, Rachel Laderman, and Zarina Morrill

Steering Committee

Margo Young(Chair), Julia Berg, Aimee Boulanger, Cedar Bouta, Gail Gensler, Jefferson Ketchel, and Heather Trim

NOTES

Children's Environmental Health Toolkit Available

Visit the Forum website for this searchable database. The toolkit has the latest information on children's environmental health and topics covered in the Northwest Children's Environmental Health Forum 2009. The database includes numerous categories and languages.

Please remember that this is a fragrance free event.

Please do not wear any perfumes, scented sprays, or scented lotions.

Thursday: Science of Children's Environmental Health

- 8:00 am Registration (Lobby)
 Continental Breakfast (Gymnasium)
- 8:30 am Introductions and Welcome (Gymnasium)
 Jefferson Ketchel, Master of Ceremonies
- Original poems from Foster High School Students
 "My Name is Pollution" authored and read by Shaun Roberts
 "When..." authored and read by Christina Saong
- 8:45 am Science Presentations (Gymnasium)
- 8:45 am Introduction to the importance of scientific research
 Elise Miller, MD, Collaborative on Health and the Environment
- 9:00 am Overview of the latest science
 Ted Schettler, MD, Science and Environmental Health Network

Summary

Children's health is influenced by a number of interacting factors, some of which influence the impacts of others. Using an ecosocial framework, this presentation will describe the particular susceptibility of developing children to environmental variables and give examples of effect modification. It will also briefly address the role of developmental environmental exposures as risk factors for diseases that become apparent much later in life.

- 9:45 am Neurotoxicants, learning and developmental diseases
 Bruce Lanphear, MD, MPH, Simon Fraser University

Summary

There is growing evidence showing that exposures to recognized environmental toxicants, such as lead, tobacco and mercury, are risk factors for learning and behavioral problems in children at levels previously thought to be innocuous or safe. There is also emerging evidence that newer environmental chemicals are associated with similar effects. Collectively, these studies indicate that we need to revise regulations and reduce children's exposures to environmental chemicals and toxicants.

- 10:30 am Break

- 10:45 am Autism and possible environmental links: What does the science say?
 Isaac Pessah, PhD, UC Davis

Summary

Dr. Pessah will present recent results from the UC Davis Center for Children's Environmental Health and Disease prevention. First he will review findings about mercury levels in children participating in the CHARGE study and how blood mercury levels correlate with gene transcription. Second he will review how persistent organic pollutants that possess non-coplanar chemical structures produce developmental neurotoxicity and discuss their potential relevance to autism and related disorders.

- 11:30 am Break

11:45 am

Breakout Session 1 (Various Locations)

Session 1-A (Gymnasium)

Pathways for dermal and ingestion exposure to toxic chemicals in the home: dust, particulates, residual films and air borne

John Kissel, PhD, University of Washington

Summary

Children's non-dietary chemical exposures are generally attributed to inhalation, soil and dust ingestion, hand-to-mouth and object-to-mouth contact, and direct dermal absorption. The ability to quantitatively predict children's chemical exposures has historically been limited by the general inadequacy of the available datasets against which assumptions could be tested. Data from a relatively recent and large scale study conducted by USEPA in North Carolina and Ohio that included capture of urinary biomarkers has been subjected to probabilistic analysis. Conventional estimates of children's exposures lead to underprediction of observed urinary biomarker excretion in those populations. Persistent, low-level dermal exposure can plausibly explain the missing dose and is likely to be a significant contributor to children's indoor exposure to many chemicals.

Session 1-B (Banquet Rooms B & C)

Food and children's environmental health: Pesticides, food additives, organics and more

Chensheng (Alex) Lu, PhD, Harvard University

Summary

A report released by the National Academy of Sciences (NAS)/National Research Council (NRC) titled "Pesticides in the Diets of Infants and Children" (NRC 1993) and the passage of the Food Quality Protection Act (FQPA, 1996) were hailed as two major milestones in recognizing the needs of systematic efforts in reducing pesticide exposure in vulnerable populations like infants and children.

One of the important summaries in the NAS/NRC report stated that "dietary intake represents the major source of pesticide exposure for infants and children, and the dietary exposure may account for the increased pesticide-related health risks in children compared to adults". Following the NAS/NRC report, the newly enacted FQPA 1996 aimed to fundamentally change the policies governing the acceptability of pesticide residues in food that requires US Environmental Protection Agency (US EPA) to assure that there is a "reasonable certainty of no harm" from pesticide exposures for pregnant women, infants, children, and other vulnerable groups.

Despite many years of effort in implementing the FQPA, monitoring and managing pesticide diet risks are still an ongoing challenge. A recent report published by the US EPA Office of Inspection General (USOIG 2006) has stressed the need for data-driven indicators of change in pesticide dietary exposures/risks. In other words, more direct measures of the impacts of US EPA actions on dietary pesticide exposures and risks are urgently needed.

Session 1-C (Meeting Room A)

Electromagnetic fields and the risk to children's health

Cindy Sage, MA, Sage Associates

Summary

The science and public health implications of chronic exposure to electromagnetic fields and radiofrequency radiation will be presented. The inadequacy of existing public safety standards will be discussed in relation to public health concerns about the global rollout of wireless technologies and other sources of exposure. Sources of non-ionizing radiation have traditionally been considered to be biologically inactive. But, growing scientific and public health evidence point strongly to such exposures as not only bioactive, but contributing to cognitive impairment, disruption of sleep and behavior, and some cancer and neurological disease endpoints.

12:30—1:30 pm Lunch and Speaker (Gymnasium)

1:00 pm Epigenetic transgenerational actions of environmental compounds on disease: The ghosts in your genes
Michael Skinner, PhD, Washington State University

Summary

Transgenerational effects of environmental toxicants (e.g. endocrine disruptors) significantly amplify the impact and health hazards of these compounds. One of the most sensitive periods to endocrine disruptor exposure is during embryonic gonadal sex determination when the germ line is undergoing epigenetic programming and DNA re-methylation. The model endocrine disruptors tested were vinclozolin, which acts as an anti-androgenic compound, and methoxychlor, that has metabolites that are estrogenic.

Previous studies have shown that these endocrine disruptors can effect embryonic testis development to subsequently cause an increase in spermatogenic cell apoptosis in the adult. Interestingly, this spermatogenic defect is transgenerational (F1, F2, F3 and F4 generations) and hypothesized to be due to a permanent altered DNA methylation of the germ-line. This appears to involve the induction of new imprinted-like DNA methylation sites that regulate transcription distally. The expression of over 200 genes were found to be altered in the embryonic testis and surprisingly this altered transcriptome was similar for all generations (F1-F3). In addition to detection of the male testis disorder, as the animals age transgenerational effects on other disease states were observed including tumor development, prostate disease, kidney disease and immune abnormalities. Recent observations suggest transgenerational effects on behaviors such as sexual selection and anxiety.

Therefore, the transgenerational epigenetic mechanism appears to involve the actions of an environmental compound at the time of sex determination to alter the epigenetic (i.e. DNA methylation) programming of the germ line that then alters the transcriptomes of developing organs to induce disease development transgenerationally. The suggestion that environmental factors can reprogram the germ line to induce epigenetic transgenerational disease is a new paradigm in disease etiology not previously considered.

1:45 pm Break

2:00 pm Breakout Session 2 (Various Locations)

Session 2-A (Gymnasium)

Climate change and children's health
Catherine Karr, MD, PhD, University of Washington

Summary

There is scientific consensus that climate change is occurring and continues at an accelerating pace. Adverse health consequences include direct and indirect processes ranging from influences on extreme weather events, ambient air quality, water and food borne illness, and food production. Children represent a particularly vulnerable group that is likely to suffer disproportionately from health effects of climate change. This session will introduce the basic concepts of climate change and children's health with a focus on regional concerns related to ambient air quality.

Session 2-B (Banquet Rooms B & C)

Seafood consumption and children's health
Larry Dunn, Lower Elwha Klallam Tribe
Nim Ha, MPH, Alaska Division of Public Health

Summary

Seafood is an integral part of the Northwest and Alaskan economy, culture, and diet. In particular, Native Americans and Alaska Natives have a strong reliance on fish and other seafood as part of their traditional way of life and subsistence diet. Fish provides important nutrients for optimal neurodevelopment in fetuses and young children and also is a vital source of nutritious food, but fish can also be a main dietary source of mercury and other toxic chemicals that can damage the developing brain. Larry Dunn, Lower Elwha Tribe, and Nim Ha, Alaska Division of Public Health, will explain impacts on children's health, current research and discuss the complex and often controversial world of fish advisories, messaging, and cultural issues rooted the world of subsistence diets.

Session 2-C (Meeting Room A)

Outdoor air quality and children's health
Sheryl Magzamen, PhD, University of California Berkeley

Summary

Not available at time of printing.

Session 2-D (Social Hall)

Biomonitoring, body burden, & environmental health tracking
Tom Burbacher, PhD, University of Washington

Summary

Not available at time of printing.

2:45 pm Break

3:00 pm Science Presentation (Gymnasium)
Endocrine disruptors and children's health
Shanna Swan, PhD, University of Rochester
Moderator: Sheela Sathyanarayana, MD, MPH, University of Washington

Summary

This presentation will be briefly touching on recent evidence for threats to reproductive health, it will use our work on phthalates and male infant development to illustrate why these environmental chemicals appear to be an important serious concern for pregnant women, with some suggestions about how exposure could be limited.

3:45 pm Science Panel and Q&A
Speakers: Ted Schettler, Michael Skinner, Sheela Sathyanarayana, Bruce Lanphear,
Shanna Swan, Chensheng Lu, Isaac Pessah, Elaine Faustmen and others
Moderator: Elise Miller, MD, Collaborative on Health and the Environment

4:30—5:00 pm HUD House and Science Poster Session (Gymnasium)

Friday: Policies of Children's Environmental Health

- 8:00 am Registration (Lobby)
 Continental Breakfast (Gymnasium)
- 8:30 am Introductions and Welcome (Gymnasium)
 Jefferson Ketchel, Master of Ceremonies
- Introduction of Ron Sims
 Michelle Pirzadeh, Regional Administrator, U.S. Environmental Protection Agency
- Ron Sims, Deputy Secretary
 U.S. Department of Housing and Urban Development
- 9:00 am Policy Presentations and Panels (Gymnasium)
- Panel One: Fixing our broken policies
 Children's environmental health in the United States
 An interview with leaders influencing national laws and policies
- An overview of the science of children's environmental health
 and the imperative for policy change
 Ted Schettler, Science and Environmental Health Network
- Opportunities for reforming national laws through the Kids Safe Chemicals
 Act, coordinated state campaigns, market based campaigns and
 local community efforts
 Sarah Doll, Safer Chemicals, Healthy Families
- New opportunities for national government to protect children's
 environmental health
 Martha Berger, U.S. Environmental Protection Agency
- Questions & Answers with Audience
- 10:15 pm Break

10:30 am Policy Presentations and Panels continued (Gymnasium)

Panel Two: Our region as a national leader
Children's environmental health in the Northwest
Introduction by Ivy Sager-Rosenthal, Washington Toxics Coalition

Northwest Panelists

- Carol Kraege, Washington Department of Ecology—State government as a National leader in protecting children's environmental health
- Pam Miller, Alaska Community Action on Toxics—Alaska native biomonitoring and children's environmental health
- Jamie Silberberger, Women's Voices for the Earth—Montana's experience and engaging women nationally on environmental health
- Renee Hackenmiller-Paradis, Oregon Environmental Council—Oregon children's environmental health
- Jae Douglas and Susan Woodbury, Oregon Public Health Division—Oregon's experience and challenges
- Dave Galvin, Local Hazardous Waste Management Program in King County—Local government as a national/regional leader for protecting health

Questions & Answers with Audience

12:15 pm Lunch and Networking (Gymnasium)

1:15 pm Breakout Session 3 (Various Locations)

Session 3-A (Gymnasium)

Healthy home environments: Cleaning products, pesticides, cosmetics, dust, green building; green purchasing

Jamie Silberberger, Women's Voices for the Earth

Erika Schreder, Washington Toxics Coalition

Summary

An increasing body of research has raised concerns that chemicals in products we use every day are having serious consequences on human health, particularly when exposure occurs at critical points of development. This presentation will provide a brief overview of harmful chemicals in children's personal care products (e.g. lotions, bubble bath, etc.), and cleaning products used in the home and institutional settings (schools). The bulk of the presentation will focus on policy solutions at the state and federal level, as well as green purchasing in schools.

Session 3-B (Banquet Rooms B & C)

Food as an environmental health issue: Access to affordable, safe, healthy foods: preventing unhealthy additives from entering food

Charles Benbrook, The Organic Center

Summary

Dr. Benbrook will be discussing the reasons why the Pacific Northwest could take over from California the role as leader in advancing the quality and market penetration of organic food, if certain barriers could be removed. He will discuss why the Pacific Northwest is so well positioned to do so and what it will take to distinguish the region as the best source for high quality food.

Session 3-C (Meeting Room A)

The big picture look at a community's environmental health:
Healthy community, healthy development: transportation, clean air, and walkability
Chris Hawkins, Thurston County Public Health & Social Services

Summary

The physical environment has a profound influence on human health, and this is as true for diseases that relate to human behavior as it is for those that relate to exposure to toxins. This workshop describes the impact of various efforts by local health departments to create activity-promoting environments for children and their families in the effort to prevent diabetes, obesity and associated chronic illnesses. Community design, whether the connectivity of pathways like streets or the presence of destinations or features that encourage walking and other activities, can be done in such a way that people are much more likely to engage in healthy, preventive behaviors. Efforts to improve the nutrition environment will also be discussed. The information will provide practical tips for local health and community/environmental planning departments to use in creating healthier built environments.

Session 3-D (Social Hall)

Health care provider issues:
Reducing the barriers to engaging healthcare providers
Karen Bowman, Washington State Nurses Association
Panelists -Steve Gilbert, Cherie Eicholz, Sally Watkins, Barry Lawson, Erete Bloom

Summary

Health Care Providers: Identifying barriers and facilitators in assisting health care providers in becoming environmental health advocates for children.

Session 3-E (Meeting Room B)

The school and childcare environment:
Schools and childcare centers: environmental health risks and model programs overview
Renee Hackenmiller- Paradis, Oregon Environmental Council

Summary

The first few years of a child's life are critical to shaping his or her future health. Research links common chemicals to health concerns, ranging from asthma to learning disabilities. Small steps to reduce toxics can make a big difference in improving a child's health. This presentation will cover simple and effective techniques to make child care facilities and schools as environmentally healthy as possible as well as policy that result in greater protections for all.

- | | |
|---------|---|
| 2:30 pm | Break |
| 2:45 pm | Working Session to Develop Action Agenda (Gymnasium)
Provoking Change—Collaborate with experts, leaders, and colleagues to turn knowledge into Action.
Moderator: Aimee Boulanger, Collaborative for Health and Environment |
| 3:45 pm | Door Prizes & Closing Remarks (Gymnasium) |
| 4:00 pm | Adjourn and Safe Journey Home |