

President's task force considers climate change and children's health

By Pamela Kidron

NIEHS played a key role at a July 10 event in Washington, D.C., convened by the subcommittee on climate change of the President's Task Force on Children's Environmental Health Risks and Safety Risks to Children.

Speakers at the meeting, "Expert Consultation on the Effects of Climate Change on Children's Health," included NIEHS and NTP Director Linda Birnbaum, Ph.D.; NIEHS Senior Advisor for Public Health John Balbus, M.D.; and several NIEHS grantees. Kimberly Thigpen Tart, J.D., NIEHS policy analyst in the Office of Policy, Planning, and Evaluation and co-chair of the subcommittee, organized the event.

"The subcommittee was formed out of a recognition by the President's Task Force that the special vulnerability of children to climate change effects deserves focused attention," Thigpen Tart said. "This expert consultation is the first step toward that goal." Participants presented research on children's unique vulnerability to the health impacts of climate change and helped identify areas needing further research.

Children are especially vulnerable to heat stress, the mental and physical consequences of extreme weather events, respiratory effects of impaired air quality, changes in food quality and availability, and many waterborne, vectorborne, and zoonotic diseases. For example, children's small size makes them more susceptible to dehydration from heat or illness, while their smaller airways predispose them to greater respiratory distress from infections and asthma.

"Children's vulnerability also includes their living into a future of more severe impacts from the inertia built into the climate system," said Balbus, who is a convening lead author on the Populations of Concern chapter in the upcoming U.S. Global Change Research Program (GCRP)

(<http://www.globalchange.gov/health-special-report>)

report, "Interagency Special Report on the Impacts of Climate Change on Human Health."

Assessing the research

"The information our speakers bring forward will help inform ongoing federal, state, local, and tribal efforts to understand health vulnerabilities to climate change impacts, to prepare communities to better cope with climate change stressors, and to improve our nation's long-term health resiliency," Balbus told the assembled experts.

Scientists presented research on dangers to developing fetuses and young children from increases in air pollution that result from warmer temperatures. Such dangers include asthma, which is aggravated by increases in ground-level ozone and in the amount and allergenicity of pollen.

Other researchers linked higher temperatures to increases in pre-term births and the spread of carriers of diseases such as Lyme disease, yellow fever, and West Nile virus. Links between flooding and low birth weight, spontaneous abortions, and the susceptibility of children to certain gastrointestinal diseases were also reported.

Taking action

Several priority research needs were raised, including the need to better understand interactions between climate change, nutritional value of foods, and children's health; and more knowledge of the mechanisms by which high temperatures and flooding can lead to adverse reproductive outcomes.

According to Birnbaum, the health of the planet and the health of the people who live on it are inextricably intertwined.

"There has never been a greater need to support investigation into climate change and to disseminate credible, understandable, and indisputable information on its potential to affect children," Birnbaum said.

(Pamela Kidron is a contract writer with the NIEHS office in Bethesda, Maryland.)



Thigpen Tart serves as the NIEHS contact for the National Climate Assessment (NCA), released in May 2014 (see [story](#)). (Photo courtesy of Steve McCaw)



Balbus was a lead author of the NCA health chapter, serves as the U.S. Department of Health and Human Services principal to GCRP, and co-chairs the GCRP interagency Climate Change and Human Health group. (Photo courtesy of Steve McCaw)

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