NIH RESEARCH ON HEALTH EFFECTS FROM CLIMATE CHANGE

Source: National Institute of Environmental Health Sciences.

NIH launches research program to explore health effects from climate change

A new research program funded by the National Institutes of Health will explore the role that a changing climate has on human health. Led by NIH's National Institute of Environmental Health Sciences (NIEHS), the program will research the risk factors that make people more vulnerable to heat exposure; changing weather patterns; changes in environmental exposures, such as air pollution and toxic chemicals; and the negative effects of climate change adaptation and mitigation efforts.


Asthma. Source: CDC.

In addition to better understanding the direct and indirect human health risks in the United States and globally, one of the program's goals is to determine which populations will be more susceptible and vulnerable to diseases exacerbated by climate change. Children, pregnant women, the elderly, people from low socioeconomic backgrounds, and those living in urban or coastal areas and storm centers may be at elevated risk. This program will also help to develop data, methods, and models to support health impact predictions.

"Governments and policy makers need to know what the health effects from climate change are and who is most at risk," said John Balbus, M.D., NIEHS senior advisor for public health and lead for NIEHS' efforts on climate change. "The research from this program will help guide public health interventions, to ultimately prevent harm to the most vulnerable people."

The funding program is an outgrowth of two previous efforts led by NIH. A December 2009 workshop, sponsored by a trans-NIH working group, brought leaders in the field together to begin identifying priorities for NIH climate change research. NIH then led the ad hoc Interagency

Caroline Dilworth, Ph.D., health scientist administrator in the NIEHS Division of Extramural Research and Training, oversees the grants and anticipates funding additional projects in this important portfolio. "This research will clarify how changes in climate and our environment affect not just heat stress, but also common diseases, such as asthma, cardiovascular disease, and stroke," she said.

In addition to NIEHS, support for the following research projects also comes from the National Institute on Aging (NIA) and the Fogarty International Center (FIC).

Investigator	Institution	Research Summary	Funding Institute

			or Center
Ralph Delfino, M.D., Ph.D.	University of California, Irvine	Identify populations of children with asthma most vulnerable to air pollutants that are expected to increase with climate change.	NIEHS
Julia Gohlke, Ph.D.	University of Alabama at Birmingham	Determine whether significant differences in vulnerability to heat-related health impacts exist between urban and rural communities.	NIEHS
Karen Levy, Ph.D.	Emory University, Atlanta	Examine the impact of current and projected climate variables on the incidence of gastrointestinal disease in Ecuador, for use as a model system to help determine the importance of social factors and infrastructure availability in preventing gastrointestinal disease globally.	FIC
Jonathan Patz, M.D.	University of Wisconsin – Madison	Develop models that factor in climate, air quality, power plant emissions, and health models to determine which populations will be most exposed to air pollution-related health risks.	NIEHS
Roger Peng, Ph.D.	Johns Hopkins University, Baltimore	Quantify the effects of biological, environmental, and socioeconomic factors that make people more vulnerable to extreme heat.	NIEHS
Joel Schwartz, Ph.D.	Harvard University, Cambridge, Mass.	Examine the impact of changing weather patterns, such as temperature, humidity, and barometric pressure, on the elderly, as observed through changes in blood pressure, inflammation, lung function, and related health outcomes.	NIA
		Identify medical and other individual characteristics that put people at increased risk of dying due to weather, and determine air pollution impacts that contribute to those risks.	NIEHS
Antonella Zanobetti, Ph.D.	Harvard University	Define and forecast high risk days given pollution and climatic conditions, to help determine how reduction in pollution or improvement in climatic conditions could improve cardiovascular and cerebrovascular	NIEHS

		health.	
Ying Zhou, Sc.D.	Emory University	Develop models to identify vulnerable geographical locations with increased health impacts due to heat waves and air pollution exposures.	NIEHS

Source : http://www.eoearth.org/view/news/51cbf2267896bb431f6a80e1/?topic=51cbfc78f702fc2ba8129e7b