Human Health


Convening Lead Authors
• George Luber, Centers for Disease Control and Prevention
• Kim Knowlton, Natural Resources Defense Council and Mailman School of Public Health, Columbia University

Lead Authors
• John Balbus, National Institutes of Health
• Howard Frumkin, University of Washington
• Mary Hayden, National Center for Atmospheric Research
• Jeremy Hess, Emory University
• Michael McGeehin, RTI International
• Nicky Sheats, Thomas Edison State College

Contributing Authors
• Lorraine Backer, Centers for Disease Control and Prevention
• C. Ben Beard, Centers for Disease Control and Prevention
• Kristie L. Ebi, ClimAdapt, LLC
• Edward Maibach, George Mason University
• Richard S. Ostfeld, Cary Institute of Ecosystem Studies
• Christine Wiedinmyer, National Center for Atmospheric Research
• Emily Zielinski-Gutiérrez, Centers for Disease Control and Prevention
• Lewis Ziska, United States Department of Agriculture
Wide-ranging Health Impacts

Climate change threatens human health and well-being in many ways, including impacts from increased extreme weather events, wildfire, decreased air quality, threats to mental health, and illnesses transmitted by food, water, and disease-carriers such as mosquitoes and ticks. Some of these health impacts are already underway in the United States.
Climate Change Projected to Worsen Asthma

- 9.1% - 10.2%
- 7.8% - 9%
- 6.6% - 7.7%
- 5.2% - 6.5%

Map showing the projected increase in asthma rates across various counties in New York State.
Ragweed Pollen Season Lengthens

Change in Ragweed Season Length (Days)

- <0.0
- 0.0-4.9
- 5.0-9.9
- 10.0-14.9
- 15.0-19.9
- 20.0-24.9
- >25.0
Wildfire Smoke has Widespread Health Effects
Projected Temperature Change of Hottest Days

Rapid Emissions Reductions (RCP 2.6)

Continued Emissions Increases (RCP 8.5)

Temperature Change (°F)

3 4 5 6 7 8 9 10 15
Heavy Downpours are Increasing Exposure to Disease

- Storm Drain
- Wastewater
- Stormwater

Climate change increases heavy downpours.

Streams and rivers rise, which contributes to flooding of homes, businesses, and critical infrastructure like sewer and storm water systems.

Sewage overflow from treatment plants, septic fields, and municipal lines can back up into people's homes.

Floodwaters can become contaminated with agricultural waste, chemicals, raw sewage, and other pollutants.

Flooded materials in homes, schools, and businesses can cause molds to grow and be inhaled.

Floodwaters can contain disease-causing bacteria, viruses, and parasites.
Harmful Bloom of Algae
Most Vulnerable at Most Risk

Climate change will, absent other changes, amplify some of the existing health threats the nation now faces. Certain people and communities are especially vulnerable, including children, the elderly, the sick, the poor, and some communities of color.
Elements of Vulnerability to Climate Change

Aging Population in the U.S.

- Current Asthma Rates (2001-2009)
- Historical Asthma Rates (1990-1995)

U.S. Chronic Respiratory Disease Deaths (1980-2010)

U.S. Obesity Rates in Children and Adolescents (1971-2010)
- Girls
- Boys

Diagnosed Diabetes in the U.S. (1958-2010)

- Number below 125% of Poverty Level
- Number below Poverty Level

Note: only 4 years of data available in 1980s
Prevention Provides Protection

Public health actions, especially preparedness and prevention, can do much to protect people from some of the impacts of climate change. Early action provides the largest health benefits. As threats increase, our ability to adapt to future changes may be limited.
Responses Have Multiple Benefits

Responding to climate change provides opportunities to improve human health and well-being across many sectors, including energy, agriculture, and transportation. Many of these strategies offer a variety of benefits, protecting people while combating climate change and providing other societal benefits.
Climate Change Impacts in the United States

http://nca2014.globalchange.gov

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Marie O’Neill
University of Michigan School of Public Health
marieo@umich.edu