

Facts about Climate Change and Health

There is arguably no greater threat to public health than climate change, which jeopardizes the long-term sustainability of the planet. However, solving the climate change challenge has the potential to bring large benefits for public health.¹

HOW CLIMATE AFFECTS HEALTH²

- A warming climate and altered weather patterns can bring about increases in ground-level ozone and/or particulate matter air pollution, which causes lung irritation, damage and even death among sensitive individuals.
- High temperatures during summer cause spikes in death rates that may last for several days. Climate change will result in higher temperatures, which may put further stress on vulnerable individuals.
- Longer warm seasons lead to earlier and longer pollen seasons, resulting in more allergy and asthma episodes, especially among children.
- Wildfire risk goes up with warming temperatures, leading in turn to increased vulnerability for firefighters as well as downwind impacts from the air pollution generated by fires.
- Precipitation extremes, whether too much or too little, are important risk factors for illness and death from immediate trauma as well as from mental health problems. Climate change contributes to more intense and variable precipitation extremes.
- Temperature and precipitation influence the distribution of diseases carried by vectors such as mosquitoes and ticks. Climate change may prompt changing patterns of diseases, including dengue fever, malaria, and West Nile virus.
- Food production and distribution are sensitive to climate change and to rising CO₂ levels. Changing patterns of global precipitation put stresses on food production in some areas, and can lead to migration and conflict.





LINKS BETWEEN CLIMATE ACTION AND HEALTH BENEFITS

- Climate change and air pollution are closely linked, because the sources of both are often the same. The power plants and cars and trucks that emit greenhouse gases, for instance, also generate air pollution. Combating greenhouse gas emissions can bring substantial health benefits by also reducing air pollution. The key is to confront both challenges together and to do that globally. That requires collaboration on a variety of levels: international, intercontinental, public-private, business-to-business, academic and specialty-by-specialty.
- Combating climate change can benefit health in other ways besides through cleaner air. For example, urban transportation plans that encourage public transport, biking and pedestrian mobility bring substantial health benefits through physical activity and heart health. Similarly, reducing red meat consumption brings substantial health benefits while also reducing emissions of methane from livestock operations, a very potent greenhouse gas.

ABOUT THE COLUMBIA CLIMATE AND HEALTH PROGRAM:

Launched in 2009 and the first of its kind in the Nation, Columbia's Climate and Health Program carries out advanced research and training on the human health dimensions of climate change impacts and vulnerabilities, with the goal of providing information that is of direct value to policy makers.

¹ Health and Climate Change: policy responses to protect public health, *The Lancet* Vol. 385, June 2015; USGCRP, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*, 2016 (<https://health2016.globalchange.gov>)

² US Centers for Disease Control and Prevention (www.cdc.gov/climateandhealth)