Climate and Your Health: Addressing the Most Serious Health Effects of Climate Change

Science shows that climate change will affect human health across the world. From diminished air quality and degradation of food and water supplies to increasing levels of allergens and catastrophic weather events, we will experience a number of worsening health threats during our lifetimes. Scientific understanding in this area is expanding rapidly, and urgent action is needed to help us avoid the worst of these effects.

There are currently no federal limits on the life-threatening carbon pollution coming from existing stationary sources like power plants and factories. The Environmental Protection Agency (EPA) is attempting to safeguard our health by reducing this carbon pollution and lessening the impact of climate change. We can protect the health of our families and communities by supporting the EPA’s efforts to update the Clean Air Act to address more sources and types of the pollution that cause climate change and these associated health risks:

1. **Extreme Storms Affect Health and Infrastructure:** Science tells us that increases in carbon pollution have contributed to the destructive potential of Atlantic hurricanes and tropical storms in recent decades. Hurricane rainfall and wind speeds are projected to increase as the future becomes warmer. More severe storms and floods can lead to drownings, injuries, drinking water contamination, community displacement, and outbreaks of infectious disease. Storms also damage basic infrastructure and result in additional health risks such as moisture leading to mold growth that can exacerbate allergies and respiratory illnesses.

2. **Heat Waves Increase Death and Illness:** The frequency, intensity, and duration of heat waves in the United States are projected to increase substantially because of climate change. As temperatures increase, so do the number of deaths and illnesses occurring from heat stress, heatstroke, cardiovascular disease, and kidney disease. Heat waves cause the most harm among the elderly, young children, and in economically disadvantaged communities. City dwellers are also at risk because of elevated temperatures from the “urban heat island effect.”

3. **Air Pollution Contributes to More Smog and Respiratory Illness:** Approximately 158 million Americans live in counties where air pollution exceeds national health-based standards. Rising temperatures increase ozone smog formation in many areas. Increasing levels of smog are associated with increased hospital admission rates and death for people with respiratory diseases such as asthma, and worsens the health of people suffering from cardiac or pulmonary disease.

For more information, please contact Kim Knowlton at (212) 727-4579
kknowlton@nrdc.org
http://switchboard.nrdc.org/blogs/kknowlton

1. The Lancet, 2009

www.nrdc.org/policy
Health Facts

Climate and Your Health: Addressing the Most Serious Health Effects of Climate Change

4. Pollen Allergies Proliferate: Higher temperatures in the United States have been linked to longer allergenic ragweed pollen seasons.5 Today’s increased levels of carbon dioxide can cause ragweed to produce twice as much pollen; by 2075, that could be four times as much. With increased airborne pollen, those who suffer from seasonal allergies could experience worsening symptoms, including hay fever and asthma. This could be unbearable for the 23 million children and adults with asthma in the United States and would compound today’s $32 billion price tag for allergies and allergen-driven asthma.6

5. Mosquito- and Tick-Borne Infectious Diseases Spread More Widely: Climate change will affect patterns of diseases such as dengue fever, West Nile virus, and Lyme disease. Increasing temperatures and rainfall have been associated with increased occurrence and transmission of insect-borne diseases like West Nile virus.7 Hotter temperatures can lead to more rapid development of dangerous pathogens within insect carriers and allow these diseases to expand their range into new, once cooler, regions.8

Approximately 173 million Americans in at least 28 states live in counties with mosquitoes that can carry dengue fever, a painful viral illness that’s increased globally 30-fold in the last 50 years.9

6. Drinking Water Becomes Increasingly Contaminated: Outbreaks of water-borne diarrheal diseases caused by parasites like Giardia and Cryptosporidium have been associated with heavy rainfall events and flooding, which are likely to become more frequent due to climate change.10 Although climate change threatens the safety of water supplies worldwide, the impact will be most severe where water infrastructure and treatment is less available.11

7. Water and Food Supplies Threatened: Climate change is expected to worsen both floods and droughts, threatening the availability of water for drinking and irrigation. Droughts harm crops, diminishing food variety, nutritional content, and availability—all of which can contribute to malnutrition and the spread of infectious diseases. Furthermore, warming ocean temperatures bring shifts in the geographic range of fish populations that can severely impact local food supplies. And climate change’s higher temperatures increase the risk of food-borne illnesses.12

8. Large Numbers of Environmental Refugees: Sea level rise and subsequent flooding will leave some coastal regions uninhabitable, forcing people to flee their homes. Experts estimate there will be up to 50 million “environmental refugees” by 2020—people forced to migrate by a range of climate change-related environmental disasters like floods, droughts, and desertification—resulting in health threats such as increases in urban crowding, trauma, social unrest, lack of clean water, and transmission of infectious diseases.

Protecting Ourselves from the Worst Effects of Climate Change

The range of potential threats to health posed by climate change has never been clearer. At the same time that temperatures are rising the numbers of heat-vulnerable older Americans are growing at the fastest rate in a century. There are now 40 million Americans age 65 plus; that number will soar to over 86 million by 2050. Other vulnerable groups include children and economically disadvantaged communities. We now have record numbers of Americans living in poverty—at least 43.6 million people, the highest number since the 1960s. Combining this with an aging municipal infrastructure, we are a nation increasingly vulnerable to climate change.

NRDC strongly supports the EPA’s efforts to limit life-threatening carbon pollution. We must also prepare the national and local public health system to respond to this range of anticipated threats that will accompany climate change.

For more information, see NRDC’s fact sheet titled, “Preparing for Global Warming” at www.nrdc.org/globalwarming/preparedness.pdf.