EXTREME **HEAT** CAN IMPACT OUR HEALTH IN MANY WAYS

Climate change poses many risks to human health. Some health impacts of climate change are already being felt in the United States.

We need to safeguard our communities by protecting people's health, wellbeing, and quality of life from climate change impacts. Many communities are already taking steps to address these public health issues and reduce the risk of harm.

BACKGROUND

When we burn fossil fuels, such as coal and gas, we release carbon dioxide (CO_2). CO_2 builds up in the atmosphere and causes Earth's temperature to rise, much like a blanket traps in heat. This extra trapped heat disrupts many of the interconnected systems in our environment.

Climate change also affects human health by increasing the frequency and intensity of extreme heat events. Increases in the overall temperature of the atmosphere and oceans associated with climate change cause changes in wind, moisture, and heat circulation patterns. These changes contribute to shifts in extreme weather events, including extreme heat events.

THE CLIMATE-HEALTH CONNECTION

Extreme heat events can be dangerous to health – even fatal. These events result in increased hospital admissions for heat-related illness, as well as cardiovascular and respiratory disorders.

- Extreme heat events can trigger a variety of heat stress conditions, such as heat stroke. Heat stroke is the most serious heat-related disorder. It occurs when the body becomes unable to control its temperature. Body temperature rises rapidly, the sweating mechanism fails, and the body cannot cool down. This condition can cause death or permanent disability if emergency treatment is not given. Small children, the elderly, and certain other groups including people with chronic diseases, low-income populations, and outdoor workers have higher risk for heat-related illness.

- Higher temperatures and respiratory problems are also linked. One reason is because higher temperatures contribute to the build-up of harmful air pollutants.

- Many cities across the United States, including St. Louis, Philadelphia, Chicago, and Cincinnati, have seen large increases in death rates during heat waves.

ACTIONS WE CAN TAKE TO PREPARE FOR CLIMATE CHANGE

We can responsibly manage the problems facing our environment by taking sensible steps toward protecting human health and safety. Whether measures are meant to reduce future climate change impacts or address the health impacts of climate change that are happening already, early action provides the greatest health benefits. It makes sense to invest in creating the strongest climate-health adaptation and preparedness programs we can.

Reducing the release of heat-trapping gases like CO_2 can help protect our health and wellbeing by decreasing impacts on our climate system. Activities that reduce the amount of heat-trapping CO_2 in the atmosphere are many of the same things we already know prevent health problems. Active modes of transport like biking or walking can help reduce traffic-related air pollution and encourage physical activity, which has public health benefits including reduced rates of obesity, heart disease, and diabetes.

ACTIONS WE CAN TAKE TO PREPARE FOR EXTREME HEAT EVENTS

We also need to take actions that make our communities less vulnerable to climate change impacts already in progress. Many communities have programs to address climate-sensitive health issues. When it comes to managing the health threats associated with extreme heat, there are approaches that we know work:

- Heat wave early warning systems can protect people by communicating heat wave risks and suggesting protective actions. These warning systems are much less costly than treating and coping with heat illnesses.

- Heat alerts serve as triggers for cities and counties to take preventive action, like opening cooling centers where the public can gather for relief from the heat. Air-conditioning is the number-one protective factor against extreme heat, which is an essential health resource for vulnerable populations.

- Staying hydrated and avoiding strenuous outdoor exercise during heat alerts can protect individuals from adverse effects of extreme heat.

- Providing easy access to public drinking fountains, swimming pools, and spray pads can help keep people cool during periods of extreme heat.

- Updating building codes and landscaping laws can increase energy efficiency. It also improves the ability of buildings to provide protection against extreme heat events. For example, green roofs (roofs with plant cover) and strategically located shade trees can reduce indoor temperatures and improve buildings' energy efficiency.

- Urban forests, including street trees and wooded areas, can mitigate urban heat islands, reducing local air temperatures by up to 9°F.

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