HEAT-RELATED ILLNESSES AND CLIMATE CHANGE

Summary produced by the Blackfeet Environmental Office
in cooperation with the Center for Large Landscape Conservation

For more information visit **blackfeetclimatechange.com**

Warming temperatures are increasing the frequency and severity of future extreme heat events. Without adaptation, this means we may see an increase in heat-related illnesses, hospital visits, and deaths. Rising temperatures can cause heat exhaustion, heat cramps, heat stroke, and heart-related illnesses; heat can also be fatal. Our decisions and actions can influence the degree to which our community will experience these impacts to our health. Being proactive and making decisions now to safeguard health will help us be more resilient.

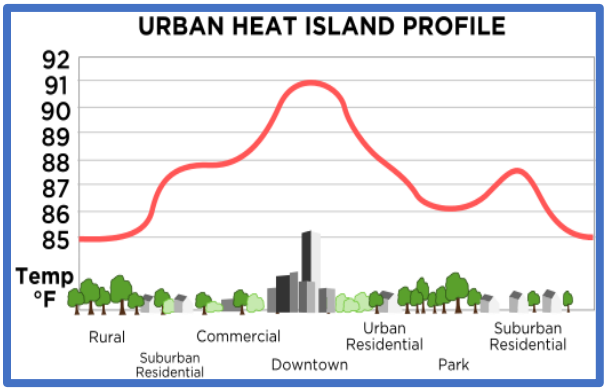

Illustration of the Urban Heat Island effect: it is difficult for heat to escape from urban areas, causing them to be warmer than surrounding areas with less development. Source: NOAA via Wikimedia Commons

Urban areas are often most at risk of high heat since high concentrations of buildings cause the heat island effect. We may think of only cities as "urban", but all buildings generate, absorb, and release heat in a way that makes areas with multiple buildings warmer than surrounding areas without buildings. Cities in cooler regions often see more heat-related deaths because people are less acclimatized to hot temperatures and are less likely to have air conditioning. For example, in August 2003, a heat wave killed 15,000 people in France. Many of the people who died were elderly, isolated, and living in buildings without air conditioning or cross-ventilation. France has since enacted more protective policies, with awareness of the need to protect at-risk groups of people when extreme heat is predicted.

Scientists predict that climate change will increase temperatures in Northern Montana, which can cause negative health impacts. Indirectly, a warming climate may decrease physical fitness levels by discouraging people from walking, horseback riding, cycling, or engaging in other familiar outdoor activities that boost fitness levels. As climate change is predicted to increase plant-based allergens, people with allergies may be less inclined to engage in rigorous outdoor activity.

WHO IS MOST AT RISK?

People without air conditioning are most at risk, as are older adults, children, people working outside, people who are socially isolated, people who are socio-economically disadvantaged, and people with chronic illnesses. For example, obesity, cardiovascular disease, and diabetes increase a person's sensitivity to heat. Some medications make it more difficult for a person's body to regulate temperature.

It's important to note that power outages are a possibility on extremely hot days, since many people using air conditioning at once can stress energy infrastructure. Having a strategy for keeping people cool if the power goes out is an important part of planning for extreme heat.

WHAT CAN WE DO ON EXTREMELY HOT DAYS?

We can encourage people to use air conditioning and to decrease their time outdoors on extremely hot days. It's also important to watch for signs of dehydration and overheating. Check on people who are most at risk, especially elderly folks, people living in isolation, and people who may need assistance getting to a cooler location.

When it is hot, it is important to drink a lot of water. Encourage your family and neighbors to stay hydrated, and learn the signs of dehydration.

Planting more trees can help urban areas stay cooler. Trees provide shade and they can also help to mitigate the urban heat island effect.

HOW CAN WE ADAPT?

- Have a policy in place for preparing for and responding to extreme heat to help coordinate response efforts.
- Provide a cooling center for people to go to when temperatures rise to assist people who do not have air conditioning; however, people who are at risk must have the motivation and the necessary transportation to get to the cooling center.
- Ensure that energy infrastructure can withstand the high energy demands of extremely hot (or cold) days and that back-up systems exist as well.
- Recognize that land use decisions have a major impact on how hot it will get in a specific place. Make climate-minded decisions now about development in the Blackfeet Nation, including infrastructure location and building design, to influence how much a specific place or building will heat up on extremely hot days. Plant trees, expand parks, and increase green spaces in and around urban areas to help reduce heat levels.
- Implement an early warning system for high heat and communicate how to care for individual and community health on hot days to help prevent heat-related illness.
- Encourage people to get to know their neighbors and to provide help to people who are more vulnerable on hot days, like older adults, children, people who are sick, and people who are overweight.

For more information, visit the Blackfeet Country and Climate Change website:

blackfeetclimatechange.com

Content on this page is summarized from the U.S. Global Change Research Program's report, "The Impacts of Climate Change on Human Health in the United States", the National Institute of Environmental Health Sciences' "A Human Health Perspective on Climate Change", and the Centers for Disease Control and Prevention's "When Every Drop Counts" to briefly describe some of the possible health outcomes that are most relevant to Blackfeet Country. This page does not include all possible health impacts and outcomes, nor does it include all possible risks and responses (December, 2017).