Understanding the threats that climate change poses to human health can help us work together to lower risks and be prepared. Climate change threatens human health, including mental health, and access to clean air, safe drinking water, nutritious food, and shelter. Everyone is affected by climate change at some point in their lives. Some people are more affected by climate change than others because of factors like where they live; their age, health, income, and occupation; and how they go about their day-to-day life.

Certain groups of workers are especially vulnerable to health impacts from climate change because of where they work and the type of work that they do. Climate change may increase the occurrence and severity of some existing occupational hazards and may also lead to new and unanticipated risks. Some workers also encounter unique hazards related to climate change, such as the exposure of firefighters to wildfires. It is important that employers understand the impacts of climate change so they can take steps to prepare for potential changes in the work environment and protect their workers. Employers, safety professionals, and workers should stay informed about emerging issues and hazards associated with climate change to better develop plans that address worker safety and health.

Develop plans that address worker safety and health.

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Develop plans that address worker safety and health.

...and hazards associated with climate change to better prepare workers. Employers, safety professionals, and workers should stay informed about emerging issues that may affect their work environment and protect themselves from new and unanticipated risks. Some workers also face increased risks related to climate change, which may lead to changes in the work environment.

It is important that employers understand the impacts of climate change so they can take steps to prepare for the potential changes in the work environment. Certain groups of workers are especially vulnerable to climate change because of where they work and the type of work that they do. Climate change threatens human health, including workers’ health, income, and occupation; and how they go about their day-to-day life.

Climate change poses threats to human health that may help us work towards better adaptation plans to help understand and mitigate these and more health threats related to climate change (see link in the Learn More section of this sheet).

**Work settings and climate change**

Outdoor workers are often among the first to be exposed to the effects of climate change. Climate change is likely to affect the health of outdoor workers through increases in temperature, poor air quality, extreme weather, diseases transmitted by ticks and mosquitoes, industrial exposures, and damage to infrastructure. Outdoor workers affected by climate change include:

- farmers, ranchers, and other agricultural workers
- commercial fishermen
- construction workers
- paramedics, firefighters, police, and other first responders
- transportation workers

But it is not only outdoor workers who are affected by climate change. Individuals who are exposed to hot indoor work environments (such as steel mills, dry cleaners, manufacturing facilities, warehouses, and other areas that lack air conditioning) are also at risk for climate change impacts such as extreme heat exposure or indoor air pollutants.

**Extreme heat**

Extreme heat may result in more cases of heat-related illnesses, like heat stroke, heat exhaustion, and fatigue among workers, especially among more physically demanding occupations. Heat stress and fatigue can reduce alertness and work capacity, leading to safety lapses that can increase the risk of injury. Higher temperatures can also worsen air pollution, raising the risk of respiratory illness for workers. Heat extremes in areas not previously affected by high temperatures can affect workers who are not used to working in high heat conditions or are unaware of heat-related hazards.

**Extreme events**

Extreme events, such as floods, storms, droughts, and wildfires are becoming more frequent and intense as a result of climate change. These events create risky conditions for workers involved in disaster response, rescue, and cleanup. For example, firefighters battling wildfires are exposed to hazards such as being overrun by fire, heat-related illnesses and injuries, smoke inhalation, and air pollutants. First responders and other emergency workers face greater health and safety risks when working in conditions with infrastructure disruptions, communication interruptions, and social unrest or violence following floods and storms.

**Other outdoor health hazards**

Other health hazards for outdoor workers include increased exposure to waterborne and foodborne illness, allergens, and insects carrying diseases such as West Nile virus or Lyme disease. In addition, because of the increase in range and duration of pests and weeds, pesticide use is expected to increase, including in areas where pesticides were not previously used. This will increase the exposure of agricultural workers. Lastly, for some groups, such as migrant workers and day laborers, the health effects of climate change can be cumulative, as they are affected both by work-related exposures and exposures associated with poorly insulated housing and lack of air conditioning.

**Members of the military**

Like others who work outdoors, military personnel who train and conduct operations in hot environments are at risk for heat-related illness. Members of the U.S. Armed Forces are also at increased risk of exposure to diseases carried by mosquitoes and ticks, as well as exposure to respiratory hazards like air pollution. In addition, military personnel are stationed and deployed globally, which exposes them to climate-related infections that are relatively rare in the United States, such as dengue fever and malaria. The U.S. Department of Defense has developed a climate change adaptation plan to help understand and mitigate these and more health threats related to climate change (see link in the Learn More section of this sheet).