

HEAT HEALTH AND SAFETY

MICHIGAN SUMMER WEATHER



This fact sheet explains some of the health risks associated with excessive heat. Read on for more information about heat-related illness and how you can protect yourself and your family when it is hot outside.

Health Risks of Hot Weather

When it is very hot, there is an increased risk of heat-related illness because the body's temperature rises and cannot be cooled by sweating or the other ways the body cools itself. The most severe heat-related illnesses are heat exhaustion and heat stroke. If not treated, heat exhaustion can worsen and cause heat stroke or death. The figure below shows common symptoms of heat exhaustion and heat stroke.

Types of heat-related illness

Heat Exhaustion

Symptoms

Faint or dizzy

Excessive sweating

Cool, pale clammy skin

Nausea or vomiting

Rapid pulse

Muscle cramps



Heat Stroke

Symptoms

Confusion, disorientation

Very high body temperature

Red, hot skin may be dry or sweaty

Nausea or vomiting

Rapid pulse

May lose consciousness

Death rates increase during heat waves because of heat stroke and related conditions, but also from other conditions such as cardiovascular disease and respiratory disease.¹

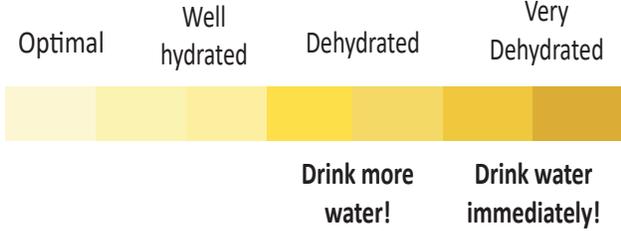
What to do for heat exhaustion	What to do for heat stroke
<ul style="list-style-type: none"> • Move to a cool place. • Loosen your clothes. • Put cool, wet cloths on your body or take a cool bath. • Drink cool water. <p>Get medical help if:</p> <ul style="list-style-type: none"> • You throw up or cannot drink, • Your symptoms get worse, • Your symptoms last longer than one hour. 	<ul style="list-style-type: none"> • Call 911 right away. • Move the person to a cooler place. • Help lower the person's temperature with cool cloths or cool bath.

Drinking **WATER** is the best way to stay hydrated while working in the heat.

It is also important to eat regular meals that replace the salt lost from sweating.

The urine color test

The color of your urine can tell you if you should be drinking more water. If you are well hydrated, your urine will be a very light yellow. The more dehydrated you are the darker your urine will be.²



How Can I Protect Myself?

Stay Cool



- Limit your time in the heat.
- When it is above 90° F, find somewhere with air conditioning or take cool showers or baths. Don't rely on electric fans to stay cool.
- Wear loose, lightweight, light-colored clothing.
- Avoid direct sunlight.
- Watch the forecast. Give yourself time to adjust to the hot weather.

Stay Hydrated



- Drink more water than usual.
- Drinking more often is better than drinking large amounts infrequently.
- Drink before you get thirsty.
- Avoid alcohol or liquids that have high amounts of sugar and/or caffeine.

When working or being active in the heat, drink about one cup of water every 15-20 minutes. Drink about one quart of water per hour.²

How much water is that?

Stay Informed



- Explore Michigan Data**
- Visit the [MiTracking Program site](#) and select the “Go to the data” button for Michigan data on heat illness and extreme heat.
 - For **heat-related illness data**, select the “Health” category and “Heat illness” content area.
 - For **extreme heat data**, select the “Environment” category, “Climate change” content area, and “Extreme heat (historical data)” indicator.
 - Check out the [Michigan Climate and Health Adaptation Program \(MICHAP\)’s report on Excessive Heat Impacts on Health](#).

Stay Informed



Get Alerts

- Sign up for your local Emergency Notification System such as CodeRed for weather warnings.
- Pay attention to weather reports when it is hot or if a heat emergency is declared.
- Many weather phone apps also provide National Weather Service (NWS) heat alert information.

The **NWS** issues Heat Advisories and Excessive Heat Warnings when the Heat Index* is expected to rise to a dangerous level.

- A **NWS Heat Advisory** is issued in Michigan when the Heat Index value is expected to exceed 100°F for three consecutive hours, which can be extended into the night if low temperatures are in the 70s or higher. A NWS Heat Advisory may be issued for lower criteria if it is early in the season or during a multi-day heat wave.³
- A **NWS Excessive Heat Warning** is issued in Michigan when the Heat Index value is expected to exceed 105°F for at least three consecutive hours.³

*The Heat Index accounts for the combined effects of relative humidity and the actual air temperature to estimate the heat stress on the human body.

At-Risk Groups

Who is most at risk for heat-related illness?

- People older than 65
- Outdoor workers
- Low-income individuals and families
- Infants and children
- People who live alone
- People without air conditioning
- People who exercise outside
- People with chronic conditions (e.g., diabetes, cardiovascular disease, and respiratory disease)

For people with chronic medical conditions or taking medications

- Talk with your primary care provider about how you should monitor and protect yourself during extreme heat.

For outdoor workers

- Drink plenty of water.
- Wear and reapply sunscreen as indicated on the package.
- Ask if tasks can be scheduled for earlier or later in the day to avoid midday heat.
- If possible, work shorter shifts until your body has gotten used to the heat and take frequent breaks to rest and cool down.
- For more information, check out the [CDC/National Institute for Occupational Health and Safety \(NIOSH\) Heat Stress webpage](#).

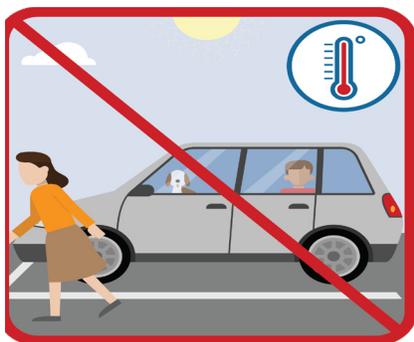
For people without air conditioning

- Use a buddy system - check on a friend or neighbor and have someone do the same for you.
- If someone in the home is at least 55 years old, or if air conditioning is medically necessary, apply for State Emergency Relief (SER) by visiting [MI Bridges](#).
- Text or call [Michigan 211](#) or contact your local health department to locate a cooling center (e.g., public library, mall, or community center) and air-conditioned shelters in your area.
- Spend some time at a shopping mall, public library, or other public buildings - even a few hours spent in air conditioning can help.

Children and Pets in Cars

It only takes **two minutes** for a car to reach unsafe temperatures. Every year children and pets left in parked vehicles die from heat stroke.⁴ Heat stroke is the leading cause of non-crash, vehicle-related deaths in children under 15.⁵

- Never leave a child, disabled person, or pet in your car, even if the windows are open.
- Even the most caring and watchful person can forget a child or pet is also in the vehicle. Always check to make sure all children and pets are out of the car before locking it and walking away.
- Teach children that cars are not safe places to play. Store your keys out of reach of children.
- Leave pets at home when you can.



A child's body warms three to five times faster than an adult's.

Never leave infants, children, or pets in a parked car.

Other Resources

Visit these webpages for more information:

- Centers for Disease Control and Prevention (CDC)'s [Warning Signs and Symptoms of Heat-Related Illness](#).
- CDC's [Protecting Vulnerable Groups from Extreme Heat](#).
- CDC's [Tips for preventing heat-related illness](#).
- National Oceanic Atmospheric Administration's [Keep your pets cool](#).
- American Veterinary Medical Association's [Pets in Vehicles](#).

References

1. EPA. 2021. Climate Change Indicators: Heat-Related Deaths. Retrieved June 2, 2021 from <https://www.epa.gov/climate-indicators/climate-change-indicators-heat-related-deaths>
2. CDC. 2017. Heat Stress: Hydration. Retrieved March 23, 2021, from [Heat Stress: Hydration \(cdc.gov\)](#)
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4. National Weather Service. Children, Pets, and Vehicles. Retrieved March 19, 2020, from [weather.gov/safety/heat-children-pets](#)
5. American Academy of Pediatrics. Prevent Child Deaths in Hot Cars. Retrieved May 7, 2021, from <https://www.healthychildren.org/English/safety-prevention/on-the-go/Pages/Prevent-Child-Deaths-in-Hot-Cars.aspx>.

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