



IT'S HOT OUT THERE

Preventing heat illness among outdoor workers

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Tampa Bay
Times
NIE
newspaper in education
tampabay.com/nie


ENTERPRISING
Latinas



Allegany
Franciscan
Ministries

A Member of Trinity Health

A project of Entering Latinas, produced by the Tampa Bay Times Newspaper in Education program with grant support from Allegany Franciscan Ministries.

ENTERPRISING LATINAS, INC.

The mission of Enterprising Latinas, Inc. (ELI) is to create pathways of opportunity for women in Tampa Bay by teaching new skills, creating networks of mutual support and advocating for innovative solutions to promote economic mobility and equity. In its tenth year of service to the community, ELI continues to recognize the social inequities driving the gap in wages and wealth for women, particularly Latinas, and focuses on turning community challenges into economic opportunities for them. ELI believes that when women do well, their families and communities do better.

This project is part of ELI's Building Green Equity initiative, which creates economic opportunities that advance climate justice.

Building Green Equity began in 2023 by

supporting entrepreneurship pathways for women and people of color as green energy contractors in Tampa Bay.

Moving forward, this initiative will facilitate climate adaptations in homes of low-to-moderate-income families to promote healthier, safer and more energy-efficient homes. ELI understands that taking action on climate change includes learning and anticipating how to mitigate and adapt to prolonged periods of extreme heat to ensure our families and communities remain healthy and thriving.

This bilingual publication focuses on informing the community about the dangers of heat illnesses among outdoor workers, how workers and employers can prevent them, and what to do if workers experience heat symptoms.



Learn more about ELI and how to support their work in creating pathways of opportunity for women, their families and our communities at enterprisinglatinas.org.

About NIE

The Pulitzer Prize-winning Tampa Bay Times is the largest daily newspaper in Florida. Locally owned and independent, the Times has long been celebrated for its outstanding and credible journalism, practiced with integrity in the public interest. The Times has been part of the Tampa Bay community for more than 140 years.

The Tampa Bay Times is a founding member of the Florida Climate Reporting Network, a multi-newsroom initiative. With grants awarded by the Pulitzer Center on Crisis Reporting, this partnership of 17 news organizations is producing and sharing stories on climate change in Florida. Learn more at tampabay.com/topics/climate.

The Tampa Bay Times Newspaper in Education program (NIE) is a cooperative effort between schools and the Times to encourage the use of newspapers in print and electronic form as educational resources – a “living textbook.”

Since the 1970s, NIE has served educators, students, families and community members in the Tampa Bay area by providing class sets of the Times plus award-winning original educational publications, teacher guides, lesson plans, educator professional development resources and much more – all at no cost to schools, teachers or families.

For more information about NIE, visit tampabay.com/nie, call 727-893-8138 or email ordernie@tampabay.com. Follow us on X at [X.com/TBTimesNIE](https://x.com/TBTimesNIE). Find us on Facebook at facebook.com/TBTNIE.

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Florida Standards

This publication and its activities incorporate the following Florida Standards for elementary, middle and high school students. Health: HE.618.R.2.4; HE.68.R.4.1; HE.68.R.4.3; HE.68.CEH.1.1; HE.68.CEH.1.2; HE.68.CEH.3.1; HE.68.CEH.3.2; HE.68.CEH.4.1; HE.68.CEH.4.2; HE.68.PHC.1.2; HE.68.PHC.1.4; HE.68.PHC.2.2; HE.68.PHC.2.6; HE.68.PHC.3.8; HE.68.PHC.3.9; HE.912.CEH.1.1; HE.912.CEH.1.2; HE.912.CEH.2.2HE.912.CEH.2.4; HE.912.CEH.2.5; HE.912.CEH.2.7; HE.912.CEH.2.8; HE.912.CEH.3.2; HE.912.CEH.3.3; HE.912.CEH.2.4; HE.912.CEH.2.5; HE.912.CEH.2.6; HE.912.CEH.2.7; HE.912.CEH.2.8; HE.912.CEH.3.2; HE.912.PHC.1.1; HE.912.PHC.2.2; HE.912.PHC.2.3; HE.912.PHC.2.4; HE.912.R.2.2; HE.912.R.2.3 Physical Education: PE.6.C.2.2; PE.6.C.2.21; PE.6.C.2.22; PE.6.R.5.3; PE.912.C.2.8; PE.912.C.2.9; PE.912.L.3.2 BEST: ELA.K12.EE.1.1; ELA.K12.EE.4.1; ELA.K12.EE.6.1; ELA.612.F.2.2; ELA.612.F.2.4; ELA.612.C.1.4; ELA.612.R.2.1; ELA.612.R.2.2; ELA.612.R.2.3; ELA.612.V.1.1

Complete a short survey about this publication to be entered into a drawing to win a \$25 gift card! Scan the QR code or go to surveymonkey.com/r/SZ2LMRQ.



Jose Luis Pedraza, 46, of Brandon, left, and Mireidy Hernandez, 27, of Wimauma, right, measure material during a class at Enterprising Latinas in Wimauma. Times (2023)

About Allegany Franciscan Ministries

This project was funded by a Climate Justice & Care for Creation grant from Allegany



Franciscan Ministries. This strategic initiative addresses the effect of climate change on communities of color and other historically marginalized communities to protect people and our common home. The long-term goal is that everyone in our communities will have the resources, support and opportunities necessary to thrive in the face of multiple risks, uncertainties and threats caused by climate change. Learn more at afmfl.org.



Douglas R. Clifford | Times (2020)

Heat is increasing in Florida

In 2022 and 2023, the Tampa Bay region experienced the hottest two years on record since 1890.

In 2023, the cities of Tampa, St. Petersburg, Plant City, Lakeland, Venice and Sarasota recorded their hottest years on record.

Globally, 2024 was the hottest year on record and the first year with an average temperature exceeding 1.5° C above the pre-industrial level. July 22, 2024 was the hottest day in recorded history.

The number of days per year at or above 95°F is increasing. The number of very warm nights – when nighttime temperatures stay above 75°F – is also increasing.

By 2050, Florida is expected to see higher average temperatures and humidity levels, up to 50 more extreme heat days per year, up to 100 additional very warm nights per year and more frequent, longer-lasting and more intense heat waves.

INCREASING HEAT = INCREASING HEALTH RISKS

From 2010 to 2020 there were 215 deaths related to environmental heat in Florida, with at least 5% of those deaths occurring in Hillsborough County.

It is critical that outdoor workers, their employers and other vulnerable residents understand what to do to prevent heat illness and the longer-term health effects of extreme and long-lasting heat.

Exposure to extreme or long-lasting heat directly impacts human health by making it harder for the body to cool itself.

When the body gets too hot, it begins to sweat to cool itself off. When sweat evaporates off the body, it reduces the body's temperature. If sweat is not able to evaporate, the body cannot cool itself.

In the short term, exposure to extreme or long-lasting heat can lead to heat-related illnesses, such as heat exhaustion and heat stroke. Heat stroke can damage the brain, heart and kidneys, and lead to death if not treated immediately.

Heat can worsen asthma and chronic obstructive pulmonary disease (COPD)

symptoms, making it harder for people with these conditions to breathe.

Heat can lead to dehydration, which can cause kidney damage. Kidney damage can become irreversible if untreated.

Repeated or long-term exposure to extreme or long-lasting heat has been linked to heart disease, kidney disease, diabetes-related illnesses, respiratory disease, mental health impacts, and complications with pregnancy and birth.

From 2010 to 2020,
there were at least
**215 HEAT-RELATED
DEATHS**

in Florida. At least ten, or
5%, of those deaths occurred in
Hillsborough County.

- University of Florida, Institute of Food and
Agricultural Sciences (UF-IFAS)

INFORMATION FOR WORKERS

Which workers are most at risk?

- People who work outdoors
- People who work in hot environments without air conditioning or good ventilation
- People who are 65 or older
- People who are overweight
- People with heart disease or high blood pressure
- People who take certain prescription medications

Why is it important to prevent heat illness?

- Heat illness can be a **matter of life and death**. Workers die from heat stroke every year, and every death is preventable.
- Even when heat illness doesn't kill, it can cause **serious heart, liver, kidney and muscle damage**.
- Workers who suffer heat illnesses can experience **serious long-term health impacts**.
- Workers suffering from heat illness are at **greater risk for accidents** because they are less alert and can be confused.
- Having a serious injury or death occur at work **affects everyone at a worksite**.

How to stay safe in the heat

Water:

- Hydrate before, during and after work.
- Drink 1 cup of cool water every 20 minutes – even if you aren't thirsty.
- For short jobs, water is fine. For longer jobs, drinks with electrolytes (such as sports drinks) are best.
- Avoid energy drinks, sugary drinks, caffeine and alcohol.
- Dark yellow urine may indicate you are not drinking enough.

Rest:

- Find shade or a cool area for rest breaks so your body can recover.

Dress for the heat:

- Wear light-colored, breathable, loose-fitting (if allowed) clothing.
- Wear a hat with a brim.
- Wear a cooling neck wrap or a vest with cooling packs in the pockets.

Work practices:

- Encourage co-workers to take breaks to cool off and drink water.
- Rotate jobs among workers to minimize heat exposure.

- If new to working outdoors, allow your body to adjust gradually and build tolerance to heat exposure.
- Use a buddy system for workers who are new to working outdoors or in hot environments.
- Ask if tasks can be scheduled for earlier or later in the day to avoid midday heat.
- Seek medical care right away if you or a co-worker has symptoms of heat illness – see Pages 10-11.

**OUTDOOR WORKERS
MAKE UP
MORE THAN
20%
OF THE TOTAL WORKFORCE
IN FLORIDA**



**MORE THAN
275,000 PEOPLE
WORK IN OUTDOOR
OCCUPATION CATEGORIES
IN TAMPA BAY**

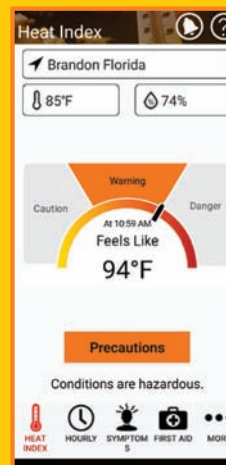


Find out more about protecting your health as an outdoor worker

Centers for Disease Control and Prevention – Heat and Outdoor Workers
cdc.gov/extreme-heat/risk-factors/heat-and-outdoor-workers.html

National Weather Service – Heat Illness
weather.gov/safety/heat-illness

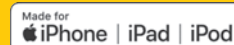
Occupational Safety and Health Administration – Information for Workers
osha.gov/heat/worker-information



OSHA-NIOSH Heat Safety Tool

Use this free bilingual app to get:

- Current heat index and associated risk levels specific to your current geographical location
- Precautionary recommendations
- Interactive hourly forecast of heat index values and risk levels
- Signs and symptoms and first aid for heat-related illnesses



GETTING HELP.

Call 911 for emergency care

- If the person is experiencing the symptoms of heat stroke (see pages 10-11).
- If heat illness symptoms get worse or last more than 1 hour.
- If the person has heart problems.
- If the person is vomiting.
- If the person is on a low-sodium diet.

For non-emergency care

If you suffer heat illness at work

- Your employer may require you to visit a specific medical provider.

If you have health insurance

- Your regular healthcare provider.

Some resources if you do not have health insurance

- **Florida Voices for Health** (list of free/low-cost health care clinics): healthyfla.org - 850-296-7433 – FLVoices@healthyfla.org.
- **Catholic Charities Free Medical Clinics:** ccdosp.org/catholic-charities-free-medical-clinics.
352-521-1218 (Dade City) / 813-707-7376 (Dover) / 813-633-2576 (Wimauma) – medclinic@ccdosp.org.
- **USF Health Tampa Bay Street Medicine Continuity Clinic at Tampa Hope:** tbstreetmedicine@gmail.com.
- **USF Health Tampa Bay Street Medicine Refugee Clinic:** 813-550-6406.



Martha Asencio-Rhine | Times (2019)

Hillsborough County Health Care Plan

The Hillsborough County Health Care Plan (HCHCP) provides free health care to Hillsborough County residents with limited income and assets who do not qualify for other health care coverage, including Medicare and Medicaid.

Eligibility:

- Resident of Hillsborough County.
- U.S. citizen or legal resident of the U.S.
- Not eligible for any other health care coverage, including Medicare and Medicaid.
- Income at or below 175% of the federal poverty guidelines.

hcfl.gov/residents/health-care-plan/apply-for-the-health-care-plan
813-272-5040 – healthcareservicesinfo@hcfl.gov.



Sources: Centers for Disease Control and Prevention; National Weather Service; Occupational Safety and Health Administration; Red Cross; Union of Concerned Scientists

INFORMATION FOR EMPLOYERS

Under the federal Occupational Safety and Health Act, employers are responsible for providing workplaces free of known safety and health hazards. **This includes protecting workers from heat-related hazards.**

With days of extreme heat becoming more frequent and more intense, the number of hours and days when outdoor work is unsafe will increase further – but there are steps that employees and employers can take to adapt to changing conditions.

How to prevent heat-related illnesses at your site

Prevention requires employers and workers to work together to recognize and reduce heat hazards.

1. Protect new workers.

Workers who are new to working in hot environments are the most at risk of heat-related illness:

- They may not be acclimated to heat. Their bodies need time to adapt to working in hot conditions.
- They may not be familiar with the symptoms of heat illness or the importance of water, rest and shade to prevent heat illness.

Steps to help new workers adjust:

- Train new workers about the symptoms of heat-related illness and the importance of water, rest and shade.
- Help new workers build heat tolerance by scheduling them to work shorter amounts of time in the heat, separated by breaks, for the first one to two weeks.
- Give new workers more frequent rest breaks.
- Monitor new workers closely for any symptoms of heat-related illness.
- Use a buddy system and don't allow new workers to work alone.

2. Train supervisors and workers.

- Heat exposure risks.
- Heat illness prevention.
- Heat illness symptoms.
- First aid.
- Procedures for getting help on a worksite and contacting emergency medical services.

3. Provide sufficient water, rest and shade.

WATER: Proper hydration is essential to prevent heat-related illness.

- Employers should provide cool water for workers to drink.
- Workers should hydrate before, during and after work.
- While working in the heat, workers should drink one cup of cool water every 20 minutes even if they aren't thirsty.
- For short jobs, water is fine. For longer jobs, drinks with electrolytes (such as sports drinks) are best.

REST: Employers should require workers to take breaks.

- The length and frequency of rest breaks should increase as heat rises.
- Breaks should last long enough for workers to recover from the heat.
- Breaks should last longer if there is no cool location for workers to rest.
- Some workers might be tempted to skip breaks. In hot conditions, skipping breaks is not safe. Employers should make sure that workers rest during all recommended break periods.

SHADE: Workers should be given a cool location where they can take their breaks and recover from the heat.

- Shady area.
- Air-conditioned vehicle.
- Nearby building or tent.
- Area with fans and misting devices.
- Cool or air-conditioned area away from heat sources such as hot equipment.

4. Understand heat hazards in your workplace and reduce risk as much as possible.

The best way to prevent heat-related illness is to make the work environment cooler and to reduce manual workload with mechanization.

Examples include:

- Air conditioning (such as air-conditioned equipment cabs, air conditioning in break rooms).
- Increased general ventilation.
- Cooling fans.
- Cooled seats or benches for rest breaks.
- Use of mechanical equipment to reduce manual work (such as conveyors and forklifts).
- Misting fans.

Work practices

Some worksites cannot be cooled by technology. At those locations, employers should modify work practices when heat stress is too high to work safely. Examples include:

- Consider scheduling work at a cooler time of day, such as early morning or late afternoon.
- Reduce physical demands as much as possible by planning the work to minimize manual effort (such as delivering material to the point of use so that manual handling is minimized).
- Rotate job functions among workers to help minimize exertion and heat exposure.
- Encourage or make it easier for workers to use cooling vests and hats, neck fans and other specialized cooling attire.

Source: Occupational Safety and Health Administration

Heat increases work-related accidents

A new study from the Workers Compensation Research Institute (WCRI) found that the probability of work-related accidents increases on extremely hot days.

The study found that the probability of work-related accidents increases by 5 to 6 percent when the maximum daily temperature rises above 90°F, relative to a day with temperatures in the 65-70°F range. The effect is stronger in the South and for construction workers. Also, the effect of excessive heat is greater on traumatic injuries, including fractures, dislocations, contusions, and lacerations.

Read the **Tampa Bay Times** article about the study at tampabay.com/news/environment/2024/05/13/heat-injuries-workers-compensation-florida.



Times (2019)

More information and resources for employers

National Institute for Occupational Safety and Health (NIOSH) – Heat Stress Toolkit
cdc.gov/niosh/topics/heatstress

Occupational Safety and Health Administration – Employer Responsibilities
osha.gov/heat/employer-responsibility

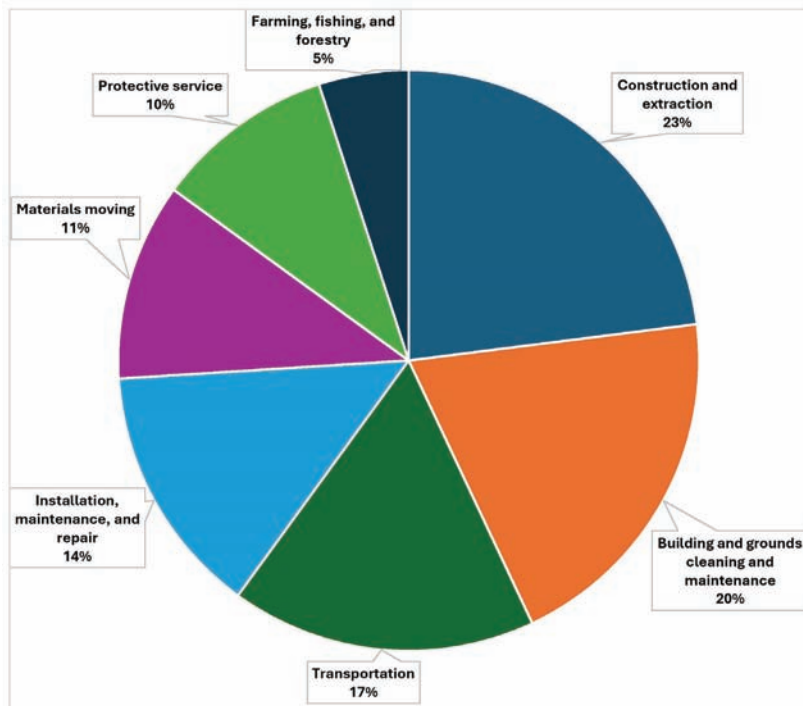
OSHA-NIOSH Heat Safety Tool App
cdc.gov/niosh/topics/heatstress/heatapp.html

University of South Florida – OSHA Education Center
health.usf.edu/publichealth/research/otiec

USF SafetyFlorida
health.usf.edu/publichealth/research/cohpe/safetyflorida/overview

Sources: Centers for Disease Control and Prevention; National Weather Service; Occupational Safety and Health Administration; Red Cross; Union of Concerned Scientists

Percentage of workers in outdoor occupation categories in Hillsborough County



OUTDOOR WORKERS IN THE UNITED STATES HAVE UP TO **35 TIMES THE RISK OF DYING** FROM HEAT EXPOSURE THAN DOES THE GENERAL POPULATION.

NEARLY 3 MILLION OUTDOOR WORKERS IN THE UNITED STATES ALREADY EXPERIENCE THE **EQUIVALENT OF SEVEN OR MORE UNSAFE WORKDAYS** PER YEAR DUE TO EXTREME HEAT.

BY 2050, UP TO 40 WORKDAYS PER YEAR WOULD BE UNSAFE DUE TO EXTREME HEAT IN HILLSBOROUGH COUNTY, **PUTTING \$594,620,709 IN OUTDOOR WORKERS' EARNINGS AT RISK** WITH BROADER IMPACTS ON EMPLOYERS AND THE ECONOMY.

INFORMATION FOR TEACHERS, COACHES AND STUDENTS

Students at risk

Similar to outdoor workers, children and young people who spend a lot of time outdoors – such as student athletes – are at increased risk of heat illness.

According to a [database](#) compiled by the Louisville Courier Journal, at least 173 high school athletes have died of heat stroke in the United States in the last 100 years. At least nine of those were in Florida.

In 2020, Florida passed the [Zachary Martin Act](#) requiring school districts to establish heat safety procedures around high school sports competitions, practices and workouts.

The law is named after Zachary Martin Polsenberg, a 16-year-old Fort Myers football player who died of heat stroke after a summer workout in 2017.

Since Zachary's death, at least three more Florida student athletes have died from heat: 14-year-old Tampa football player Hezekiah Walters (2019), 16-year-old Inverness football player Antonio Elijah Hicks (2021) and 18-year-old Port St. Joe football player Chance Gainer (2024).

How to exercise safely in the heat

People who exercise in extreme heat are more likely to become dehydrated and get heat illness.

- **If you feel faint or weak, stop all activity and get to a cool place.**
- Limit outdoor activity, especially during the middle of the day when the sun is hottest.
- Schedule outdoor workouts and practices earlier or later in the day when the temperature is cooler.
- Start activities slowly and pick up the pace gradually.
- Drink more water than usual, and don't wait until you're thirsty to drink more. Muscle cramping can be an early sign of heat-related illness.
- Use the buddy system: monitor a teammate's condition, and have them do the same for you.
- Wear loose, lightweight, light-colored clothing.

According to [truesport.org](#), a young athlete who exhibits symptoms of heat exhaustion should not return to play until all symptoms of heat exhaustion and dehydration are gone. That means taking the rest of the day off, and potentially the following day as well. Any young athlete who is treated for heat stroke should only return to play with a doctor's approval.

TEACHERS AND STUDENTS:



Think about it...

Read the Tampa Bay Times article "Florida protects student-athletes from heat. It hasn't done the same for workers." in the March 13, 2024 e-Newspaper or at <https://www.tampabay.com/news/florida-politics/2024/03/13/heat-safety-protections-student-athletes-football-workers-migrants-water-deaths/>.

Next, read the WUSF article "As Florida's heat law kicks in, feds eye worker heat protections" at <https://www.wusf.org/politics-issues/2024-07-12/florida-heat-law-biden-administration-outdoor-worker-heat-protections>.



Call to action...

Do you think that employers should be required to provide outdoor workers with similar heat protections as student athletes? Should this be a responsibility of local, state or the federal government or of individual employers? Write a letter to the editor of the Tampa Bay Times advocating for or against laws requiring protections for outdoor workers. Be sure to use facts to back up your argument. Use the letters to the editor in the Tampa Bay Times and at [tampabay.com/opinion/letters](https://www.tampabay.com/opinion/letters) as models.



More information and resources for teachers and coaches

Download the teacher guide for this publication by scanning the QR code or visiting n1eonline.com/tbtimes/downloads/supplements/TeacherGuide_ItsHotOutThere.pdf



Complete our educator survey to be entered into a drawing to win a \$25 gift card! Scan the QR code or go to surveymonkey.com/r/TLFJ8MC.



- **Florida Climate Center – For Kids** climatecenter.fsu.edu/kids
- **NASA – Climate Kids** climatekids.nasa.gov
- **National Weather Service – Heat Safety for Kids and Teens** weather.gov/safety/heat-kids
- **OSHA-NIOSH Heat Safety Tool app** osha.gov/heat/heat-app

Sources: Centers for Disease Control and Prevention; National Weather Service

WORKERS:

Think about it...

In early June 2024, HCA Florida Brandon Hospital's emergency room saw up to three patients each day with heat illnesses.



By early July, those numbers surged to up to 12 patients per day. Those coming in sick have mostly been ages 40 to 60. Some of those patients were admitted to the hospital, including one who was admitted to the intensive care unit with a temperature of 108°F.

In August 2024, Florida had the fifth-highest rate of Emergency Medical Services calls for heat illnesses in the nation, according to the [National EMS Information System \(NEMIS\)](#).

Call to action...

Do you know what to do to prevent, recognize and treat heat illnesses? **Review the information on Pages 10-11** to protect yourself and your co-workers.



EMPLOYERS:

Think about it...

Read the Tampa Bay Times article "How much does high heat increase worker injuries? This new study says a lot." at tampabay.com/news/environment/2024/05/13/heat-injuries-workers-compensation-florida.



The article describes a new study from the Workers Compensation Research Institute (WCRI) that found that the probability of work-related accidents increases on extremely hot days.

The study found that the probability of work-related accidents increases by 5 to 6 percent when the maximum daily temperature rises above 90°F, relative to a day with temperatures in the 65–70°F range. It looked at both "direct" injuries to workers, such as heat exhaustion, and "indirect" injuries, such as a worker growing fatigued and falling off a ladder.

Call to action...

Make a heat safety plan to avoid heat illnesses and heat-related workplace injuries and keep your employees safe and productive.



COMMUNITY MEMBERS:

Think about it...

Read the Tampa Bay Times article "Wishing you had more shade? Florida's heat takes uneven toll." in the Aug. 27, 2023 e-Newspaper or at tampabay.com/news/tampa/2023/08/22/floridas-heat-takes-toll-health-shade-provides-relief-not-all.



The Center for Disease Control's free Heat and Health Index (ephtracking.cdc.gov/Applications/heatTracker) helps identify communities where people are most likely to experience negative effects of heat on their health.

The tool incorporates historical temperature, heat-related illness and community characteristics data at the ZIP code level.

For example, ZIP code 33619 in Tampa is considered extremely vulnerable to the impacts of heat. Factors leading to this ranking include the high number of residents lacking health insurance; the relative lack of grass and tree canopy; and a high percentage of renters and lower-income residents.

Call to action...

Look up your ZIP code's Heat and Health Index. How vulnerable is your community to the health effects of heat? What are the factors that most affect its ranking?



Contact your local government representative to talk about ways to improve your neighborhood's heat resilience (for example, by increasing green space; planting shade trees or building shade structures; or providing air conditioning units to people who lack them).

Heat and Health Index ZIP Code Tabulation Area*: 33619



90.7%

This area is in the **top 90.7%** of the country.

An HHI ranking of **90.7%** signifies that **90.7%** of ZCTAs in the nation are likely **less vulnerable** to the impacts of heat than the ZCTA of interest and that **9.3%** of ZCTAs in the nation are likely **more vulnerable** to the impacts of heat.

The **Historical Heat and Health Burden** module captures measures of previous experience with heat at the local level (ZCTA or ZIP code)

The **Sensitivity** module is comprised of pre-existing health conditions that may increase risk of negative health outcomes when the individual with the condition is exposed to extreme heat

The **Sociodemographic** module encompasses social and demographic characteristics that increase exposure or sensitivity to heat or lessen one's ability to cope with extreme heat

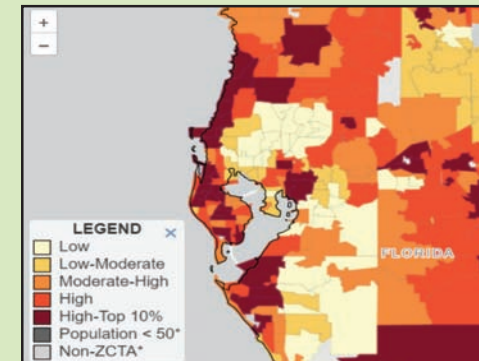
The **Natural and Built Environment** module focuses on characteristics of the natural and built environment that increase exposure or sensitivity to heat or lessen one's ability to cope with extreme heat

Historical Heat and Health Burden
66.0%
This area is in the top 66.0% of the country

Sensitivity
2 of 6
This area has 2 of 6 indicators flagged

Sociodemographic
87.1%
This area is in the top 87.1% of the country

Natural and Built Environment
84.3%
This area is in the top 84.3% of the country



Centers for Disease Control and Prevention



Stages of heat illness

Know the signs. Take action to stay safe!

STAGE



Heat cramps

Heat cramps usually affect workers who sweat a lot during strenuous activity. This sweating reduces the body's levels of salt, water and minerals. Low salt levels in muscles cause painful cramps. Heat cramps may also be a symptom of heat exhaustion.

Rhabdo

Rhabdomyolysis (rhabdo) is a serious medical condition that can be caused by dehydration and overheating. Rhabdo causes your muscles to break down. When this happens, toxic elements of your muscles enter your blood and kidneys. This can cause kidney damage or kidney failure.

SYMPTOMS

- Muscle cramps, pain or spasms in the stomach, arms or legs



- Muscle swelling
- Weak muscles
- Tender and sore muscles
- Dark urine that's brown, red or tea-colored



FIRST AID



- Stop physical activity and move to a cool place.
- Drink water or a sports drink.
- Have a snack.
- Wait for cramps to go away before resuming physical activity.
- Do not take salt tablets.
- * **Get medical help right away if the person:**
 - Has cramps that last longer than 1 hour.
 - Has heart problems.
 - Is on a low-sodium diet.

- Stop physical activity and move to a cool place.
- Drink water.
- Seek immediate care at the nearest medical facility. Ask to be checked for rhabdomyolysis.
- You can't tell by symptoms alone if you have rhabdo. The only way to know for sure is to see a healthcare provider.

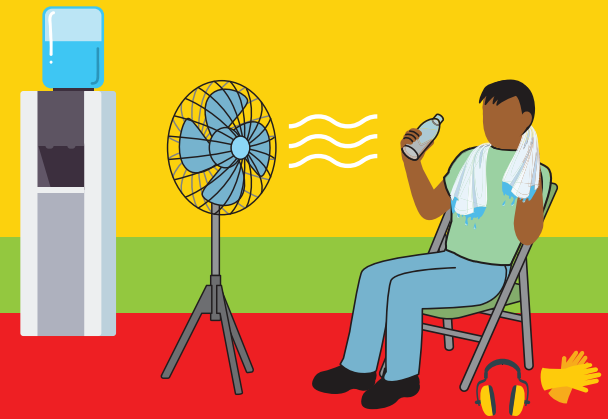


Sources: Centers for Disease Control and Prevention; Cleveland Clinic; Mayo Clinic

Feeling ill while working in the heat is a serious warning sign. Any worker who reports feeling unwell during work in hot conditions could have heat exhaustion, which can quickly progress to heat stroke if not treated.

People with severe heat illness do not always recognize the risks they face. If a worker shows signs of heat exhaustion or heat stroke, do not leave him or her alone until they receive medical attention.

Symptoms can occur in any order. You don't need to have all of the symptoms in a category to have heat illness.



Heat exhaustion

Heat exhaustion is the body's response to an excessive loss of water and salt, usually through excessive sweating. Without prompt treatment, heat exhaustion can lead to heatstroke, a life-threatening condition.



- Heavy sweating
- Weak, fast pulse
- Muscle cramps
- Headache
- Fainting (passing out)
- Thirst
- Decreased urine output
- Cold, pale and clammy skin
- Nausea or vomiting
- Tiredness or weakness
- Dizziness
- Irritability
- Elevated body temperature

Heat stroke

Heat stroke is a medical emergency. It is the most serious heat-related illness.

Heat stroke occurs when the body can no longer control its temperature and is unable to cool down. When heat stroke occurs, the body temperature can rise to 106° F or higher within 10 to 15 minutes. Untreated heatstroke can quickly damage the brain, heart, kidneys and muscles.

Heat stroke can cause permanent disability or death if the person does not receive emergency treatment.

- Very high body temperature (103° F or higher)
- Loss of consciousness (passing out)
- Hot, red, dry skin OR profuse sweating
- Headache
- Nausea or vomiting
- Rapid breathing
- Confusion
- Slurred speech
- Fast, strong pulse
- Seizures
- Dizziness



- Stop physical activity and move to a cool place.
- Loosen clothing and remove unnecessary clothing such as shoes and socks.
- Cool the person however you can: ice, cold water, icepacks, wet cloths, or have them wash their head, face and neck with cold water.
- Drink cool water or sports drinks.
- Take the person to a clinic or emergency room.
- If medical care is unavailable, call 911 and stay with the person until help arrives.

*Call 911 right away if the person:

- Is vomiting.
- Has symptoms that get worse or last longer than 1 hour.

• Call 911 right away, then:

- Move to a cool place.
- Cool the person however you can: ice bath, cold water, icepacks, wet cloths.
- Do NOT give the person anything to drink.
- Stay with the person until emergency medical services arrive.



PULL OUT THIS PAGE AND POST FOR REFERENCE.

Heat Illness Action Guide

Feeling ill while working in the heat is a serious warning sign.

Symptoms can occur in any order. You don't need to have all of the symptoms in a category to have heat illness.



WHAT TO LOOK FOR

WHAT TO DO

Heat Cramps

***Get medical help right away if the person:**

- Has cramps that last longer than one hour.
- Has heart problems.
- Is on a low-sodium diet.

- Muscle cramps, pain or spasms in the abdomen, arms or legs

- Stop physical activity and move to a cool place.
- Drink cool water or a sports drink.
- Have a snack.
- Wait for cramps to go away before resuming physical activity.
- Do NOT use salt tablets.

Heat Exhaustion

***Get medical help right away if the person:**

- Is vomiting.
- Has symptoms that get worse or last longer than one hour.

- Heavy sweating
- Cold, pale and clammy skin
- Weak, fast pulse
- Nausea or vomiting
- Muscle cramps
- Tiredness or weakness
- Headache
- Dizziness
- Fainting (passing out)
- Irritability
- Thirst
- Elevated body temperature
- Producing less urine than normal

- Stop physical activity.
- Take the person to a clinic or ER for medical evaluation and treatment.
- Call 911 if medical care is unavailable.
- Have someone stay with the person until help arrives.
- Move to a cool place.
- Loosen clothing and remove unnecessary clothing.
- Cool the person with cool, wet cloths, a cool bath, or fans; or have them wash their head, face, and neck with cold water.
- Drink cool water or sports drinks.

Heat Stroke

***Heat stroke is a medical emergency.**

Call 911 immediately.



- Very high body temperature (103° F or higher)
- Confusion
- Slurred speech
- Loss of consciousness (passing out)
- Hot, red, dry skin OR profuse sweating
- Fast, strong pulse
- Seizures
- Headache
- Dizziness
- Nausea or vomiting
- Rapid breathing

- Call 911 for emergency medical care immediately. Heat stroke can be fatal if treatment is delayed.
- Do NOT give the person anything to drink.
- Stay with the person until emergency medical services arrive.
- Move the person to a cool area and remove outer clothing.
- Cool the person quickly with whatever means are available:
- Put the person in a tub of ice water.
- Soak the person with cold water from a hose or shower.
- Wet the skin or place cold wet cloths on the skin.
- Soak clothing with cool water.
- Place ice packs or cold, wet towels on the person's head, neck, armpits and groin.



Preventing heat-related illness: Water, Rest and Shade



Water:

- Hydrate before, during and after work.
- Drink 1 cup of cool water every 20 minutes – even if you aren't thirsty.
- For longer jobs, drinks with electrolytes (such as sports drinks) are best.



Rest:

- Employers should require workers to take breaks. Breaks should last long enough for workers to recover from the heat.
- Breaks should last longer if there is no cool location for workers to rest.



Shade:

- Workers should be given a cool, shaded location where they can take their breaks and recover from the heat.