



2026

Extreme Heat Health Guidance for Schools

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Introduction and purpose

The Extreme Heat Guide for Schools was developed in partnership with BOCES to provide schools with information about the health impacts of extreme heat, aligned with the recent amendment to the [education law](#)¹ in New York State (NYS), which requires schools to take action when indoor educational spaces reach 82°F or higher. The guide is intended to help schools understand how extreme heat can affect the health of students, teachers, and staff when temperatures exceed 82°F. Heat-related illness, which occurs when the [body's temperature gets too high](#),² can develop quickly. Recognizing the signs in different groups of people (children, people with chronic medical conditions, people who work outside) can help prevent medical emergencies.

BOCES provides guidance on how schools can manage indoor temperatures and take safe steps to cool educational spaces. The Extreme Heat Health Guide complements the BOCES guidance by providing information on the health impacts of extreme heat for those who work at or with schools. Much of the content in this guide can be printed as one-page fact sheets to keep on hand, including information on how extreme heat affects children, children with chronic conditions, student athletes, staff, staff with chronic conditions, and staff working in support services, such as kitchens, buses, and outdoors.

The guide's content, gathered via a desk review, summarizes rigorous evidence on what to look for to prevent heat-related illness from reputable, accessible sources. All links to references are embedded in the text and are listed in the reference section. The recommendations and evidence presented here have been summarized and reviewed by public health experts, educational development experts, physicians, and health and safety officers. The guide does not replace first-aid training on extreme heat, but is intended for quick guidance or to raise awareness among staff, students, and parents/caregivers. Additionally, the guide points to in-depth resources, such as our [Extreme Heat Toolkit](#).³

Lastly, everyone has different needs and possible conditions that may be impacted by extreme heat. When in doubt, it is best to talk to your primary care physician about any questions you may have about extreme heat and your health, especially if you are taking medication or have a chronic medical condition.

Extreme Heat in NYS

Heat is a growing concern across the Northeastern United States (U.S.). Heat has become the leading cause of weather-related death in the U.S., even though it is completely preventable.⁴ A person can experience severe health impacts from heat quickly and suddenly. A school can help prevent this by having strong plans in place and being able to implement them quickly. Heat also disrupts essential services such as transportation and our power/electricity supply, and can affect overall air quality. New York State is taking widespread action to reduce the risks of extreme heat for all New Yorkers. This guide will help you recognize the early warning signs of extreme heat, assess the risk associated with heat, and take action, along with resources to help you develop your own heat action plan.

What is extreme heat?

Extreme heat is defined as a long period (2 - 3 days) of high heat and humidity with temperatures above 90°F.⁵ The number of days above 90 and 95°F is expected to rise across NYS, along with the number of heat waves (3+ days of heat above 90°F).⁶

Factors, such as the built environment, location, and community characteristics, influence how temperatures rise and are experienced, making some areas hotter than others. For example, a school in the city will experience different impacts from extreme heat than a school in a rural location. Figure 1 (to the right) provides a brief snapshot of how the type of area you live, work, or go to school in can experience different temperatures.

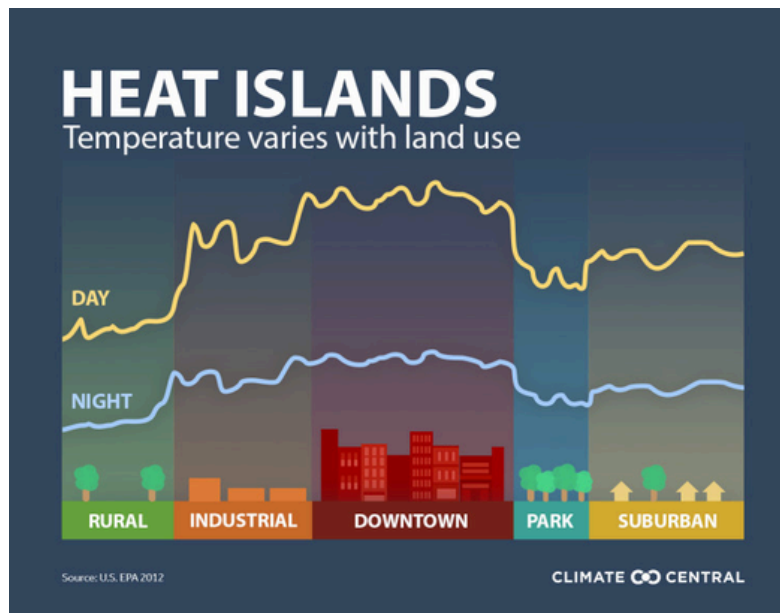


Figure 1. Temperature variations based on land use and time of day.⁷

Extreme Heat Law in New York State

In 2024, New York State launched an Extreme Heat Action plan. The [New York State Extreme Heat Action Plan](#)⁸ outlines 49 actions for the **State** to adapt to and reduce heat-related risks. In line with the growing concern of the impacts of extreme heat, the state amended the education law to include ways to protect students from extreme heat in school and establish a systematic method for assessing classroom temperatures.

The amendment to the [New York State Education Law](#)¹ requires school districts and BOCES to protect students and staff from extreme heat and ensure their safety when indoor temperatures reach or exceed 82°F.

Extreme heat condition days are defined as days when occupiable educational and support services (indoor) spaces are at 82°F or higher.¹

Beginning September 1, 2025, NYS mandates all school districts and BOCES take action when temperatures reach 82°F or higher in occupied indoor school building spaces (excluding kitchens that serve meals to students and school buses).

Indoor spaces under the purview of the law may include: Classrooms; Vocational program spaces (Welding, Auto Tech, Auto Body, Culinary, etc.); Support spaces; Transportation centers; District offices; Maintenance centers; Indoor pools; Greenhouses, etc.

Key points to remember about the new amendment:

- The effective date of the law is **September 1, 2025**.
- A [heat action policy](#) is **required** in every school or district. Many athletic departments have existing heat guidance.
- **All applicable building and fire code requirements must be maintained.** This includes maintaining the building's safety and security.
- The **trigger to implement heat mitigation** actions is when indoor spaces reach 82°F.
- The maximum allowable temperature indoors is 88°F. Relocation from indoor spaces exceeding these temperatures is required when practicable.
- Heat-related illness can occur rapidly. When it does, it is critical to **cool the body as quickly as possible**.

Trigger points and actions

Use this page to help create a [heat action plan](#)⁵ or [policy](#)⁹ when indoor temperatures reach 82°F and 88°F. Plan ahead for an effective response during the day. Pay attention to National Weather Service alerts and guidance.

Consider who will monitor classroom temperatures and report to the administration? What procedures will be followed to inform staff and students of current conditions and adjust the school day for them? How much water will be provided and how often? When and where to use fans?

When temperatures reach 82°F inside classrooms, actions may include:

- Closing window shades or blinds during the day.
- Turning off lights and unnecessary electronics.
- Turning on fans and opening doors to increase air movement.
 - NOTE: Fire code supersedes this recommendation; If your classroom door is a fire door, it should never be propped open.
- Increased water breaks for students and staff.
- Decreased physical activities or limited outdoor activities.
- Using air-conditioned spaces for teaching, rotate groups if feasible, or adjust school day plans so students spend less time in the hottest classrooms.
- At night, ventilate and flush the building with cool morning air when possible.
- Advise parents/caregivers that heat is expected and to dress their children appropriately.
- Advise the parents/caregivers of your heat response plan and when it is activated.

At 88°F, schools should have a plan to remove students and staff from occupied education and support spaces, when practicable.

Plans might include:

- Relocating students to air-conditioned spaces.
- Using an emergency closure day.
- Dismissing students and staff early.

How does heat pose a risk to human health?

Heat can affect people in many different ways. Age, medication use, pre-existing conditions, substance use, and many other factors can make people more vulnerable when the temperature rises. It's not always heat alone that can impact your health. Heat combined with high humidity, low wind, and prolonged exposure can leave people vulnerable.¹⁰



When we experience prolonged periods of heat, our bodies have to work extra hard to cool down. This work can stress our hearts and kidneys and lead to heat-related illnesses, such as heat exhaustion and heat stroke. Extreme heat can be much more dangerous to people with pre-existing health conditions, such as cardiovascular disease, respiratory conditions, diabetes, and mental health conditions. Heat may also have a stronger effect on people who experience mobility limitations,¹¹ food insecurity,¹¹ wardrobe limitations,¹¹ and communication challenges.¹² Furthermore, rapid changes in plans may add stress for some students and staff.



In a school environment, extreme heat can affect all members of the community, from young to old. In this regard, taking a '**universal precautions**' approach and having strong risk reduction plans in place can help everyone; special attention may also be warranted to school community members, such as diverse age groups, people on medications that impact thermoregulation, people with cognitive or mobility disabilities, and children, who are more sensitive to extreme heat. The content on the following pages will help you develop universal precautions while providing information to better understand who is at risk of extreme heat and why.

Understanding Heat Risk

Everyone responds to heat differently. We know that as the temperature rises, the body actively cools itself through sweating. However, factors such as age, medications, or chronic conditions may limit this. High humidity also decreases our ability to cool ourselves through sweating.

The National Weather Service (NWS) provides a Heat Risk Index¹³ (Table 1 on the next page, for accessibility) that describes the level of risk associated with current temperature, humidity, time of year, duration of the heat event, and the elevated risk of heat-related health complications.¹³ The combination of these five factors informs the five-level, color-coded heat risk scale,¹⁴ ranging from 0 (little to no risk, green) up to 4 (extreme risk, magenta). The Heat Risk Index focuses on outdoor conditions and provides advanced warning of high health risks posed by extreme temperatures. Understanding these risks can help schools make decisions on heat plans and when to take action.

The NWS often issues early warnings of high-heat risk days, but you can stay ahead by visiting the NWS Heat Risk interactive map,¹⁴ which shows the level of heat risk for a given location up to 7 days in advance.

Who is most at risk of extreme heat?

Everyone is vulnerable to extreme heat, even healthy people, if their bodies are under too much stress trying to cool down. As the body's temperature rises, people may experience varying degrees of heat-related illness, from heat cramps (mild) to heat stroke (severe, medical emergency). However, chronic health conditions,¹² medications,¹⁵ cognitive or developmental impairments,¹² and age¹⁶ can reduce a person's ability to regulate body temperature and exacerbate pre-existing medical conditions.

Other groups who may be at higher risk of heat-related illness(HRI)⁴ include:

- Infants and children
- Pregnant people
- Outdoor workers
- Athletes
- People without air conditioning or experiencing energy insecurity
- Individuals who are socially isolated or unhoused
- People over the age of 65

The next several pages outline general actions to take if adults experience symptoms of heat-related illness, followed by more specific details and guidance for schools, given the different populations within an educational environment.

Table 1: NWS Heat risk levels¹⁴ and general recommended actions.

Risk Value	Definition	Recommended action
0 Little to no risk	There is no elevated risk.	No preventative actions are necessary.
1 Minor risk	There is a minor risk for extremely heat-sensitive groups.	Monitor sensitive individuals, increase hydration, provide shade, and reduce time spent outdoors.
2 Moderate risk	Moderate risk to heat-sensitive groups and for anyone exposed to the sun for long periods of time. Also, people working in transportation or utilities may be at increased risk.	Reduce time spent in the sun, stay hydrated, remain in cooler places (e.g., indoors) during the hottest times of the day, and move outdoor activities to earlier, less hot times of the day.
3 Major risk	Major risk to heat-sensitive groups and for any individuals exposed to the sun for long periods of time or those without access to proper hydration and adequate cooling.	Cancel outdoor activities (if essential, move them to the coolest parts of the day), stay hydrated, stay in a cool place during the hottest times of the day and the evening, and seek out places with air conditioning.
4 Extreme risk	There is an extreme risk to the entire population. This HeatRisk category indicates a multi-day extreme heat event and is very dangerous for anyone without proper hydration or adequate cooling.	Cancel outdoor activities, stay hydrated, stay in a cool place for the entire day (including overnight), and seek out places with air conditioning.

How heat affects children

Children are considered more vulnerable to heat illness because they have a higher rate of heat absorption, a lower rate of sweating, and reduced blood circulation. Children are also less likely to recognize the symptoms of overheating and the need to drink more water. Heat-related illness (HRI) can occur in children and adolescents with varying severity compared to adults. Most commonly, students report fatigue and lower ability to concentrate¹⁷ at temperatures above 88°F (32°C). The Arizona Department of Health Services¹⁸(ADHS) identifies four critical concerns about heat-related illness among children:

- Heat feels hotter for children.
- Children have a lower capacity to sweat compared to adults.
- Children have less agency to change their environment and behavior.
- Children have a lower sense of urgency about drinking water or a lower awareness of their dehydration status.

Heat cramps are an early sign of mild heat-related illness in children. If left untreated, these symptoms can worsen and lead to moderate to severe heat-related illnesses, including heat exhaustion and heat stroke. Heat stroke is the most severe form of heat-related illness and occurs when the body's temperature rises above 104°F.¹⁹ **** If a child exhibits symptoms of heat stroke, such as sweating profusely, pale or flushed skin, rapid breathing, confusion or dizziness, call 911 immediately.**

Children with chronic conditions may experience heat differently, including:

- **Children with asthma:** according to the CDC, heat can worsen asthma symptoms by increasing the risk of dehydration. Hot weather can also increase air pollution levels, which can trigger asthma attacks.²⁰
- **Children with diabetes (both Type 1 and Type 2):** Children with diabetes are often more susceptible to hospitalizations during extreme heat.²¹

- **Children who may be overweight or experiencing obesity:** People who are overweight have a reduced ability to dissipate heat and regulate their temperature, which increases the risk of heat stroke.²² This includes increased risk of exertional heat illness among young athletes.²³
- **Children with Down Syndrome:** Children with Down Syndrome are more vulnerable to heat because of reduced sweating, differences in how their bodies regulate blood flow, and an increased likelihood of thyroid disorders.²⁴ One study found that people with Down Syndrome were less able to regulate their body temperature²⁵ after exercise, so they may feel cool to the touch while internally overheating. To add, children with Down Syndrome may be less able to ask for help when overheating.
- **Children with sickle cell anemia or sickle cell trait:** Children and young people with sickle cell trait may be at increased risk of serious heat-related complications, particularly exertional heat stroke, following intense physical activity.²⁶ One study among teenagers and young adults from the Army Medical Corps found that the risk of death from exertional heat stroke among those with sickle cell trait was 30 times higher compared to African Americans without sickle cell trait.²⁷
- **Athletes:** Children involved in intense physical activity are at increased risk of exertional heat stroke, a form of heat illness. Those who exercise on hot days are more likely to become dehydrated, which increases the risk of heat illness.²⁸ Exertional heat stroke is a leading cause of sudden death in high-school athletes, particularly football players.²⁹
- **Mental health:** Although there are limited studies on the impacts of extreme heat on mental health among children, one study³⁰ examined the relationship between depression, anxiety, and extreme heat among 19,852 adolescents in China (ages 10 - 18). They found a significant relationship between anxiety and depression and heat waves across all subgroups of participants, with increased rates of both anxiety and depression for each additional day of extreme heat. Higher levels of anxiety, in relation to extreme heat, were observed among adolescents living in rural areas compared to urban areas. Extreme heat can also **exacerbate**³¹ behavioral problems, self-harm, and thoughts of suicide among adolescents.

Symptoms of HRI in Children³²



Mild

Moderate

Severe

Heat cramps

Heat exhaustion

Heat stroke

- Painful cramps, especially in the legs
- Flushed, moist skin
- Mild fever, usually less than 102.5°F

- Muscle cramps
- Pale, moist skin
- Usually has a fever over 102°F
- Nausea or vomiting
- Diarrhea
- Headache
- Fatigue
- Weakness
- Anxiety, and faint feeling

- Warm, dry skin
- High fever, usually over 104°F
- Rapid heart rate
- Loss of appetite
- Nausea or vomiting
- Headache
- Fatigue, lethargy, confusion, agitation
- Seizures, coma, and death are possible

Symptoms

Move to a cool place & rest.

Move to a cool place & rest.

Call 911. Heat stroke is a life-threatening medical emergency!

Remove excess clothing, place cool cloths on skin; fan skin.

Give cool sports drinks containing salt & sugar such as Gatorade.

Move to a cool place & rest.

Give cool sports drinks containing salt & sugar such as Gatorade.

If no improvement or unable to take fluids, call your child's physician or take them to an ER immediately. IV (intravenous) fluids may be needed.

Remove excess clothing & drench skin with cool water; fan skin.

Stretch cramped muscles slowly & gently.

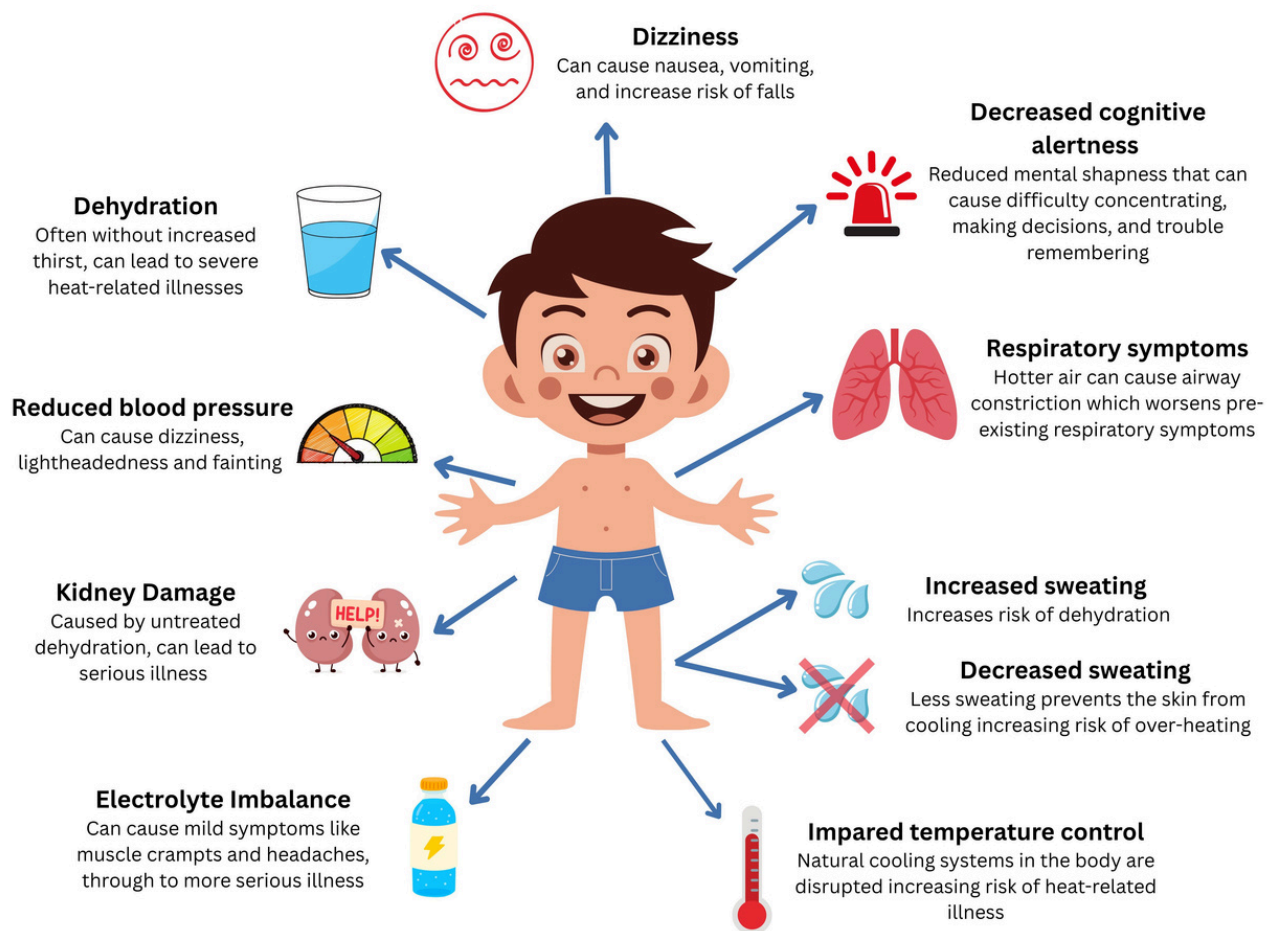
Place ice bags on the armpits & groin areas.

Offer cool fluids if alert & able to drink.

First Aid

Recognizing HRI Symptoms in Children

Figure 2 below summarizes some of the main causes and symptoms³³ of HRI in children. Use this graphic to help recognize signs and symptoms of heat-related illness in children. Medications can also contribute to heat-related illness and, in some cases, increase children's sensitivity to heat. Knowing the early signs and symptoms of HRI can prevent the onset of severe illness.



Certain medications can interact with extreme temperatures, which can increase an individual's vulnerability to heat-related illness. The graphic above highlights some of the ways medications can alter the body during periods of extreme heat. In many cases, the individual may not be aware of their symptoms.

Some examples of medications that can cause these vulnerabilities include: anti-depressants (especially SSRIs such as Celexa), medications for respiratory or GI issues (eg: Zantac and Atrovent), and antihistamines (eg: Zyrtec).

Figure 2: Created by Sabine Jamal, MD, MPH, Cornell Health Impacts Core, 2025.

Symptoms of HRI in Adults³⁴



Mild

Moderate

Severe

Heat cramps

Heat exhaustion

Heat stroke

Symptoms

- Sweating a lot
- Muscle cramps
- Pain or spasms in the abdomen, arms or legs
- Developing tiny red bumps on skin and a prickly sensation (heat rash)

- Heavy sweating
- Having cool, clammy or pale skin
- Feeling very weak or tired
- Headache, nausea, dizziness
- Irritability
- Thirst
- Elevated body temperature

- Temperature of 103°F
- Having hot, red, dry or damp skin
- Having deep, fast breathing
- Throbbing headache or nausea
- Having rapid, weak, or irregular pulse
- Feeling dizzy, confused, or delirious
- Slurred speech
- Fainting

First Aid

Move to a cool place & rest.

Remove excess clothing, place cool cloths on skin.

Drink fluids every 15 - 20 minutes, eat a snack or sports drink.

Avoid salt tablets.

If experiencing heat rash avoid creams or ointments. They can make the rash worse.

Move to a cool place & rest.

Remove excess clothing, place cold compresses on skin.

Encourage frequent, but slow sips of cool water.

Seek evaluation and treatment from a medical professional.

Stay with the person until medical help arrives.

Call 911. Heat stroke is a life-threatening medical emergency!

Move to a cool place & rest.

Remove excess clothing & drench skin with cool water; fan skin.

Place ice bags on the armpits & groin areas.

Immerse the person in an ice water bath if possible.

Offer cool fluids if alert & able to drink.

Quick Reference Guide on Protective Actions for Heat

Schools involve multiple stakeholders, each with different vulnerabilities to extreme heat. The next several pages summarize common groups found on school property daily. The table indicates the top concerns for each group, lists recommended actions, and provides useful resources for additional information.

Students

Key Concerns

- Vulnerabilities across age groups
- Prolonged heat exposure on school buses or at home
- Extreme heat in classrooms
- Chronic conditions or medications that increase vulnerability
- Food access (e.g. lunch) if sent home early
- Exposure during outdoor activities or athletics

Recommended actions to keep students safe

- Train staff and faculty to recognize the signs, symptoms, and treatment of heat related illness
- Teach students³⁵ how to recognize the dangers of extreme heat
- Follow guidance from facilities, health and safety for keeping classrooms cool.
- Have plans in place for taking action when temperatures reach 82°F or higher
- Have cooling first aid on hand

Additional Resources

- Recognizing, Preventing, and Treating Heat-related illness:³⁴ CDC Web-Based Training Course teaches school staff and students about heat-related illnesses, symptoms, treatments, and prevention strategies for school settings.
- Heat and Infants and Children:³⁶ Guidance and resources from the CDC on keeping children cool and hydrated.
- Encouraging water access³⁷ in schools.

Parents and Caregivers

Key Concerns

- Ensure parents and caregivers are aware of the impacts of heat on children.
- Knowing how to prepare children for hot weather.
- Do parents and caregivers recognize the symptoms of heat-related illness and how to keep kids safe?

Recommended actions to share with parents and caregivers

- Dress children³⁸ in light-colored, lightweight, tightly woven, and loose fitting clothing.
- Encourage children to regularly take water breaks on hot day.
- Gradually increase time spent outdoors to acclimate children to heat as seasons change. **If the day is abnormally hot, DO NOT spend time outdoors.**
- Help children apply sun screen and have adequate sun protection on hot days.

Additional Resources

The Iowa Department of Public Health has created a heat index chart (Figure 3, below) specific to children. The chart indicates which temperatures and humidity levels may be of concern for children. Parents/caregivers and those working with children may find the chart below helpful in deciding whether or not it is safe for children to play outside.

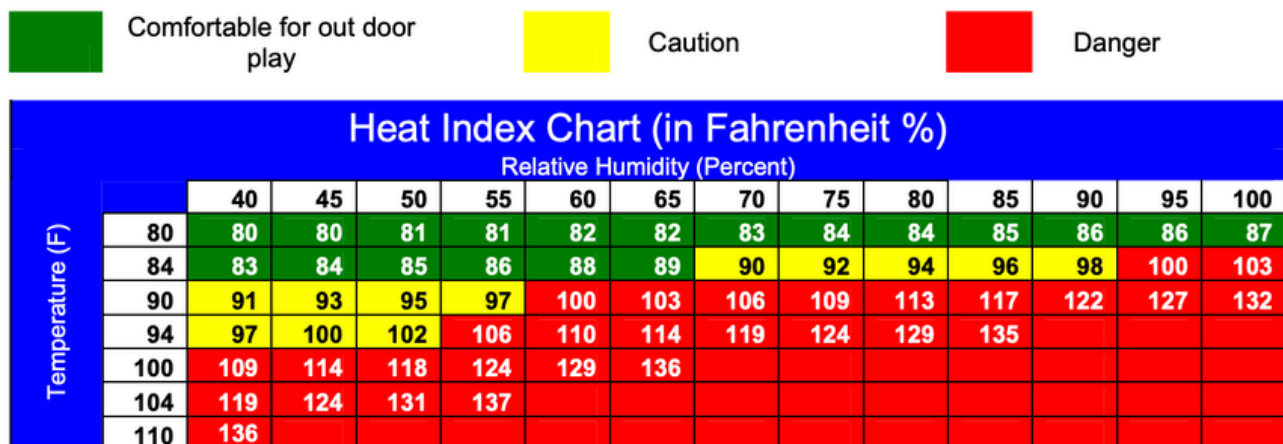


Figure 3. Child Care Weather Watch Heat Index Chart.³⁹

- [Children’s Hospital of Philadelphia](#).³⁸ How to Prevent Heat Stroke.
- [HeathlyChildren.org: Extreme Heat](#).³³ Tips to Keep Kids Safe When Temperatures Soar.
- [Parent/Caregiver Information Sheet](#).⁴⁰ Document created by the CDC to provide parents and caregivers with information about the signs, symptoms, and treatment of heat illness.

Teachers and staff

Key Concerns

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> • Recognizing the signs of heat-related illness | <ul style="list-style-type: none"> • Monitoring and providing self-care when focused on student safety | <ul style="list-style-type: none"> • Differing vulnerabilities in urban and rural environments (social isolation, heat island effects, cooling center access) |
| <ul style="list-style-type: none"> • Limited access to cooling at home or at work | <ul style="list-style-type: none"> • Adapting school day activities in extreme heat | |
-

Recommended actions for teachers and staff to take

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> • Training³⁴ on recognizing, Preventing, and Treating Heat-related illness for schools. | <ul style="list-style-type: none"> • Creating a school air quality and heat wellness policy.⁴¹ | <ul style="list-style-type: none"> • Massachusetts Metropolitan Area Planning Council practical templates⁴² for considering ways to reduce impacts of heat and poor air quality in schools. |
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Additional Resources

- [HeathlyChildren.org: Extreme Heat](#).³³ Tips to Keep Kids Safe When Temperatures Soar
- [OSHA guidance](#)⁴³ on first aid for heat-related illness.
- [Grants to Fund Shade Structures](#).⁴⁴ The American Academy of Dermatology Association provides grants to fund shade structures for public schools and non-profit organizations.

Maintenance, Outdoor Workers, Kitchen Staff and Bus Drivers

Additional considerations should be made for staff working outside, in school kitchens, and bus drivers who may have less access to cooling measures during extreme heat. During extreme heat events, workers can experience more injuries in the workplace in addition to heat-related illness. As humidity increases or during periods of unseasonably warm weather, heat-related illness can come on quickly. Adjusting work-to-rest ratios is strongly encouraged during extreme heat, along with hydration.

The New York State Department of Labor has created [a guide for employers](#)⁴⁵ to protect outdoor workers during extreme heat events.

Key points include:

- Monitor the heat index to understand the risk for outdoor workers.
- Make sure outdoor staff have access to water and drink plenty of water, even if they do not feel thirsty.
- When the heat index reaches 80°F or above, employees should be provided with paid rest and shade. After the heat index exceeds 90°F, breaks should be more frequent. New York State has provided recommended employer-specific rest break durations. Note that, if the work is strenuous, breaks should be longer and more frequent.

Recommended rest break triggers and durations

Heat Index Temperature	Rest Break Duration
80°F or greater	As needed to prevent overheating
90°F or greater	15 minutes every two hours
100°F or greater	15 minutes every hour
110°F or greater	High risk of heat stress; consider rescheduling activities. If rescheduling is not possible, best practice is 15 minutes of work with 45 minutes of rest every hour.

- Encourage employees to wear protective clothing and/or equipment, such as light-weight, light-colored, and loose-fitting clothing; cooling vests; sweat-wicking fabric; wide-brim hats; water-cooled garments (e.g., a wet towel on the neck); and sunscreen.
- Create an acclimatization plan and include it in your school heat action plan. Most heat illnesses occur among workers who are not properly acclimatized, and it can take up to two weeks for people to be acclimated to warmer weather. During a heat event or the first warm days of the season, start workers out with a 2-hour shift on day one. On day two, increase the shift to 4 hours, then six hours the third day, and a full 8-hour shift the final day.
- Make sure all staff recognize the symptoms of heat illness, understand acclimatization, and the importance of rest breaks.
- Establish a plan to ensure staff receive proper rest and relief, as well as training and acclimatization for extreme heat. For outdoor staff, you may want to consider adding the following components to your heat action plan:
 - How and when to alert supervisors and medical staff in the event of a heat illness
 - How to monitor heat-related illness symptoms among employees
 - Clear methods for monitoring extreme heat before and during a workday
 - Establish roles and responsibilities among staff for monitoring extreme heat
 - Identify triggers for emergency response
 - Create a “buddy system” at work to help staff keep each other safe

Additional Resources


- [Arizona Department of Health Services](#)¹⁴⁶ comprehensive list of resources for managing extreme heat.

Student Athletes

Participating in physical education and athletics during extreme heat can result in heat-related illness, including exertional heat stroke (EHS). Exertional heat stroke is one of the leading causes of sudden death among young athletes. High school football has the highest EHS rate of all sports combined. Athletes will often collapse from exertional heat stroke. The two main diagnostic criteria are a core body temperature above 105°F and central nervous system dysfunction (symptoms include irrational behavior, irritability, emotional instability, altered consciousness, collapse, coma, dizziness). Not all symptoms are easily identifiable; students may also experience headaches, confusion, nausea or vomiting, diarrhea, muscle cramps, inability to walk, imbalance, sluggishness, profuse sweating, decreased performance, thirst, low blood pressure, rapid pulse, and shortness of breath.

If a student exhibits EHS symptoms, **cool first, then transport**. For additional guidance on first aid for student athletes with different levels of heat-related illness, visit this [USA Football guide](#).⁴⁷

To cool an athlete suffering from EHS:

- Activate your Emergency Action Plan
 - Remove all equipment and extra layers of clothing
 - Cool the athlete as quickly as possible within 30 minutes of symptoms via whole body immersion in either cold or ice water (place the athlete in a tub with ice and water approximately 35-58°F). Stir water and add ice throughout the cooling process.
- 
- If cold-water immersion is not possible (no tub), aggressively douse the athlete's whole body with cold water. Or if that's not possible, take the athlete to a shaded, cool area and use rotating cold, wet towels to cover as much of the body surface as possible.
 - After cooling has been initiated, activate the emergency medical system by calling 911.
 - **Immediate cooling via cold water immersion or aggressive whole body water dousing within 10 minutes greatly reduces the risk of mortality.**

Student Athletes

Schools and athletic directors should develop plans for reducing the risk of EHS among athletes and learn to recognize these risks. All athletic teams should have an Emergency Action Plan (EAP). [Here is a template](#)⁴⁸ to develop one. Regarding heat in the EAP, [here is a presentation](#)⁴⁹ on additional considerations.

Some additional actions may include:

- Cancel outdoor or intense activities when the temperature is too high.
- Schools should consider having a tub, cold water/ice, 3-4 towels, and a tent available if there is a risk of EHS.
- Be extra cautious when it is a hot/humid day, near the start of practice season, at the end of practices, or on the first day when athletes are wearing full pads and equipment.
- Gradually increase the intensity of training in the first two weeks of the season.
- Encourage proper hydration before, during, and after practice.
- Implement regular breaks into practices for hydration and for cooling.
- Coaches and staff should make communicating about the risks of DHS a priority.

Additionally, young athletes may have underlying behaviors, thoughts, or beliefs that may push them to ignore the initial signs of EHS.



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Appendix A: Medication List for School Nurses and Medical Directors




Certain medications can increase an individual’s vulnerability to heat-related illness. Below is a list of common medications that interact with heat. It may be helpful to encourage parents, caregivers, and staff to **discuss these risks with their doctors** to ensure they are aware of potential risks during extreme heat events. The table below is intended to raise awareness among school nurses and medical directors of possible increased risks among students and staff who may be taking certain types of medications and are at increased risk for heat-related illness.

Medication	Examples <i>(non-comprehensive)</i>	Mechanism	Resources
Drugs with anticholinergic effects	Found in many drug types (refer to pocket card). Examples include asthma medications, antihistamines, gastrointestinal drugs, anti-vertigo drugs (e.g., dramamine), urinary incontinence drugs, antiemetics.	Impaired thermoregulation, decreased cognitive alertness, decreased sweating	Anticholinergic Pocket Card 
Antipsychotics	Medications prescribed to manage symptoms of psychosis (e.g., in those diagnosed with bipolar disorder and schizophrenia). Examples include Olanzapine (Zyprexa), Haloperidol (Haldol), Quetiapine (Seroquel), Risperidone (Perseris)	Inhibit sweating mechanism, impaired thermoregulation, decreased cognitive alertness, impaired vasodilation, reduced systolic blood pressure	Antipsychotic Drug List 



Medication List continued

Medication	Examples <i>(non-comprehensive)</i>	Mechanism	Resources
Antihistamines (specifically with an anticholinergic effect)	Medications used to manage allergies. Diphenhydramine (Benadryl), Doxylamine (Unisom), Promethazine	Impaired sweating mechanism, reduced blood pressure	<p><u>Benadryl and Dramamine can limit the body's ability to sweat.</u></p> 
Antidepressants	Medications such as: Mood stabilizers (Lithium) SSRIs (Sertraline), SNRIs (Duloxetine) Tricyclic antidepressants (Amitriptyline)	Electrolyte imbalance, decrease in cognitive alertness Increased sweating, impacts on thermoregulation Decreased sweating, impacts on thermoregulation	<p><u>List of SSRIs</u> <u>List of SNRIs</u> <u>List of tricyclic antidepressants</u></p> 
Drugs with anxiolytic effects	Medications prescribed for anxiety disorders. Found in many different medications such as antidepressants, antihistamines, benzodiazepines.	Decreased sweating, increased dizziness, decreased cardiac output and vasodilation, worsened respiratory symptoms	<p><u>Anxiolytics</u></p> 

Medication List continued

Medication	Examples <i>(non-comprehensive)</i>	Mechanism	Resources
Anti-adrenergics and beta blockers	<p>Certain medications prescribed for managing high blood pressure, cardiovascular health. Examples include metoprolol and atenolol</p>	<p>Can prevent dilation of blood vessels, impacted thermoregulation</p>	<p>List of beta blockers</p> 
Sympathomimetics	<p>Drugs prescribed for managing low blood pressure and cardiac arrest. Examples include epinephrine, norepinephrine, pseudoephedrine, amphetamine, methylphenidate, and nitrates and calcium channel blockers.</p>	<p>Worsened hypotension in vulnerable patients</p>	<p>Sympathomimetics and other common heat-drug interactions</p> 
Anti-hypertensives and diuretics	<p>Medications that help your body get rid of excess salt and water through urination (diuretics) AND medications that lower blood pressure (antihypertensives). Examples include diuretics, beta blockers, calcium channel blockers, ACEi, ARNIs, and ARBs.</p>	<p>Dehydration, reduced blood pressure, may lead to abnormally low sodium levels (hyponatremia) especially with excess fluid intake</p>	<p>CDC Medications & Heat List</p> 

Medication List continued

Medication	Examples <i>(non-comprehensive)</i>	Mechanism	Resources
Anti-convulsants/anti-seizure medications	Medications used to control epilepsy and seizure disorders. Examples include topiramate, oxcarbazepine, and carbamazepine.	Decreased cognitive alertness, increased dizziness	List of Anti-Seizure Medications 
Analgesics	Medications used to relieve pain. Examples include nonsteroidal anti-inflammatory drugs (NSAIDs), aspirin, and acetaminophen.	Kidney OR liver injury possible if dehydrated.	CDC Medications & Heat List 
Anti-Parkinson's Disease agents	Medications prescribed to treat symptoms of Parkinson's disease. Examples include levodopa, anticholinergics, dopamine agonists, MAO-B inhibitors, COMT inhibitors, and amantadine	Impaired sweating mechanism, reduced systolic blood pressure, increased dizziness/confusion	List of Anti-Parkinson's Disease Agents 