



# BOH Forms: #61 Heat Emergencies

Board of Health and Local Health Department Standard Operating Procedures (SOP)

This **Checklist** highlights many of the actions to take during emergencies: used in tandem with the **MA DPH and MEMA Advisories**.

## During Declared Emergencies

*Follow all official guidance and orders and stay informed.*

### During Local Emergencies:

- Emergency Management Director
- Police
- Fire
- Board of Health
- Chief Elected Officials

### During State/Federal Emergencies:

- Massachusetts Emergency Management Agency
- DPH
- CDC
- FEMA
- NWS/NOAA
- WHO

## What is a Heat Emergency:

- Sustained high Heat and Humidity based on NWS/NOAA Heat Index dark Orange/Red
- Forecast for 3 or more days with outdoor temps over 85F with humidity, especially with outdoor/indoor temperatures over 75F at night.
- Note: Heat Index assumes an adult in good health 5'-7', 147 lbs., light clothing, light breeze (5 knots), light activity, no sun.

## Vulnerable Populations:

- Older adults – 80% of heat related deaths are in those over 60
- Adults 55 – 64 age group – most deaths
- Children under 5 very vulnerable
- Pregnant people
- People living outside or in substandard housing or without access to air-conditioning
- Individuals living with chronic diseases, obesity, heart disease, COPD, diabetes, etc.
- Individuals living with physical/mental disabilities.
- Individuals with compromised immune systems
- Pets and livestock
- Outdoor workers and outdoor athletes

## Heat Emergency Triggers and Interventions

### Planning and Education Begin June 1<sup>st</sup> Each Year for Heat Emergencies

- Outreach to Camps, Senior Centers, Schools, Social Service Agencies to help them plan.
- Coordinate with Boards of Health/BCBOHA, EMD/REPC, CEO, Hospitals, EMS, Schools
- Coordinate with Joint Information Systems (JIS) to prepare messaging channels.
- Press Releases on preparing for heat emergencies
- Social Media on preparing for heat emergencies

### 80F & 40% Humidity: Heat Education

- Ongoing Public Messaging: Newsletters, Blogs, Social Media, Newspaper Articles
- Alerts and planning with Town Officials, EMD, Police, Fire, COA, Camps, Schools, NGO
- Promote energy rebates for insulation, heat pumps, windows, etc.
- Promote setting up a “cooling” room in lower levels

### 84F and 70% Humidity: Heat Emergency Planning

- Plan for Cooling Centers
  - Existing Spaces: Libraries, Senior Centers, Community Centers, public buildings
  - Semi-Public Cooling Centers – air-conditioned churches, businesses,

- Dedicated Cooling Centers: Schools, Town Halls, COA, Rented Event Halls, Trailers
- Sustained Heat Emergency Messaging
  - Avoid the sun and outside activities when the temperatures are over 85F.
  - Daycare and Children’s Camps should have Heat Emergency Plans or close.
  - Schools should have Heat Emergency Plans or close.
  - Sustained outdoor athletic events should be cancelled or modified.
  - Outdoor workers should have Heat Emergency Plans with rest, shade, water, etc.
  - Splash pool, beaches and pool locations

### 88F and 80% Humidity: Heat Emergency Response

- Open Cooling Centers at least 5 hours per day
- Check on older adults, under 5, people living with mental/physical disabilities.
- Drop off education and guidance to Vulnerable Populations
- Help Vulnerable Individuals connect with their support networks.
- Provide portable fans and air conditioners as available

### 90F and 70% Humidity” Heat Emergency Interventions

- Consider issuing a Heat Emergency Declaration to free up resources for the response.
- Work to cancel or change outdoor sports and other events.
- Rent cooling centers if no other options available and provide transportation.
- Visit Vulnerable Populations and help them get to cooling centers every day.
- Provide portable air conditioners as available to keep homebound at home.

### ☐ NWW/NOAA Heat Emergency Alert Levels

- **Excessive Heat Advisory** issued within 12 hours of the onset of dangerous heat conditions.
  - Likelihood of Heat Related Disorders from prolonged exposures to high heat/humidity
- **Excessive Heat Watch** issued when conditions favorable for excessive heat in the next 24 to 72 hrs
- **Excessive Heat Warning** is issued within 12 to 24 hours before the onset of extremely dangerous heat conditions.
  - Caution – Prepare. Messaging
  - Extreme Caution – Take Precautions. Direct people to air-conditioned places.
  - Danger – Provide Cooling Centers and Transportation
  - Extreme Danger – Evacuate as Needed

[HEAT.gov](https://www.heat.gov) - National Integrated Heat Health Information System

[Extreme heat: A media resource guide | National Oceanic and Atmospheric Administration \(noaa.gov\)](https://www.noaa.gov)

### ☐ Safer Operations During Heat Emergencies – Follow Official Advice/Directions

#### Heat/Humidity Emergencies: Increase Heat Illness, Heat Stroke, Heart & Respiratory Issues

- Stay out of the sun – it adds 15F to the temperature
- Take frequent breaks in the shade.
- Drink extra water even when not thirsty
- Cool Down at least 4 hours/day in areas below 75F.
- Fans are effective below 95F especially with the use of wet towels/clothing
- Take cold showers; feet in cold water; ice packs; swim in cool water
- Monitor older adults, very young, pets.
- Stay in HVAC if possible, at least 4 hours per day.
- Check on Neighbors and Family.
- Watch for Heat Illnesses on 3<sup>rd</sup> day for everyone. On 2<sup>nd</sup> day for vulnerable individuals.
- Have a Heat Action Plan (HAP)

## ☐ Heat & Humidity Emergency Messaging

- **Know the Symptoms** [Heat Related Illnesses \(cdc.gov\)](https://www.cdc.gov/heat-related-illnesses/)
  - Heat and Humidity combine to reduce the body's ability to stay cool. (Assumes in the shade)
    - **88F with 60% humidity results in an Extreme Caution Warning**
    - **90F and 40% humidity results in Extreme Caution**
    - **90F and 70% Humidity results in Danger Warning**
  - **More people die from heat related hazards than any other hazard in the US.** (Tornados close 2nd)
  - Everyone is vulnerable during heat/humidity emergencies if they are in the sun and don't cool down.
  - Direct sunshine adds 15F to the way our bodies handle heat.
  - Breezes help our bodies handle heat if we drink enough water.
  - Avoid heavy/hot foods, alcohol, sugary drinks, recreational drugs.
  - Older adults, young children, pregnant people, obese, mobility issues, homeless, outdoor workers/athletes at higher risk.
  - More heat related deaths on the 2<sup>nd</sup> and 3<sup>rd</sup> days of a heat wave.
  - **Heat cramps** are muscle spasms, often in the abdomen, arms, or calves, caused by a large loss of salt and water in the body. Heat cramps can occur from prolonged exposure to extreme heat combined with dehydration, and they commonly happen while participating in strenuous outdoor activities such as physical labor or sports.
  - **Heat exhaustion** is a severe illness requiring emergency medical treatment. It can occur from exposure to extreme heat over an extended period of time (usually several days), especially when combined with dehydration. Heat stroke is the most serious heat-related condition, requiring emergency treatment.
  - **Heat stroke** (or hyperthermia) occurs when the body can no longer regulate its temperature, and its temperature rises rapidly—up to 106°F or higher. Heat stroke usually occurs as a progression from other heat-related illnesses, such as heat cramps or heat exhaustion. It can also strike suddenly without prior symptoms, however, and it can result in death without immediate medical attention.
- **Prepare your Home**
  - Create a downstairs "cool" room, close windows/curtains; equip with fans/a portable air conditioner,
  - When temperatures are over 90F, fans aren't enough; cool down in air-conditioned spaces.
  - Upgrade insulation if you can. Use shades and curtains to block sun.
  - Have plenty of water, ice and non-alcoholic/unsweetened beverages on hand
  - Keep medications cool. Check with pharmacy. Heat makes some meds less effective and some more.
- **Prepare your Family/Network:** Heat exhaustion reduces mental awareness
  - Heat and Humidity Heat Index:
  - Prompt kids, older adults, outside workers, athletes, pregnant people, medical issues to drink even when not thirsty.
  - Monitor for heat illnesses
  - Sunburn reduces the body's ability to manage heat
  - Animals/pets may be even more at risk than healthy adults
  - Recent illness and chronic illness can lower your ability to handle heat
  - Heat can affect medications making some more powerful and others less. Project medications from heat
- **Prepare your Car:** NEVER leave kids or pets in a car, even with the windows open
  - Bring water along even on short trips
  - Consider sunshades when parked
  - Be aware that the cars equipment such as seatbelts can get VERY hot and burn
  - At 80F on a sunny day, inside car temperatures can reach 123F in an hour.
- **Execute your Plan:**
  - **Activate Networks:** check-in with your family/friend/neighborhood support networks.
  - **Calling for Help:** If you experience heat stroke, call 911 immediately and take steps to cool down with ice and cold-water packs (Drinking is not recommended at this stage of illness)
  - **Cooling Down:** Air Conditioning or Cool Room below 75F at least 4 hours per day

**B . C . B . O . H . A .**  
**BERKSHIRE COUNTY BOARDS OF HEALTH ASSOCIATION**  
[BCBOHA@BERKSHIREPLANNING.ORG](mailto:BCBOHA@BERKSHIREPLANNING.ORG)

**Prepare Now for Heat Emergencies**

**Berkshire County, MA, Date, Time**

Last summer was the hottest on record worldwide. Berkshire County had xxx days over 85F, many with high humidity. In the US, heat is the hazard that kills the most people, followed closely by tornados. During high heat and humidity, everyone is vulnerable to heat illnesses, especially older adults, children under 5, individuals with chronic diseases or living with mental or physical disabilities, outdoor workers, pets, and athletes. Prepare now for this summer’s heat. Working or playing in the sun will add 15F to the heat. Urban areas without shade are heat islands and will experience higher day and night temperatures. Second floor rooms will be hotter. Plan now:

- Plan for extra hydration (water is best) and rest breaks in the shade.
- Have a reliable network to check on your status and provide help if needed.
- What will happen if the power goes off? Where will you go?
- Fans are useful until the temperature gets around 95F, after that you need air conditioning.
- Create a “cool” room on a lower floor at least with fans and a portable air conditioner and water.
- Know where you can get access to air conditioning at least 4 hours per day.
- Pets and farm animals are also at risk.
- Check medications. Heat may make some of them less effective and other more potent.
- Individuals who are older, very young, living with a mental or physical disability, or who work or play hard outdoors are especially at risk.
- Know the signs of Heat Illness:: headaches, dizziness, fainting, chills/clammy skin – cool down now
- Heat Stroke: no longer sweating, confused, skin looks sunburned - seek medical attention immediately.

**Remember, your body needs to spend at least 4 hours a day below 75F to cool down and recover.**

For more information and resources contact your local Board of Health

[HEAT.gov](http://HEAT.gov) - [National Integrated Heat Health Information System](#)

[Extreme heat: A media resource guide | National Oceanic and Atmospheric Administration \(noaa.gov\)](#)

## **Recreational Camp for Children Heat Emergency Plan**

**Avoid Direct Sun**

- Provide Shade: Trees, Tents, Umbrellas
- Wear Hats
- Use Sunscreen

**Hydrate Continuously**

- Drink plenty of water every hour, even when not thirsty, at least a quart.
- Aoid really cold drinks – can cause cramps
- Avoid sugary drinks, alcohol, and caffeine.
- Offer high water content foods

**Monitor Campers and Staff**

- Wear light clothing
- Use the “buddy” system
- Special monitory of children and staff with health conditions
- Check for symptoms of heat illness
  - Dizziness, cramps, hot skin, chills, headache, weakness, clammy or very dry skin,

- Heat of the Day: avoid strenuous activities:
  - Move activities to early mornings and evenings
- Rest Breaks
  - 10 minutes every hour in the shade
- Cool Off
  - Swimming
  - Splash Pools/Wet Clothing
  - Cold water foot baths
  - Fans (not useful near 95F)
  - Air Conditioning
  - If over 75F at night, spend several hours every day in cool water
- Cancellations
  - If unable to keep children and staff cool and safe, cancel camp during extreme heat and humidity

# B . C . B . O . H . A .

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## **\*\*\*Health and Safety Alert – Extreme Heat and High Humidity\*\*\***

**Berkshire County, MA, Date, Time**

The National Weather Service (NWS) is forecasting oppressive heat and humidity for late this week. A Heat Advisory is in effect ..... Although Berkshire County's temperatures will not reach these levels, it will still be very hot and humid, with highs of ..... creating dangerous conditions.

Extreme heat and high heat indexes that combine heat and humidity can be dangerous and even life-threatening if proper precautions are not taken for everyone; especially for older adults, the very young, those with health conditions or individuals who are working or exercising hard in direct sunlight which can raise effective temperatures 15 degrees F.

During extreme heat and high humidity, the body must work extra hard to maintain a normal temperature. Extreme heat is especially dangerous if it doesn't cool down in homes at night to below 75 °F. The second and third days of a prolonged heat emergency are the most dangerous as vulnerable individuals become heat exhausted and can no longer maintain their body temperature.

Most heat-related illnesses occur because the victim has been over-exposed to heat or has over-exercised for their age and physical condition. Although anyone can suffer from a heat-related illness, some people are at greater risk than others. Those at greater risk include older adults, young children and those who are sick or overweight. To reduce the risks of extreme heat conditions, take the proper safety precautions to protect yourself and your family.

- Never leave children or pets alone in a closed vehicle. Even with the windows cracked open, interior temperatures can rise almost 20°F within 10 minutes.
- Slow down and avoid strenuous activity.
- Wear lightweight, loose-fitting, light-colored clothing. Light colors reflect heat and sunlight and help maintain normal body temperature.
- Drink plenty of water — even if you are not thirsty. Avoid alcoholic beverages and liquids high in sugar or caffeine. If your doctor generally limits the amount of fluid you drink, ask how much you should drink during hot weather.
- Eat well-balanced, light, regular meals.
- Stay indoors as much as possible and limit exposure to the sun.

- Do not leave pets outside or in the sun for extended periods of time. Ensure that pets have plenty of water and shade.
- If you must be outdoors, limit your outdoor activity to the morning and evening hours. Try to rest often in shady areas so your body temperature will have a chance to recover. Use sunscreen with a high SPF and wear a wide-brimmed hat.
- If you do not have air conditioning, stay on your lowest floor, out of the sun. Use fans to stay cool and avoid using your stove and oven. Consider spending time in air-conditioned public spaces, such as schools, libraries, theaters, and other community facilities at least a few hours every day.
- Check with your local authorities or [Call 2-1-1](#) to find locations of cooling centers or shelters near you.
- On hot days, more people cool off around bodies of water. Playing in and around water can increase the risk of drowning. Learn how to keep yourself and your children safe in and around water with these [Water Safety Tips](#).
- If there are [power outages during warm weather](#), you may need to take additional precautions or go to a cooling center or emergency shelter to stay cool or cool down at least once a day for a few hours.
- Know the symptoms of and watch out for heat-related illnesses such as dizziness, chills, confusion, elevated pulse, high body temperature, headache, nausea, fainting. Call 9-1-1 to report emergencies.
- Be a good neighbor. Check on family, friends, and neighbors, especially the elderly, those who live alone, those with medical conditions, those who may need additional assistance, and those who may not have air conditioning.

[Extreme Heat Safety Tips | Mass.gov](#)

[Warning Signs and Symptoms of Heat-Related Illness | Natural Disasters and Severe Weather | CDC](#)

[Extreme Heat | Natural Disasters and Severe Weather | CDC](#)

[Heat and Infants and Children | Natural Disasters and Severe Weather | CDC](#)

[Heat and Outdoor Workers | Natural Disasters and Severe Weather | CDC](#)

[Heat and Athletes | Natural Disasters and Severe Weather | CDC](#)

[Heat and Pets | Natural Disasters and Severe Weather | CDC](#)

[Heat Watch vs. Warning \(weather.gov\)](#)

###

HEAT INDUCED ILLNESSES

# Heat Exhaustion & Heat Stroke

## Symptoms

### Heat Exhaustion

- Headaches
- Dizziness or lightheadedness
- Weakness
- Mood changes such as irritability
- Confusion or the inability to think straight
- Upset stomach—vomiting
- Fainting or passing out
- Pale, clammy skin

### Heat Stroke

- Dry, pale skin with no sweating
- Hot, red skin that looks sunburned
- Mood changes such as irritability
- Confusion or the inability to think straight
- Seizures or fits
- Unconsciousness with no response

## What You Can Do

- Learn the signs and symptoms of heat-induced illnesses
- Build up tolerance to heat and work activity slowly
- Drink plenty of cool water, about a cup every 15 to 20 minutes
- Wear loose fitting clothing
- Take frequent, short breaks in cool, shaded areas
- Avoid eating large meals in hot environments
- Avoid alcohol or beverages with caffeine
- Have workers trained about heat-induced illnesses

AN IBEW SAFETY REMINDER

## Relative Humidity

°F	40	45	50	55	60	65	70	75	80	85	90	95	100
110	136												
108	130	137											
106	124	131	137										
104	119	124	131	137									
102	114	119	124	130	137								
100	109	114	118	124	129	136							
98	105	109	113	117	123	128	134						
96	101	104	108	112	116	121	125	132					
94	97	100	103	106	110	114	119	124	129	135			
92	94	96	99	101	105	108	112	116	121	126	131		
90	91	93	95	97	100	103	105	109	113	117	122	127	132
88	88	89	91	93	95	98	100	103	106	110	113	117	121
86	85	87	88	89	91	93	95	97	100	102	105	108	112
84	83	84	85	86	88	89	90	92	94	96	98	100	103
82	81	82	83	84	84	85	86	88	89	90	91	93	95
80	80	80	81	81	82	82	83	84	84	85	86	86	87

**Heat Index**  
(Apparent Temperature)

NOTE: Exposure to full sunshine can increase heat index values by up to 15°F

## With Prolonged Exposure and/or Physical Activity

### EXTREME DANGER

Heat stroke or sunstroke highly likely

### DANGER

Sunstroke, muscle cramps, and/or heat exhaustion likely

### EXTREME CAUTION

Sunstroke, muscle cramps, and/or heat exhaustion possible

### CAUTION

Fatigue possible

Printed in the U.S.A.



Avoid the sun  
from 10.00 a.m. - 4.00 p.m.



# HEAT STROKE INFOGRAPHICS

Source  
global warming

## PREVENTION



## Warning



## SYMPTOMS

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## National Weather Service Heat Index Chart



Temperature (°F)

	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

### Likelihood of Heat Disorders with Prolonged Exposure and/or Strenuous Activity

- Caution
- Extreme Caution
- Danger
- Extreme Danger