Heat Stress: A Hot Topic

IN NEW ENGLAND, we all track the weather, knowing full well if you don't like the weather today, stick around and it will change. This past winter, we had a day of snow followed by 60+ degrees the next afternoon. This makes for a challenging work environment for the outdoor worker, supervisor, and business owner. Heat stress, always a heightened risk in summer, is a year-round concern even in the Northeast.

Heat stress is an illness caused by exposure to extreme heat or prolonged exposure to hot environments. Overexertion and overexposure can also bring on heat stress. It occurs when the body cannot shed excess heat and cannot cool itself to a healthy temperature, typically 37° C or 98.6° F.

The National Safety Council reports 162 people in the United States died from heat-related exposures in 2018 and 503 were hospitalized. A common cause of heat stress is exposure to the sun and warm environments. Alcohol, medications, drug use, poor physical condition, and lack of food can also contribute to heat stress.

In the workplace, high risk environments for heat stress range from kitchens, plating shops, and laundry sites to confined spaces like boiler rooms and crawl spaces. Certain jobs pose higher risks:

- Welders, Police, Fire, and Utility Workers,
- Landscapers, Roofers, and Builders
- Kitchen Workers and Chefs
- Professional Athletes and Food Vendors

Drowning In A Sea Of Blankets

Heat stress can lead to injuries, illness, and even death. Unchecked, it worsens to heatstroke and extreme exhaustion, a feeling described as "drowning in a sea of blankets, barely able to move," according to a Mayo Clinic report.

Symptoms include lightheadedness, headache, shortness of breath, increased heart rate, and nausea. Other common indicators are profuse sweating, confusion, thirst, pale skin, and fainting as well as cramps caused by low body salts.

Self-care is vital when you experience early warning signs. Find a cool place, rest, elevate legs, and drink plenty of water or sports drinks. Loosen clothing and place a wet towel on your neck. If you don't feel better in an hour, seek medical attention.

Prevention

It takes up to three weeks for the average worker to acclimate to hot environments. The first steps in reducing heat stress risk are to avoid direct sunlight. If possible, wear a vented hat, and hydrate.

We advise employers to adjust work schedules to allow for regular breaks away from a heat source and to provide protective clothing. Gloves, eyewear, cooling vests, misting devices, and thermal boots to protect feet on hot pavement may also be appropriate. Many Fitbits and Smartwatches can alert people to early symptoms.

Don't underestimate humidity. We have all heard it's not the heat, it's the humidity, a direct reference to the Heat Index. According to the Centers for Disease Control and Prevention, the heat index is a measure of how hot it feels when relative humidity is factored in along with actual air temperature. For example, the thermometer may read 96° F, but with relative humidity at 65 percent, it feels like 121° F.

A.I.M. Mutual's injury prevention staff can help with any questions employers may have about heat stress risks. Additional resources including a Heat Safety app and worksite posters are available on the company's website.

National Weather Service Heat Index Chart

Temperature (°F)

Relative Humidity (%)	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

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