

Heat Illness Prevention Plan

Company name

Purpose

The purpose of this plan is to protect our employees from the hazards of hot working environments. Work activities that could potentially expose our employees to these hazards include:

Scope

This plan implements efficient and safe work practices that will prevent both indoor and outdoor heat-related illnesses among employees at our workplace. It will be used for training new employees and for the annual refresher training of employees. All employees potentially exposed to hot working environments are subject to his plan.

Background

Heat-related illnesses can happen if workplace activities in a hot environment overwhelm the body's ability to cool itself. This becomes more likely if any of the risk factors are present. Examples include working in a hot environment without adequate access to water for rehydration, working in protective gear that does not allow air circulation across the skin, or working where the humidity is too high for sweat to evaporate.

Risk factors

The following are environmental risk factors for heat illness (see heat index on Page 4):

- Air temperature above 90 degrees F.
- Relative humidity above 40 percent
- Radiant heat from the sun and other sources
- Conductive heat sources such as dark-colored work surfaces
- Lack of air movement
- Physical effort needed for the work
- Use of nonbreathable protective clothing and other personal protective equipment

The following are personal risk factors for heat illness:

- Lack of acclimation to warmer temperatures
- Poor general health
- Dehydration
- Alcohol consumption
- Caffeine consumption
- Previous heat-related illness
- Use of prescription medications that affect the body's water retention or other physiological responses to heat such as beta blockers, diuretics, antihistamines, tranquilizers, and antipsychotics.

NIOSH [heat stress app](#)

Heat-related illnesses

- **Heat rash** is the most common health problem in hot work environments. It is caused by sweating and looks like a red cluster of pimples or small blisters. Heat rash usually appears on parts of the body that overlap or rub other parts of the body, such as in the groin area, under the arms or breasts, and in knee or elbow creases. If an employee has symptoms of heat rash, provide a cooler, less humid work environment, if possible. Advise the employee to keep the area dry and not to use ointments and creams that make the skin warm or moist, which can make the rash worse.
- **Heat exhaustion** can best be prevented by being aware of one's physical limits in hazardous environment on hot, humid days. The most important factor is to drink enough clear fluids (especially water, not alcohol or caffeine) to replace those lost to perspiration. Signs and symptoms of heat exhaustion typically include:
 - Profuse sweating
 - Weakness and fatigue
 - Nausea and vomiting
 - Muscle cramps (associated with dehydration)
 - Headache
 - Light-headedness or fainting; fainting or loss of consciousness is potentially serious and should be treated as a medical emergency.

When you recognize heat exhaustion symptoms in an employee, you must intervene; stop the activity, and move the employee to a cooler environment. Cooling off and rehydrating with water (or electrolyte-replacing sports drinks) is the cornerstone of treatment for heat exhaustion. If the employee resumes work before their core temperature returns to normal levels, symptoms may quickly return.

If there is no intervention and the body's temperature regulation fails, heat exhaustion can rapidly progress to heat stroke, a life-threatening condition!

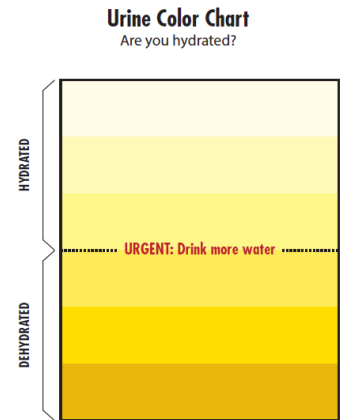
- **Heat stroke** requires an immediate emergency medical response. The person may stop sweating, become confused or lethargic, and may even have a seizure! The internal body temperature may exceed 106 degrees F. Signs and symptoms of heat stroke typically include:
 - Absence of sweating
 - Dry skin
 - Agitation or strange behavior
 - Dizziness, disorientation, or lethargy
 - Seizures or signs that mimic those of a heart attack

Ensure that emergency responders are summoned immediately if heat stroke is suspected. While waiting for emergency responders to arrive, cool the employee; move the employee to an air-conditioned environment or a cool, shady area; and help the employee remove any unnecessary clothing. Do not leave the employee unattended. Heat stroke requires immediate medical attention to prevent permanent damage to the brain and other vital organs that can result in death.

Heat index	Risk level	Protective measure
Less than 91°F (33°C)	Lower (caution)	Basic health and safety planning
91°F to 103°F (33°C to 39°C)	Moderate	Implement precautions and heighten awareness
103°F to 115°F (39°C to 46°C)	High	Additional precautions to protect workers
Greater than 115°F (46°C)	Very high to extreme	Even more aggressive protective measures

Preventing heat-related illnesses

- Gradually increase workloads and allow more frequent breaks during the first week of work so that employees become acclimatized to higher temperatures, especially those who are new to working in the heat or have been away from that work for a week or more.
- Encourage employees to frequently drink small amounts of water before they become thirsty to stay hydrated. During moderate activity, in moderately hot conditions, employees should drink about 8 ounces of liquid every 15 to 20 minutes. Employees can monitor their hydration with a urine chart. Urine should be clear or slightly colored; dark urine is a warning sign! See urine color chart.
- Encourage employees to eat regular meals and snacks as they provide enough salt and electrolytes to replace those lost through sweating as long as enough water is consumed.
- Provide a buddy system where employees encourage each other to drink water, use shade to stay cool, and to watch each other for symptoms of heat-related illness.
- Educate employees that drinking extreme amounts of water can also be harmful (more than 12 quarts in a 24-hour period).
- Schedule frequent rest periods with water breaks in shaded or air-conditioned recovery areas. Note that air conditioning does not result in loss of heat tolerance.
- Ensure employees are aware of the signs of heat-related illnesses and encourage them to report immediately they or their co-workers show symptoms.
- Monitor weather reports daily and reschedule jobs with high heat exposure to cooler times of the day, if possible. Be extra vigilant when air temperatures rise quickly. When possible, schedule routine maintenance and repair projects for the cooler parts of the year.
- Provide shade or cool areas for breaks



Water is located throughout the work area. Locations include:

Shade or cooling areas are located:

Other measures we will follow to prevent heat-related illness at our workplace are:

Our company is serious about preventing heat-related illness and we have adopted the following best practices from Appendix A:

Responsibilities:

All employees are responsible for protecting themselves from heat illnesses by following these guidelines for prevention and immediately reporting any signs or symptoms to his or her supervisor.


_____ is responsible for conducting initial training with new employees and for the annual refresher training.

_____ is responsible for administering the provisions of this plan.

Heat index

		Relative Humidity (%)																				
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
80	77	78	78	79	79	79	80	80	80	81	81	82	82	83	84	84	85	86	86	87	87	
81	78	79	79	79	79	80	80	81	81	82	82	83	84	85	86	86	87	88	89	90	91	91
82	79	79	80	80	80	80	81	81	82	83	84	85	86	88	89	90	91	93	95	97	99	95
83	79	80	80	81	81	81	82	82	83	84	85	86	87	88	90	91	93	95	97	99	99	99
84	80	81	81	81	82	82	83	83	84	85	86	88	89	90	92	94	96	98	100	103	103	103
85	81	81	82	82	82	83	84	84	85	86	88	89	91	93	95	97	99	102	104	107	107	107
86	81	82	83	83	83	84	85	85	87	88	89	91	93	95	97	100	102	105	108	112	112	112
87	82	83	83	84	84	85	86	87	88	89	91	93	95	98	100	103	106	109	113	116	116	116
88	83	84	84	85	85	86	87	88	89	91	93	95	98	100	103	106	110	113	117	122	122	121
89	84	84	85	85	86	87	88	89	91	93	95	97	100	103	106	110	113	117	122	127	127	127
90	84	85	86	86	87	88	89	90	92	95	97	100	103	106	109	113	117	122	126	132	132	132
91	85	86	87	87	88	89	90	92	94	97	99	102	105	109	113	117	122	126	132	137	137	137
92	86	87	88	88	89	90	92	94	96	99	101	105	108	112	116	121	126	131	136	141	141	141
93	87	88	89	89	90	92	93	95	98	101	104	107	111	116	120	125	130	136	141	146	146	146
94	87	89	90	90	91	93	95	97	100	103	106	110	114	119	124	129	135	141	146	151	151	151
95	88	89	91	91	93	94	96	99	102	105	109	113	118	123	128	134	140	146	151	156	156	156
96	89	90	92	93	94	96	98	101	104	108	112	116	121	126	132	138	145	151	156	161	161	161
97	90	91	93	94	95	97	100	103	106	110	114	119	125	130	136	143	150	156	161	166	166	166
98	91	92	94	95	97	99	102	105	109	113	117	123	128	134	141	148	154	161	166	171	171	171
99	92	93	95	96	98	101	104	107	111	115	120	126	132	138	145	153	160	166	171	176	176	176
100	93	94	96	97	100	102	106	109	114	118	124	129	136	143	150	158	164	171	176	181	181	181
101	93	95	97	99	101	104	108	112	116	121	127	133	140	147	155	161	168	174	181	186	186	186
102	94	96	98	100	103	106	110	114	119	124	130	137	144	152	160	166	173	180	186	191	191	191
103	95	97	99	101	104	108	112	116	122	127	134	141	148	157	165	171	178	184	191	196	196	196
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105	97	99	102	104	108	112	116	121	127	134	141	149	157	166	172	179	186	192	199	205	205	205
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107	99	101	104	107	111	116	121	127	134	141	149	157	167	173	180	187	194	201	208	214	214	214
108	100	102	105	109	113	118	123	130	137	144	153	162	172	178	185	192	199	206	213	219	219	219
109	100	103	107	110	115	120	126	133	140	148	157	167	177	182	189	196	203	210	217	223	223	223
110	101	104	108	112	117	122	129	136	143	152	161	171	181	186	193	200	207	214	221	227	227	227
111	102	106	109	114	119	125	131	139	147	156	166	176	186	191	198	205	212	219	226	232	232	232
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114	105	109	113	119	125	132	140	148	158	168	179	189	199	204	211	218	225	232	239	245	245	245
115	106	110	115	121	127	134	143	152	162	173	184	194	204	209	216	223	230	237	244	250	250	250
116	107	111	116	122	129	137	146	155	166	177	187	197	207	212	219	226	233	240	247	253	253	253
117	108	112	118	124	132	140	149	159	170	181	191	201	211	216	223	230	237	244	251	257	257	257
118	108	113	119	126	134	142	152	162	174	186	196	206	216	221	228	235	242	249	256	262	262	262
119	109	114	121	128	136	145	155	166	178	189	199	209	219	224	231	238	245	252	259	265	265	265
120	110	116	122	130	138	148	158	170	182	193	203	213	223	228	235	242	249	256	263	269	269	269
121	111	117	124	132	141	151	162	174	187	198	208	218	228	233	240	247	254	261	268	274	274	274
122	111	118	125	134	143	154	165	178	190	201	211	221	231	236	243	250	257	264	271	277	277	277
123	112	119	127	136	146	157	169	182	194	205	215	225	235	240	247	254	261	268	275	281	281	281
124	113	120	129	138	148	160	172	185	197	208	218	228	238	243	250	257	264	271	278	284	284	284
125	114	121	130	140	151	163	176	189	201	212	222	232	242	247	254	261	268	275	282	288	288	288

Heat Index



NOAA
NATIONAL WEATHER SERVICE

Extreme Danger	Heat stroke likely.
Danger	Sunstroke, muscle cramps, and/or heat exhaustion likely. Heatstroke possible with prolonged exposure and/or physical activity.
Extreme Caution	Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.
Caution	Fatigue possible with prolonged exposure and/or physical activity.

Appendix A

Best practices could include providing employees with:

1. Containers that hold ice or otherwise keep drinking water and other beverages cold.
2. Chilled beverages such as electrolyte type sports drinks. Discourage caffeine consumption.
3. Cold treats at break time such as popsicles, ice cream, or fruit with high water content (watermelon, grapes, oranges).
4. A cooling trailer with conditioned air and cold water to consume.
5. Cooling tents with mist, fan, and cold water to consume.
6. Heat-reflective work clothing such as light-colored, breathable uniforms.
7. Evaporative accessories (cooling neck wraps, head bands)
8. Cooling vests designed to safely use ice packs.
9. Ventilated PPE (high-visibility garments or powered air purifying respirators, if appropriate)
10. Cell phone text orders from supervisor to stop and rest in shade and drink.