

# Types of Heat Stress and Treatment

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Heat-related injuries range from minor to life-threatening, depending upon exposure. When environmental temperatures are 90 to 104 degrees Fahrenheit, heat cramps or heat exhaustion is possible. In temperatures of 105 to 130 degrees, heat cramps or heat exhaustion is likely to occur and heat stroke is possible. The following chart compares the environmental heat with the humidity percentage:

Relative Humidity	Environmental Temperature (F)								
	65°	70°	75°	80°	85°	90°	90°	100°	105°
0%	64°	69°	73°	78°	83°	97°	91°	95°	99°
10%	65°	70°	75°	80°	85°	90°	95°	100°	105°
20%	66°	72°	77°	80°	87°	93°	99°	105°	112°
30%	67°	73°	78°	84°	90°	96°	104°	113°	123°
40%	68°	74°	79°	86°	93°	101°	110°	123°	137°
50%	69°	75°	81°	88°	96°	107°	120°	135°	150°
60%	70°	76°	82°	90°	100°	114°	132°	149°	x
70%	70°	77°	85°	83°	106°	124°	144°	x	x
80%	71°	78°	86°	97°	113°	136°	x	x	x
90%	71°	79°	88°	102°	122°	x	x	x	x
100%	72°	80°	91°	108°	x	x	x	x	x

## Sun Burn

### Symptoms:

- + Redness of skin and pain
- + Blisters in severe sun burn
- + Fever or headaches possible

### Treatment:

- + Apply approved ointments for mild cases.
- + If blisters appear, do not break.
- + If sun burn is severe, seek medical attention.

## Heat Rash

### Symptoms:

- + "Prickly" painful skin rash caused by plugged sweat ducts.

### Treatment:

- + Rest in a cool place part of each day.



- + Bathe and dry skin regularly.

## Heat Cramps

### Symptoms:

- + Painful spasms in legs and/or abdomen
- + Heavy sweating

### Treatment:

- + Apply firm pressure on muscles or gently massage to relieve cramps.
- + Give sips of water unless nausea occurs

## Heat Exhaustion

### Symptoms:

- + Sweating
- + Moist, clammy skin
- + Weakness and fatigue
- + Slight elevated temperature
- + Headache
- + Disorientation

### Treatment:

- + Remove from heat.
- + Apply cool cloths and fan the victim. If chills set in, stop.
- + Give fluids if possible - one pint water with one teaspoon of salt every 30 seconds.
- + Seek medical attention.
- + Do not give alcohol or tobacco products.
- + Never leave the victim alone.

## Heat Stroke

### Symptoms:

- + Hot, dry skin
- + Red or spotted skin
- + Extremely high temperature
- + Mental confusion
- + Convulsions



- + Loss of consciousness

**Treatment:**

- + Remove from heat.
- + Remove the clothing and place in a cool bath.
- + Immediately seek medical attention.
- + Do not administer fluids or medicines.
- + Do not give alcohol or tobacco products.
- + Do not allow the victim to become cold.
- + Never leave the victim alone.

**Avoiding Heat Stress**

Employers should encourage or require employees to do the following to reduce the potential for heat stress:

- + Drink plenty of fluids.
- + Reduce or eliminate alcohol and tobacco intake.
- + Build up tolerance for warm environments by gradually increasing working time.
- + Stay physically fit.
- + Dress in light colored, loose fitted clothing.
- + Eat low-fat, nutritious foods.
- + Get plenty of rest and take frequent breaks.
- + Watch coworkers for signs of heat related accidents.
- + Understand that personal protective equipment can increase chances of heat accidents.
- + Wear gel packs, a cooling vest or use a cool mister if possible.
- + Ventilate the workplace whenever possible and/or use fans.
- + Adjust work hours by beginning work two to three hours earlier in the morning, when it's cooler

