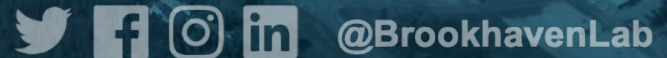




# TAKE FIVE for Safety- Heat Stress

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- Heat stress occurs when the heat from activity/ working (metabolism) is not lost to the environment at a rate sufficient to maintain a proper core body temperature.
- We lose most of our body heat to the environment through sweat (evaporation) and wind cooling (convection).
- When the environment prevents this loss, there is a higher potential for heat stress.

The primary risk for Heat Stress occurs during moderate to strenuous work in the following conditions:

- ❖ Hot temperatures
- ❖ High humidity
- ❖ Prolonged exposure to direct sunlight
- ❖ Low wind conditions

# Main Heat Stress symptoms:

- ❖ Tiredness
- ❖ Weakness
- ❖ Thirst
- ❖ Dizziness
- ❖ Headache
- ❖ Nausea
- ❖ Vomiting
- ❖ Diarrhea
- ❖ Fainting
- ❖ Skin is clammy/ moist
- ❖ Complexion pale/ flush

**SERIOUS TO LIFE THREATENING HEALTH CONSEQUENCES CAN OCCUR IF YOU IGNORE OR WORK THROUGH THESE SYMPTOMS.**

The potential for developing Heat Stress symptoms is based on a formula that combines the temperature and relative humidity. Other factors that influence this potential is how strenuous the activity/ work is, and the type of PPE being worn.

Below is an example of an email/ text message that is sent out by BNL during a Heat Stress alert:

Heat Stress Index: 28.5/ 83.0 Rest Period for Light Activity – 0%, Moderate – 25%, Heavy – 50%, Very Heavy – 50%.

## HEAT INDEX CHART

Relative Humidity (%)

	40	45	50	55	60	65	70	75	80	85	90	95	100
110	136												
108	130	137											
106	124	130	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	126	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

**CAUTION**

Possible Fatigue with Prolonged Exposure

**EXTREME CAUTION**

Heat-Related Illness Possible with Prolonged Exposure

**DANGER**

Heatstroke Possible and Heat-Related Illness Likely

**EXTREME DANGER**

High Risk of Heatstroke

Source: Adapted from NOAA National Weather Service Heat Index

# What Should I do?

- ❖ Wear loose fitting cotton clothing, if work conditions permit.
- ❖ Follow BNL Heat Stress alerts and inform workers as conditions change.
- ❖ Modify workload (how hard you work and how long you work).
- ❖ Based on the weather conditions (i.e., take more breaks during heavier work).
- ❖ Be aware of Heat Stress symptoms.
- ❖ Moving away from heat sources, drinking electrolyte fluids or water.

# Conclusion:

- ❖ Heat Stress is a serious Health and Safety issue.
- ❖ Be aware of Heat Stress symptoms for yourself and workers.
- ❖ Plan your work with rest periods per BNL Heat Stress alerts.