ARCTIC RADWEAR by RADIANS

HEAT STRESS

FAST FACTS

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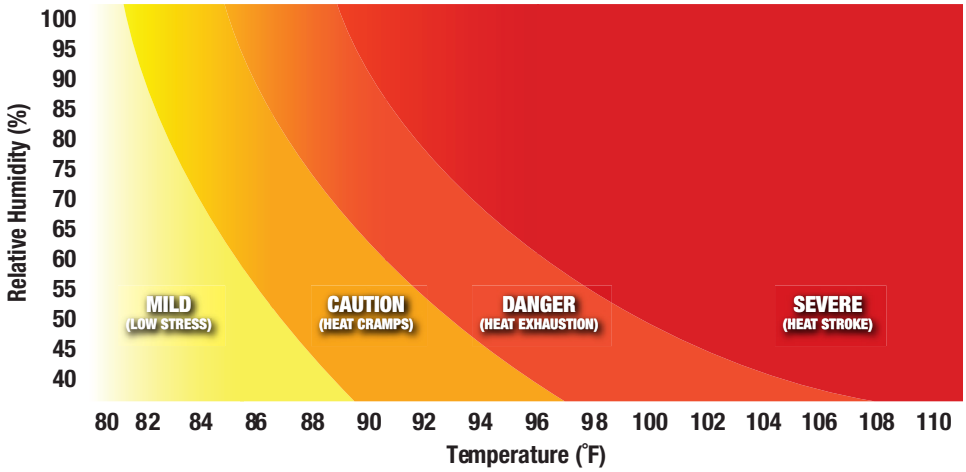
HOMEOSTASIS & THERMOREGULATION

We all learned in science class that homeostasis is the self-regulating process by which our bodies maintain stability. One of the most important functions of homeostasis is the regulation of body temperature, which is called thermoregulation. Thermoregulation is the homeostatic process that allows the human body to maintain its core internal temperature of 98.6 degrees Fahrenheit or 37 degrees Celsius. All thermoregulation mechanisms, such as sweating and shivering, are designed to return the body to its internal core temperature.

WHAT IS HEAT STRESS?

Heat stress occurs when the body is no longer able to cool itself by sweating because the surrounding air temperature is close to or exceeds core body temperature. When the body is unable to cool itself by sweating, several heat-induced illnesses can occur, such as heat cramps, heat rashes, heat exhaustion and the often fatal heat stroke.

HEAT INDEX



OSHA lists temperatures over 91 as a moderate risk and advises to implement precautions that reduce heat stress.

HEAT INDUCED ILLNESS	THE BODY'S RESPONSE	SYMPTOMS
HEAT EXHAUSTION TWO TYPES: • WATER DEPLETION • SALT DEPLETION NOTE: HEAT EXHAUSTION CAN LEAD TO THE MORE DANGEROUS HEAT STROKE.	Dehydration, exposure to high temperatures for several days, and an excessive loss of water and salt from excessive sweating.	• Confusion • Dark colored urine • Dizziness or fainting • Fatigue • Headache • Muscle cramps • Nausea or vomiting • Pale, clammy skin • Profuse sweating • Rapid heartbeat
HEAT STROKE OR SUNSTROKE (A MEDICAL EMERGENCY THAT CAN CAUSE DEATH OR PERMANENT DISABILITY)	Prolonged exposure to high temperatures usually in combination with dehydration. Core body temperature reaches critical levels. At 105 degrees Fahrenheit, the brain and other organs are damaged, leading to possible permanent disability or even death.	• 105 degree temperature • Fainting • Throbbing headache • Dizziness and light-headedness • Lack of sweating despite the heat • Red, hot, and dry skin • Muscle weakness or cramps • Nausea and vomiting • Rapid heartbeat • Rapid, shallow breathing • Confusion, disorientation, or staggering • Seizures • Unconsciousness

FIRST AID MEASURES FOR HEAT EXHAUSTION OR STROKE

- Call 911
- Move worker to air conditioned or shady area
- Administer cool water and/or water with electrolytes
- Remove or loosen tight-fitting clothing
- Apply ice packs or wipe forehead, wrists, back, and neck with Arctic Radwear® Cooling Towel. Because these areas are rich with blood vessels next to the skin, cooling them may reduce body temperature.
- Remain with victim until paramedic arrives.

* PLEASE REFER TO YOUR DOCTOR IF ANY OR MULTIPLE SYSTEMS ARISE. MEDICAL INFORMATION DERIVED FROM MAYOCLINIC.COM

CALCULATE YOUR RISK TO HEAT STRESS

Any job site—indoors or outdoors—that can raise a worker's internal core temperature increases the risk of heat stress. High heat environments, high humidity areas, radiant heat sources, direct physical contact with hot objects, or strenuous physical activities can induce heat stress in employees. Other risk factors include weight, physical fitness and acclimatization, dehydration, metabolism, use of alcohol or medications, blood pressure, and age.

Certain industries, occupations, and sports activities expose people to heat stress. These include but are not limited to military operations, welding and metal forging, commercial laundries and bakeries, firefighters, boiler room workers, construction workers, and factory and automotive workers. Sporting and recreational events, such as 5K runs, marathons, fishing, even lying on the beach, can also induce heat stress, especially if the event takes place in a hot and humid climate.

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HOW CAN WORKERS PREVENT HEAT-RELATED ILLNESSES?

Heat-related illnesses can be prevented or its effects minimized. Here are popular preventative measures:

- **Acclimatization (Short work exposure early in the hot season, followed by gradual**
- **increases in intensity and duration.)**
- **Frequent work breaks in an area that is cooler than the work environment.**
- **Drink plenty of water before, during, and after your shift.**
- **Wear light-colored, loose-fitting clothing.**
- **Avoid sugar, alcohol and caffeine.**
- **Ask your employer to provide a Hydration Station with easy access to cool air or shade, water, fans, etc.**
- **Invest in PPE cooling products, such as the Arctic Radwear Cooling Vest, T-Shirt, Wrap, Towel, Headband, or Headshade, to help maintain your core body temperature.**

BE PROACTIVE, NOT REACTIVE

Limit your exposure to heat exhaustion and heat stroke by choosing **Radians Arctic Radwear Cooling Products** for your safety program. Our heat stress management line includes cooling vests, shirts, towels and wraps, headbands, and headshades. **Radians Arctic Radwear Cooling Products** are made with **Advanced ARCTIC Technology** that accelerates the evaporative cooling process. The PVA material can hold up to eight times its weight in water but remains dry to the touch even when activated. The cooling products, which can last for hours depending on humidity levels, will keep you comfortable and cool while helping to maintain a stable core body temperature. To learn more about **Arctic Radwear Cooling Products** or our comprehensive line of personal safety gear, visit www.radians.com.

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RADIANS®

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HEADQUARTERS

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