

Heat stress

Risk factors and preventative safety solutions

An MSA White Paper



WE KNOW WHAT'S AT STAKE.

HEAT STRESS

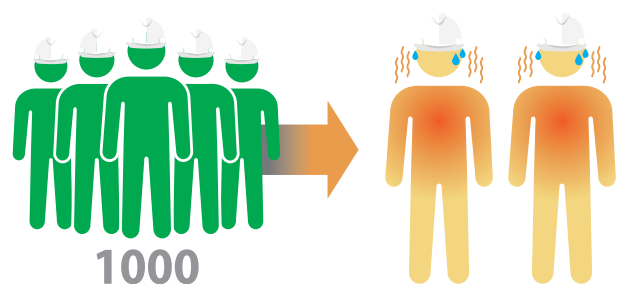
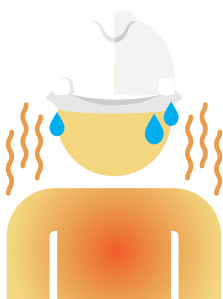
Risk factors and preventative safety solutions

When summer is here, beware of its energy-sapping heat. For construction workers in particular, heat is not only uncomfortable, but also dangerous.

Working during the summer months means many workers are at risk of heat-related illness – especially when exposed to direct sunlight and high temperatures, involved in heavy physical labour, or required to wear heavy protective clothing.

Learn about the dangers of heat stress, what it means for workers at risk, and how to combat the dangers by using the correct protective safety solutions.

HEAT STRESS: RISK FACTORS & OCCUPATIONAL HAZARDS



Heat stress is a physical condition in which the body cannot get rid of excess heat. It causes the body's core temperature to go up, increasing heart rate and making it difficult for a person to focus on a task. In severe instances, heat stress causes irritability, sickness, fainting, and even death.

In addition to health and safety concerns, heat-related illnesses lead to poor performance and lost productivity. According to NIOSH (US National Institute for Occupational Safety and Health), for every 1,000 workers, 2 are at risk for heat stress. That number goes up, too, depending on occupation. For example, those working in construction, mining, and manufacturing are at even greater risk for occupational exposure to heat stress due to the combination of a hot environment and high physical demand.

BUT WHAT ARE THE SYMPTOMS OF HEAT STRESS?



SYMPTOMS OF HEAT STRESS

Heat stress comes in various forms:



HEAT STROKE

Heat Stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down.

When heat stroke occurs, the body temperature can rise to 41°C or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.

Symptoms of heat stroke may include:

- Confusion, altered mental status, slurred speech
- Hot, dry skin or profuse sweating
- Seizures
- Very high body temperature
- Loss of consciousness (coma)
- Fatal if treatment delayed



HEAT EXHAUSTION

Heat Exhaustion is often a precursor to heat stroke. It is often accompanied by elevated core body temperatures around 38°C–39°C.

Symptoms of heat exhaustion may include:

- Headache
- Nausea
- Dizziness
- Fatigue
- Weakness
- Thirst
- Heavy sweating
- Irritability

PREVENTING HEAT STRESS



Track weather and heat conditions and adjust work accordingly, particularly in the event of a heat wave



Schedule heavy work for earlier or later in the day instead of the hottest midday hours



During hot weather, give workers more frequent breaks and/or assign additional workers to the job. Ideally provide cool areas and shade for breaks



Provide workers with plenty of fresh water. Encourage workers to drink water before and during their shifts to stay hydrated (avoid drinks containing caffeine/do not consume alcohol)



Drink plenty of water - every 15 minutes! Drink often, before you feel thirsty



Train workers in recognising heat stress symptoms, and how/when to obtain medical assistance in the event of an emergency



Designate a responsible person to monitor conditions and protect workers who are at risk of heat stress or use a buddy system



Wear lightweight, light coloured, loose-fitting working clothes



This will not help prevent heat stress, but it is important to prevent skin cancer: regularly apply high protection sunscreen on areas of your body not covered by clothing



Consider protective clothing and PPE that provides cooling or at least are breathable



These are tips for best practice only. Always refer to your company safety requirements or to your local health and safety authority's direction.

YOU NEED COOL, COMFORTABLE PROTECTION



COOLER, MORE COMFORTABLE PROTECTION

Check out the MSA PPE solution designed to minimise the effects of heat stress, providing better comfort and increased productivity for workers exposed to high temperatures.

V-GARD® CROWN COOLER WITH NECK SHADE

Tested and approved with the V-Gard range of safety helmets. Use the Crown Cooler with Neck Shade with a vented V-Gard safety helmet model - i.e the V-Gard 930 with integrated over-spectacles - for optimum performance (ensure your company's risk analysis allows for vented safety helmets).



MSA'S IDEAL SOLUTION

Part Number	Description
GA90023	V-Gard Crown Cooler with Neck Shade
GVC1A-0000000-000	V-Gard 930 with Integrated Over-Spectacles (EN397), Vented, White. 4-pt chinstrap, badge-holder, reflective stickers, logo printing and more options are available
10194783	V-Gard H1 Trivent (EN12492), Vented, White (includes 4-pt chinstrap and reflective stickers). Clear visor, clear spectacles and logo printing options are available
10211351	V-FLEX Harness with Back & Chest D-Ring, STD



GA90023



GVC1A-0000000-000



10194783



10211351

For more information about keeping workers safe, compliant, cooler, and more comfortable for longer periods of time with MSA PPE solutions, visit [MSAafety.com](https://www.MSAafety.com) or [contact us](#).

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice.

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