

Top 10 Signs & Symptoms of Heat Stress to Monitor on the Job Site



As summer heat waves intensify across North America, Occupational Health and Safety (OHS) managers must remain vigilant against heat stress – a serious hazard that can quickly lead to injury or even death if overlooked. Whether on a construction site, in a manufacturing facility, or during outdoor tasks such as landscaping or maintenance, extreme temperatures pose significant risks to worker health and safety. To ensure full compliance with workplace safety regulations and to fulfill your duty of care, it is essential to recognize the early and advanced signs of heat stress.

1. Excessive Sweating

Heavy sweating is one of the body's first responses to overheating. While it's a natural cooling mechanism, it can lead to dehydration and a dangerous loss of electrolytes. If a worker is sweating profusely even during moderate physical activity, it is a signal that their body is struggling to maintain a safe internal temperature.

2. Muscle Cramps

Muscle cramps often occur when the body loses too much salt

and water through sweating. Workers may experience painful contractions, especially in the legs, arms, or abdomen. These cramps can signal the early stages of heat-related illness and should not be dismissed as routine fatigue.

3. Dizziness or Light-headedness

Feeling faint or dizzy is a serious warning that the brain is not receiving enough oxygen-rich blood. This often occurs when individuals move too quickly from a sitting or squatting position, or after prolonged exposure to the sun. A dizzy worker on scaffolding, ladders, or near machinery poses a significant fall or operational hazard.

4. Headache

A throbbing or persistent headache in the heat can be an early indicator of dehydration or the onset of heat exhaustion. When fluids and salt levels drop, blood flow and brain function can be affected, leading to pain or pressure in the head. Persistent headaches require immediate rest in a cool, shaded area and rehydration.

5. Nausea or Vomiting

Nausea can escalate quickly to vomiting, making fluid loss even more dangerous. This symptom signals a serious imbalance in the body's cooling and digestive systems and should be treated as an urgent health issue. Workers displaying these signs must be removed from the heat immediately and assessed for medical attention.

6. Rapid Heartbeat or Breathing

As the body struggles to cool itself, the heart works harder to pump blood to the skin's surface. This can lead to a rapid or irregular heartbeat and shallow, fast breathing. These cardiovascular changes increase the risk of heat stroke and demand quick intervention to prevent escalation.

7. Red, Hot, or Dry Skin

In the advanced stages of heat stress, particularly heat stroke, the skin may feel hot and dry instead of sweaty. This is because the body has lost its ability to cool itself through perspiration. Red or flushed skin is a medical emergency and indicates that body temperature may be rising to life-threatening levels.

8. Confusion or Disorientation

When the brain is affected by heat, cognitive functions such as memory, coordination, and reasoning begin to decline. A worker may appear confused, irritable, or behave unusually. This is a red flag for heat stroke and requires immediate medical attention.

9. Fatigue or Weakness

General fatigue, weakness, or lethargy can occur as the body redirects blood flow away from muscles and internal organs to attempt cooling. Workers may complain of feeling unusually tired or sluggish, which can impair judgment and motor skills. Rest breaks, hydration, and shade are critical at this stage.

10. Loss of Consciousness

Fainting or loss of consciousness is a clear emergency and often the final stage before full heat stroke sets in. This

can happen suddenly and without warning, especially in high-humidity environments. Workers who lose consciousness due to heat stress require emergency medical services and should not return to work until medically cleared.

Proactive Prevention Saves Lives

Understanding these symptoms is not just about employee wellness, it's a legal and operational imperative. Under OH&S laws across Canada and the U.S., employers are responsible for providing a safe work environment, which includes mitigation of heat stress risks. Implement heat stress training, hydration stations, rest schedules, and PPE modifications (like cooling vests or wide-brimmed hats), and ensure all staff – including supervisors – can recognize these 10 signs in themselves and others.

Being able to spot and respond to the early symptoms of heat stress can make the difference between a routine summer day and a workplace tragedy. Let this be the summer where prevention takes precedence over reaction and where every employee goes home safe.