Working outdoors in hot weather

Working outdoors in hot weather, can have a serious impact on an employee's health if the risks have not been properly managed. The impact can be immediate, heat exhaustion, for example, but it may occur over a long period of time.

The **Health and Safety at Work Act 1974** requires employers to provide their employees with, among other things, a safe and healthy working environment. **The Management of Health and Safety at Work Regulations 1999** require employers to assess the risks to the health and safety of their employees arising out of their work activity.

General hazards

At high temperatures (25°C and above) employees may become drowsy and less aware of dangers. There is also an increased risk of accidents due to slips, trips, falls, poor manual handling, injury from hand tools, and so on. Thermal discomfort gives rise to reduced efficiency that can lead to poor decision-making with resultant errors.

Skin cancer and other effects of UV

Too much UV is harmful to the skin, with a tan indicating that it has become damaged. In the short term, sunburn can blister the skin and make it peel. Over the longer term, it can speed up the ageing of the skin, making it leathery, mottled and wrinkled, with the most-serious effect being an increased risk of developing skin cancer.

Employers should:

- Include sun protection advice in routine health and safety briefings
- Encourage workers to keep covered up during the summer months, especially at lunchtime when the sun is at its hottest
- Encourage workers to use sunscreen of at least Sun Protection Factor (SPF) 30
- Encourage workers to take their breaks in the shade
- Schedule work to minimise exposure
- Site water points and rest areas in the shade
- Encourage workers to drink plenty of water to avoid dehydration
- Encourage workers to check their skin regularly for unusual spots or moles that change size.

Further information is contained in the HSE publication ***Keep Your Top On: Health Risks from Working in the Sun*[1].**

Heat stroke and heat stress

Heat stroke occurs when the core body temperature approaches 41°C. It affects the co-ordination of the nervous system and thermal regulation mechanism. Heat stroke carries a high risk of fatality from cardiac or respiratory arrest, can lead to liver failure and must be treated as a medical emergency. Body temperature may rise to 41°C or higher within 10 – 15 minutes. Warning signs of heat stroke may include:

- High body temperature *(above 39.5°C, orally)*
- Red, hot and dry skin *(no sweating)*
- Rapid, strong pulse
- Throbbing headache
- Nausea and dizziness
- Unconsciousness.

It is important ***not*** to give the victim any fluids to drink. While waiting for medical assistance, it may be necessary to:

- Get the sufferer to a shady area
- Cool the sufferer rapidly using whatever methods are available.

Where the muscles begin to twitch uncontrollably, it is important to keep the victim from injuring themselves. However, no object should be placed in the mouth. If there is vomiting, it is vital to keep the airway open by turning the victim onto their side.

The HSE information sheet **INDG451** ***Heat Stress in the Workplace***[2] states that ***"as well as air temperature, factors such as work rate, humidity and clothing worn while working may lead to heat stress".*** Heavy work in hot and humid conditions can lead to an increased risk of heat stress because:

- Sweat evaporation is restricted by the type of clothing worn and by the humidity of the environment
- Heat will be produced within the body due to the work rate and, if insufficient heat is lost, deep body temperature will rise
- The body reacts by increasing the amount of sweat produced, which may lead to dehydration
- Heart rate also increases, which puts additional strain on the body.

Typical symptoms include:

- Muscle cramps
- Heat rash
- Severe thirst–a late symptom of heat stress.
- Fainting
- Heat exhaustion–fatigue, giddiness, nausea, headache, moist skin
- Heat stroke–hot dry skin, confusion, convulsions and eventual loss of consciousness.

Heat stroke is the most severe disorder. Remember, **it can result in death if not detected at an early stage.**

Sunburn

Sunburn damages the skin, and although the discomfort is usually minor, with healing usually taking place within a week, more severe sunburn may require medical attention. Symptoms include: the skin becoming red, painful, and abnormally warm after sun exposure. However, severe sunburn can cause:

- fever
- fluid-filled blisters
- severe pain.

When treating sunburn:

- Apply cold compresses or immerse the sunburned area in cool water
- Apply moisturising lotion to affected areas
- Do not break blisters.

Risk assessment

The main factors to consider when carrying out a risk assessment of outside work in hot weather are: temperature, humidity, heat radiation from direct sun, workload, work clothing and personal protective clothing to be worn, duration of the work, age or vulnerability of those involved, and any equipment involved that might generate additional heat.

The controls introduced following the risk assessment should adopt the usual hierarchy of control approach. For example:

- Elimination of risks by the rescheduling the work to cooler periods of the day
- Reduction of risks by doing the work in a way that requires less strenuous effort
- Administrative controls and safe work practices by the provision of appropriate training and work instructions, additional breaks in cooler areas, cool water and job rotation
- PPE–the provision of sun protection.

Other steps that can be taken include:

- Introducing shading in areas where individuals are working
- Encouraging the removal of personal protective equipment when resting to encourage heat loss
- Educating workers to recognise the early symptoms of heat stress.

Finally, the findings of the risk assessment process and the risk control measures introduced should be subject to robust monitoring and review.

For more information:

[1] HSE Keep Your Top On:
https://www.hse.gov.uk/pubns/indg147.pdf

[2] HSE Heat Stress in the Workplace:
https://www.hse.gov.uk/pubns/indg451.pdf

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