

General Administration of Sustainability

Workshop Titled: Heat Stress

June 2025

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Speech by His Excellency the
General Director of the
Sustainability Administration

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Methods





Speech by His Excellency the General Director of the Sustainability Administration

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Workshop Goals

01

Understand the concept of heat stress and its impact on the health and safety of workers

02

Review methods of prevention and dealing with heat stress in work environments

03

Provide practical solutions to improve work environments and reduce risks related to heat stress



Introduction to Heat Stress

Heat Stress



Heat stress is the condition that occurs when the body is unable to regulate its temperature and maintain it at a normal level, due to excessive exposure to high temperatures or due to intense physical exertion in hot environments, leading to heat accumulation inside the body.

The Difference Between Heat Stress and Heat stroke

	Heat Stress	Heatstroke
Symptoms	Excessive sweating – Fatigue – Headache – Dizziness – Nausea	Cessation of sweating – Elevated body temperature – Loss of consciousness – Confusion
Treatment	Easily treatable if cooling and rest are applied immediately	Medical emergency (fatal) without urgent medical intervention



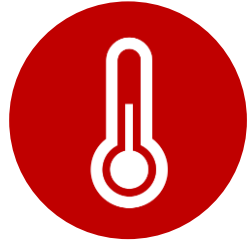
Causes and Effects



Causes of Heat Stress



High temperatures



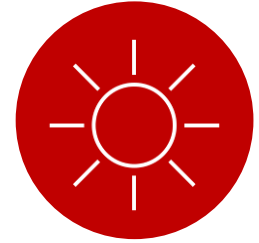
Mine depth and geothermal heat



Poor ventilation



Heat generated by machinery



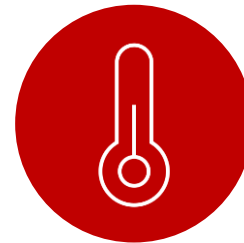
Direct exposure to the sun



High physical exertion



Personal protective equipment (PPE)



Lack of acclimatization



Personal factors



Effects of Heat Stress

Fluid loss

Salt loss

Muscle cramps

Fatigue

Headache

Dizziness

Nausea

Organ
dysfunction

Loss of
consciousness

Death



Solutions and Prevention Methods

Methods of Preventing Heat Stress



Improve ventilation
and cooling



Adjust work schedules
and rest periods



Continuous body
hydration



Gradual heat
acclimatization



Awareness and
training



Buddy system



Technical
monitoring



Additional
measures



Policies and
procedures



First Aid for Heat Stress Cases

01

Move the worker to a cool or shaded place and remove heavy clothing

02

Cool the body with water and ensure good ventilation

03

Gradually give the affected person water

04

Seek medical assistance if the condition worsens

Saudi Regulations and Legislation Related to Heat Stress

01

Ministry of Human Resources Resolution No. 3337, which stipulates the following: Prohibition of working under direct sunlight from 12:00 PM to 3:00 PM during the period from June 15 to September 15.

02

Procedural Guide for Occupational Safety and Health: Heat risk assessment – Provision of protective means – Worker training.

03

Saudi Labor Law: Requires employers to provide a safe work environment, including protection against heat stress.

Heat Index				
Danger Level	Heat Index °C	Symptoms/Illnesses from High Temperature Exposure	Rest Periods	Recommendations
Caution	25–29	Possibility of fatigue with prolonged exposure or strenuous physical effort	Normal scheduled work	Drink enough water
Extreme Caution	30–38	Possibility of muscle cramps, heat stress, heat stroke with prolonged exposure or strenuous physical effort	25% of working hours divided into equal rest periods	Drink enough water
Danger	39–51	Likely occurrence of muscle cramps, heat stress, heat stroke with prolonged exposure or strenuous physical effort	50% of working hours divided into equal rest periods	Drink enough water
Extreme Danger	52+	On the verge of heat stroke	75% of working hours divided into equal rest periods; it is recommended to stop work when the heat index reaches 56°C or higher	Drink enough water

THANK YOU



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