



Heat Stress Management and Saudi Midday Outdoor Work Ban Compliance



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Technical depth: Practitioner · **Practical mode:** Inspection walkthrough

Introduction

Outdoor and hot indoor work in construction, utilities, logistics, energy and agriculture exposes crews to heat illness that can progress to fatal heatstroke within one shift. In Saudi Arabia, the midday outdoor work ban enforced by the Ministry of Human Resources and Social Development MHRSD and the National Council for Occupational Safety and Health NCOSH sets a legal floor, yet heat risk continues outside the banned hours and months. This Core Concept course equips supervisors and HSE staff to measure heat stress with recognised indices and control it on site, leaving with a Heat Stress Management Plan.

Course Objectives

- Apply the Saudi midday outdoor work ban and the MHRSD heat stress procedural guide to shift planning, contractor supervision and site records
- Measure and interpret heat stress on a worksite using WBGT to ISO 7243, the Thermal Work Limit and the predicted heat strain model
- Set work-rest cycles, hydration and acclimatisation schedules matched to workload and heat category
- Recognise heat-related illness early and initiate first aid, rapid cooling and emergency escalation
- Inspect outdoor and hot indoor work areas for engineering, administrative and PPE controls
- Produce a Heat Stress Management Plan covering the ban period and the hot months either side of it

Target Audience

- Site supervisors and foremen who plan and direct outdoor or hot indoor work
- HSE officers and advisers responsible for heat risk assessment and site inspection
- Occupational health nurses and first-aid coordinators who respond to heat illness
- Contractor and subcontractor supervisors accountable for the compliance of their crews
- Operations and maintenance supervisors in plants, warehouses and utilities with hot work areas
- Workforce administrators who schedule shifts, overtime, transport and worker accommodation

Course Outline

Day 1: Heat Stress Fundamentals and the Saudi Regulatory Context

- Human Heat Balance: Metabolic, Radiant, Convective and Evaporative Exchange
- Heat-Related Illness Spectrum: Heat Rash, Cramps, Syncope, Exhaustion and Heatstroke
- Saudi Midday Outdoor Work Ban: 12:00 to 15:00 From 15 June to 15 September
- MHRSD Procedural Guide on Sun Exposure and Heat Stress Ministerial Decision 196086
- Worksite Heat Exposure Baseline Using the WHO/WMO Workplace Heat Stress Guidance

Day 2: Heat Stress Indices and Standards

- WBGT Index Measurement and Reference Values to ISO 7243:2017
- Thermal Work Limit TWL Method in the NIOSH Hot Workplaces Guide
- Predicted Heat Strain PHS Model to ISO 7933:2023
- Metabolic Rate Estimation by Task Using ISO 8996:2021
- ACGIH Heat Stress TLV, Action Limit and Clothing Adjustment Factors

Day 3: Controlling Heat Risk on Site

- Heat Stress Risk Assessment Aligned to ISO 45001 Clause 6.1.2
- Work-Rest Cycle Scheduling by Heat Category and Workload
- Acclimatisation Protocols for New and Returning Workers
- Hydration Stations, Shade Shelters and Cooled Rest Area Design
- Shift Rescheduling and Task Sequencing Around the Midday Ban Hours

Day 4: Vulnerable Workers, Emergencies and Compliance Risk

- Individual Risk Factors and Medical Supervision to ISO 12894
- Physiological Strain Monitoring to ISO 9886: Heart Rate and Core Temperature
- Heatstroke First Aid: Rapid Cooling and Cold-Water Immersion Protocol
- Cooling Garments and Heat-Rated PPE: Selection and Trade-Offs
- MHRSD Inspection Readiness, Ban Records and the 19911 Reporting Channel

Day 5: Site Heat Inspection and the Heat Stress Management Plan

- Worksite Heat Inspection Walkthrough with a WBGT Meter and Checklist
 - Construction Site Case: Heat Controls During the Ban Period
 - Warehouse and Plant Room Case: Indoor Radiant Heat Controls
 - Heat Alert Toolbox Talk and Worker Communication Drafting
 - Heat Stress Management Plan Build and Peer Review
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Skills You Will Gain

- Heat Stress Measurement
- Thermal Risk Assessment
- Work-Rest Scheduling
- Heat Illness First Response
- Acclimatisation Planning
- Midday Ban Compliance Management
- Worksite Heat Inspection

Why Attend This Course

- Return to work with a Heat Stress Management Plan built around your own worksite, crews and shift pattern
- Know exactly what the midday ban requires and where heat risk remains after 3 pm and outside the ban months
- Use a WBGT meter and heat indices with confidence instead of relying on air temperature alone
- Compare heat controls with supervisors from construction, energy, logistics and facilities services

Conclusion

Heat illness is predictable and preventable, yet it still stops work and costs lives every summer. This course moves from the physiology of heat and the Saudi midday ban, through the WBGT, Thermal Work Limit and predicted heat strain methods, to the vulnerable workers, emergencies and inspection exposure that test a site's controls. The final day applies that material in a heat inspection walkthrough and turns it into a Heat Stress Management Plan that participants take back to their site managers for the next hot season.
