

# Heat Stress Safety by Shereen Montero

A Training Guide to DOSH Compliance & Worker Health

# Essential Learning Objectives

This session equips employees and OSH coordinators with the skills to identify heat risks and implement controls under the latest Malaysian safety regulations.

- Understand OSHA 2022 legal requirements
- Identify early symptoms of heatstroke
- Apply engineering and admin controls
- Execute emergency first aid SOPs



# Malaysian Workplace Compliance

## OSHA 2022 Act

Effective June 1, 2024, safety duties expand to all workplaces. Employers must conduct HIRARC for heat hazards under Section 18B.

## RM 500,000 Fine

Non-compliance penalties under Section 15 have increased 10x. Failing to manage thermal comfort now risks up to 2 years imprisonment.

## OSH Coordinator

Workplaces with 5+ employees must appoint a trained OSH Coordinator to monitor site heat stress and worker symptoms.

# MetMalaysia Heatwave Alert System

Level 1: Alert



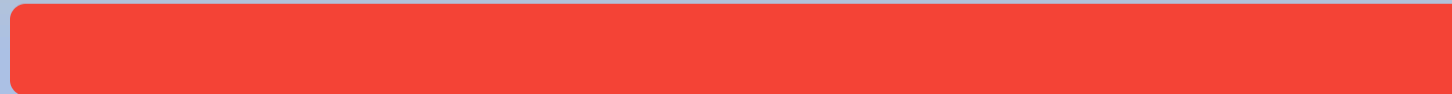
37°C

Level 2: Heatwave



40°C

Level 3: Extreme



45°C

Source: MetMalaysia 2024. Alerts are triggered after 3 consecutive days at high thresholds.

# Recognizing Heat Illness Symptoms

Heat illness is progressive. Early intervention prevents permanent organ damage.

- Heat Exhaustion: Heavy sweating, rapid pulse, dizziness, nausea.
- Heatstroke (Emergency): Temperature  $>40^{\circ}\text{C}$ , confusion, fainting, dry/hot skin.
- Immediate Action: Move to shade, cool the body, and seek help.



# High-Risk Groups & Industries

## Vulnerable Workers

- Workers aged 50+
- Pregnant women
- Chronic conditions (Diabetes, Heart Disease)
- New or returning workers lacking 7–14 days of acclimatization.

## High-Heat Sectors

- Construction & Oil & Gas
- Agriculture & Plantations
- Manufacturing (Iron, Steel, Timber)
- Laundry & Kitchen operations.

# Prevention: HIRARC Control Measures

## Engineering Controls

- Automation of heavy tasks
- Heat-shielding around machinery
- Enhanced local exhaust ventilation
- Dedicated air-conditioned rest areas.

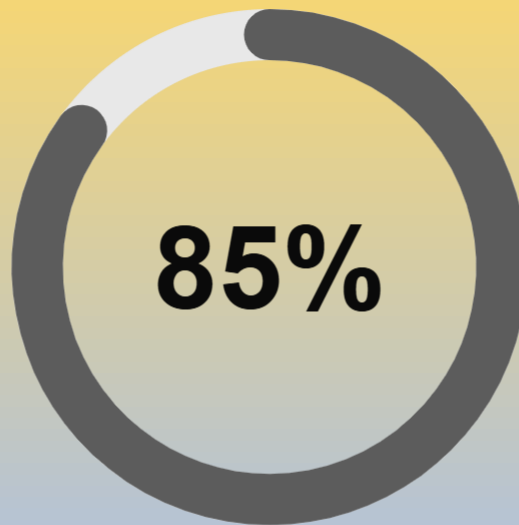
## Administrative Controls

- Scheduled water breaks every 20m
- Acclimatization for new hires
- Buddy system for symptom checks
- Work rescheduling to cooler hours.

# Hydration & Rest Scheduling



Hourly Water Intake



Break Compliance



Rest Area Access

Goal: 250ml every 15–20 minutes. Avoid sugary or caffeinated drinks which increase dehydration risk in Malaysian humidity.

# Emergency First Aid for Heatstroke

## 1. Call for Help

Immediately notify the site OSH Coordinator and call 999 for emergency medical services in Malaysia.

## 2. Rapid Cooling

Move worker to a shaded, ventilated area. Remove heavy gear and use wet cloths or ice packs on neck and armpits.

## 3. Hydration Rules

Only provide sips of water if the worker is fully conscious. Do not give water if they are vomiting or confused.

## 4. Monitoring

Stay with the victim until medical help arrives. If they lose consciousness, place them in the recovery position.

# Acclimatization: Adapting to Tropical Heat

Malaysian humidity significantly slows cooling through sweat. Workers must be gradually exposed to heat for 7–14 days.

- Day 1-2: 20% exposure time
- Day 3-5: Increase by 20% daily
- Monitor for signs of fatigue or heat rash during the transition period.



# THANK YOU