



اوتوريٽي ڪيٽيگري ڪملا مٿن
ڪمپيٽن. دان عالم سڪيٽر

Safety, Health and Environment
National Authority

MANAGING HEAT STRESS IN THE WORKPLACE

MOHAMMAD NADZIRUL BIN MOHD JAILAINI
OFFICER II, COMPLIANCE AND INTERNATIONAL DIVISION



اوتوریتی کبغسان کسلامتن
کھیچتن دان عالم سکیت
Safety, Health and Environment
National Authority

TABLE OF CONTENTS

- 1 UNDERSTANDING OF HEAT STRESS, ITS EFFECTS AND THE OCCUPATIONS AT RISK**
- 2 STATISTICS FROM GLOBAL AND NATIONAL PERSPECTIVES**
- 3 RELEVANT LEGISLATIONS**
- 4 RELEVANT PUBLICATIONS**
- 5 RISK MANAGEMENT & CONTROL MEASURES**
- 6 KEY TAKEAWAY MESSAGE**

UNDERSTANDING OF HEAT STRESS

A condition when **the accumulation of heat in the body exceeds the body's natural ability to remove the excess body heat**, leading to impaired body functions once core temperature rises above **the normal range of 36.1°C to 37.2°C**.

WORKING ENVIRONMENT

- Ambient Temperature
- Air Movement
- Ambient Humidity
- Direct Heat Source
- Reflection of Solar Radiation



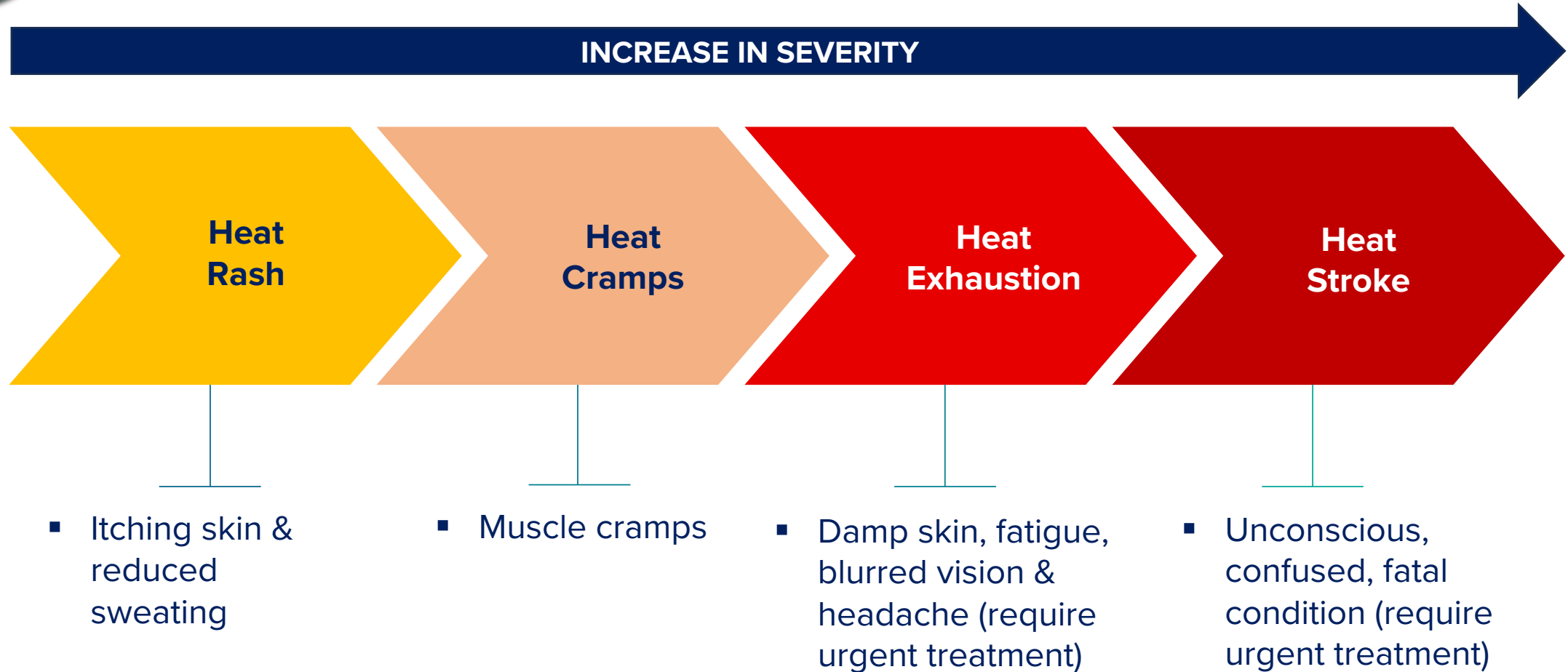
WORKER HEALTH CONDITIONS

- Heat Acclimatisation
- Nutrition & Hydration
- Medical Conditions
- Medications
- Fatigue & Sleep Deprivation
- Motivated/Complacency Worker

NATURE OF WORK

- Workload
- Duration
- Clothing

HEAT STRESS EFFECTS ON HEALTH



Other Chronic Effects: Cellular damage of kidney, heart, liver, skin and reproductive system



اوتوریٹی کبھساں کسلامتن
 کصیتن دان عالم سکیتر
 Safety, Health and Environment
 National Authority

OCCUPATIONS AT RISK



INDOORS	OUTDOORS
<ul style="list-style-type: none"> • Brick Factory • Steel working • Electricity generating plants • Petrochemical plants • Oil and chemical refineries • Interior construction and renovation work • Boiler room • Commercial Kitchens • Bakeries • Warehouse • Laundries/Dobi • Welders 	<ul style="list-style-type: none"> • Construction and repair work <ul style="list-style-type: none"> • Road • Housing and buildings • Bridges • Brick Layering • Welders • External painters • Oil and gas sectors (e.g. those working on offshore and onshore platforms) • Excavation and grading • Roofing • Agriculture/Harvesting • Fisheries • Forestry/Logging • Car wash • Cable Installation • Painting • Postman/Food Delivery





اوتوريٽي ڪي بڻسائن ڪسلامتن
ڪصپين دان عالم سڪيتر
Safety, Health and Environment
National Authority

STATISTICS - GLOBAL PERSPECTIVES

Globally

**2.41 billion
workers**

70 per cent of the working population
are exposed to excessive heat

This results in

22.85
million non-
fatal injuries

and

18,970
deaths
annually

Source: International Labour Organization Report (2024)



US\$361 billion

could be saved globally

if OSH measures to prevent
occupational injuries related to
excessive heat were implemented.



9/10

worker exposures
to excessive heat
occur outside of
a heatwave.



8/10

occupational injuries
linked to excessive
heat occur outside
of a heatwave.



26.2
million

people living with chronic
kidney disease attributable
to heat stress worldwide.



اوتوريټي ڪيٽيگري
ڪميٽي ڊان عالمي سڪيٽر
Safety, Health and Environment
National Authority



HEAT STRESS/EXHAUSTION REPORTED CASES (2020 – 2025)

STATISTICS – NATIONAL PERSPECTIVES



WEATHER UPDATE FOR BRUNEI DARUSSALAM 07 MAY 2025

1. General Weather Situation

Brunei Darussalam is currently in the inter-monsoon period. Normally during this period, the atmospheric condition tends to be more stable with reduced rainfall activities.

Since 5th May 2025, Brunei Darussalam has been experiencing Excessive Hot Weather (EHW) conditions at several areas of the country during the day. The daily maximum temperatures recorded in several observation stations around the country have reached 35°C or above for 3 consecutive days.

As of yesterday, Tuesday, 6th May 2025, 3 areas have recorded Excessive Hot Weather (EHW), namely Labi, Lakiun dan Anggerek Desa, whereas another 5 areas have recorded Unusual Hot Weather (UHW), including Bandar Seri Begawan, Lumapas, Sinaut, Benutan dan Bangar.

2. Brunei Darussalam Weather Forecast

Based on the latest numerical weather prediction models, the weather in Brunei Darussalam is forecasted to continue to be generally hot and dry, with reduced rainfall amount and activity for the next upcoming days.

The daily maximum temperatures are expected to reach between 33°C and 37°C.

3. Our Advice

Members of the public are advised to take necessary precaution and safety measures in light of the expected hot and dry weather conditions.

The Brunei Darussalam Meteorological Department (BDMD) has provided recorded daily maximum temperature as well as 'feels like' temperature for several areas in Brunei Darussalam using infographics for public information and reference, which are shared through BDMD's social media platforms. The infographics include the following:



اوتوري تي كبغسان كسلامتن
كصيتن دان عالم سكيتر
Safety, Health and Environment
National Authority

HEAT STRESS CASE STUDY IN BRUNEI DARUSSALAM

The IP was conducting **mechanical demolition works** when he felt dizzy and almost fainted during his lunch break inside the toilet. A colleague heard the IP calling him from inside the toilet, and discovered the **IP sitting on the floor, conscious but weak**.

Weather condition on the day was noted to **be warm and humid**. The rest area at the work site had a **tarpaulin shade but did not have any breeze or fans**. The work shift is from 0700 hrs to 1600 hrs.

IP was said to have stayed up late **the night before and was feeling tired prior to heading** to work and took unprescribed medication. IP had breakfast on the day but **was not drinking enough water**.

IP was brought to medical clinic and **given rehydration sachet**. IP was diagnosed with heat-related illness.

RELEVANT LEGISLATIONS

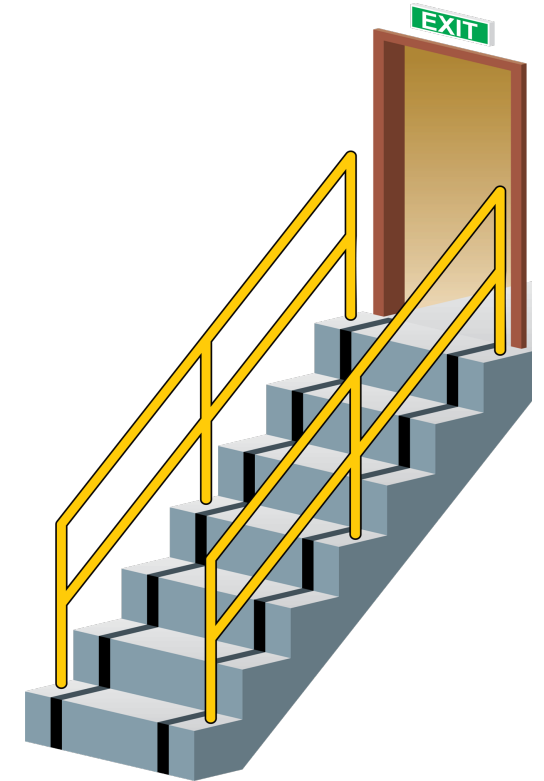
WSHA CAP 277

OCCUPIER (SECTION 11)

Duty to take, so far as is reasonably practicable, such measure to ensure that the following are **safe and without risks to health**...

- The **workplace**;
- All means of **access to or egress**; and
- Any **machinery, equipment, plant, article or substance** kept at the workplace,

...to every person within those premises, whether or not that person is at work or is an employee of the occupier.



RELEVANT LEGISLATIONS

WSHA CAP 277

EMPLOYERS (SECTION 12)

Duty to take, so far as is reasonably practicable, such measures as are necessary **to ensure the safety and health of his employees and persons at work:**



- Providing and maintaining **safe work environment** without risk to health, and adequate as regards to facilities & arrangement for their welfare



- **Persons not exposed to hazard** arising out of arrangement at workplace or near workplace and under control of principal



- Develop & implement **procedure for emergencies**



- Provide adequate **instruction, information, training & supervision**



- Adequate safety measures for any **machinery, equipment, plant, article or process**

RELEVANT LEGISLATIONS

WSHA CAP 277

SELF-EMPLOYED PERSONS (SECTION 13)

- The duty of a self-employed person (whether or not he is also a contractor or sub-contractor) to take, so far is reasonably practicable, such measures as are necessary to ensure the **safety and health of persons (not being his employees) who may be affected by any undertaking carried on by him at the workplace.**





اوتوري تي كېڻسان ڪڍڻ
ڪڍڻ. ڏانءِ عالمي سڪيتر
Safety, Health and Environment
National Authority

RELEVANT LEGISLATIONS

WSHA CAP 277

PRINCIPALS (SECTION 14 & 14A)

Duty to take, so far as is reasonably practicable, such measures as are necessary to **ensure the safety and health of any contractor, direct/indirect sub-contractor and any employee employed by contractor or sub-contractor:**

- Providing and maintaining **safe and adequate work environment;**
- Adequate safety measures for any **machinery, equipment, plant, article or process;**
- Persons not **exposed to hazard** arising out of arrangement at workplace or near workplace;
- Develop & implement procedure for **emergencies;**
- Ensure persons at work have adequate **instruction, information, training & supervision.**

ADDITIONAL DUTIES

ENSURE THE CONTRACTOR ENGAGED...

- Has the **necessary expertise** to carry out the work
- Has **taken adequate safety and health measure** in respect of any machinery, equipment, plant, article or process used.
- Has **sufficient experience & training** to carry out the work
- Have **obtained any necessary license, permit, certificate** or any other documents to carry out work.
- Has **conducted risk assessment** in relation to the safety and health risks; and
- Has **communicate to person who may be affected of the risk involved**, any measure or safe work procedure implemented.



اوتوریٹی کبغسان کسلامتن
کصیعتن دان عالم سکیتز
Safety, Health and Environment
National Authority

RELEVANT LEGISLATIONS

WSHA CAP 277

PERSONS AT WORK (SECTION 15)



Duty of every person at work to:

- **Use the personal protective equipment** as required for the activity
- **Co-operate** with employer or principal to comply with WSHA Cap 277
- **Not willfully or recklessly endanger himself and others or misuse** any appliance, protective clothing, convenience, protective equipment; and
- **Not willfully or recklessly does any act which endangers** the safety of himself or others



اوتوریٹی کبھساں کسلامتن
کھیچن دان عالم سکیتر
Safety, Health and Environment
National Authority

RELEVANT LEGISLATIONS

Regs. 4(1), 4(2) and 4(3) of WSH (Risk Management) Regulations

- The duty of the employer, self-employed person, and principal of every workplace to take all reasonably practicable steps to **eliminate any foreseeable risk** to any person.
- If the **risk cannot be reasonably eliminated**, then reasonably practicable steps shall be taken to **minimise such risks and safe work procedures to control such risks** that are to be put in place.

Reg. 10 of WSH (General Provisions) Regulations

- The duty of the occupier of a workplace to take all reasonably practicable measures to ensure that persons at work in the workplace **are protected from excessive heat**.





اوتوريٽي ڪي بڻسائن ڪسلامتن
ڪصين. دن عالم سڪيتر
Safety, Health and Environment
National Authority

RELEVANT PUBLICATIONS



اوتوريٽي ڪي بڻسائن ڪسلامتن
ڪصين. دن عالم سڪيتر
Safety, Health and Environment
National Authority

NOTE TO INDUSTRY (NTI)

TOPIC: REMINDER TO MANAGE RISKS OF HEAT STRESS AND FLASH FLOODS IN THE WORKPLACE				Reference Number 2025/NTI/07
Approved by: Director of Compliance & International Division	Endorsed by: Chief Executive Officer (CEO)	Issue date: 22 May 2025	Expiry date: None	Revision No: 1.0

Purpose: This Note to Industry (NTI) serves to remind all principals, employers, occupiers, self-employed persons, and persons at work to exercise heightened precautions in managing the risks associated with heat stress and flash floods within the workplace. This is especially important during periods of changing weather, which may include hot and dry conditions followed by occasional heavy rain and thunderstorms.

On 7 May 2025, the Brunei Darussalam Meteorological Department (BDMD), under the Ministry of Transport and Info-communications, released a statement indicating that Brunei Darussalam is currently in the inter-monsoon period, experiencing Excessive Hot Weather. The forecast indicates primarily hot and dry conditions, with several areas recording temperatures of 35°C or higher since 5 May 2025. BDMD urges the public to take necessary precautions and safety measures during this period. Additionally, recent weather warnings from BDMD have noted occasional heavy and thundery showers which have resulted in flash floods. For latest weather updates, please refer to BDMD's Instagram @brunei.weather or download BDMD's mobile application, Brunei WX.

In response, SHENA would like to remind all principals, employers, occupiers, self-employed persons and persons at work to take extra precautions to manage the risks associated with heat stress and flash floods in the workplace. Heat stress can lead to mild issues, such as heat rash and heat cramps, as well as more severe conditions, including heat exhaustion and potentially fatal heat stroke if not treated immediately. Similarly, flash floods can result in structural instability, create electrical hazards when materials come into contact with water, and increase risk of slips, trips and falls.

The following provisions outline the responsibilities under the relevant legislations:

(1) **Section 12 of the WSHA, Cap 277:**

Employers must implement reasonably practicable measures to ensure the health and safety of employees at work.

2025/NTI/07

1



اوتوريٽي ڪي بڻسائن ڪسلامتن
ڪصين. دن عالم سڪيتر
Safety, Health and Environment
National Authority

MELINDUNGI PEKERJA DARIPADA TEKANAN HABA

- Memastikan semua pekerja menyesuaikan diri dengan cuaca panas / keadaan kerja yang panas.
- Menjadualkan semula kerja yang melibatkan kegiatan fizikal yang berat di bawah sinaran matahari ke waktu yang lebih sejuk mengikut kesesuaian yang munasabah.
- Melakukan penilaian risiko yang menangani aktiviti kerja dalam persekitaran yang panas dan aktiviti kerja yang menghasilkan haba yang berlebihan.
- Menyediakan waktu rehat yang fleksibel dari haba.
- Sentiasa menyediakan pekerja dengan air minuman sejuk yang mencukupi di tempat yang mudah untuk diakses.
- Mengajar dengan menggalakkan pekerja memastikan diri mereka sentiasa terhidrat, mengenali gejala awal gangguan berkaitan haba dan memahami risiko dan langkah kawalan.
- Menyediakan pelan persediaan kecemasan dan langkah-langkah pemulihan bagi pekerja yang disyaki mengalami kesan haba.
- Memastikan First Aider yang dilantik di tempat kerja bersedia untuk memberikan pertolongan cemas jika perlu.
- Menggalakkan pekerja untuk memakai pakaian yang longgar dan berwarna cerah.
- Menyediakan pengudaraan yang mencukupi bagi pekerja yang bekerja di persekitaran yang panas dan tertutup.

Majikan dan pengamal perubatan diingatkan untuk melaporkan kes strok haba yang berkaitan dengan pekerjaan (selepas diagnosis dari pengamal perubatan) kepada SHENA dengan menekan punat 'Report an Incident' di laman sesawang SHENA, www.shena.gov.bn



اوتوريٽي ڪي بڻسائن ڪسلامتن
ڪصين. دن عالم سڪيتر
Safety, Health and Environment
National Authority

INDUSTRY GUIDANCE NOTE

TOPIC: MANAGING HEAT STRESS AT WORKPLACE				Reference Number: 2024/IGN/01
Approved by: Acting Director of Compliance and International Affairs Division	Endorsed by: Acting Interim CEO	Issue date: 27 March 2024	Expiry date: None	Revision No: 01

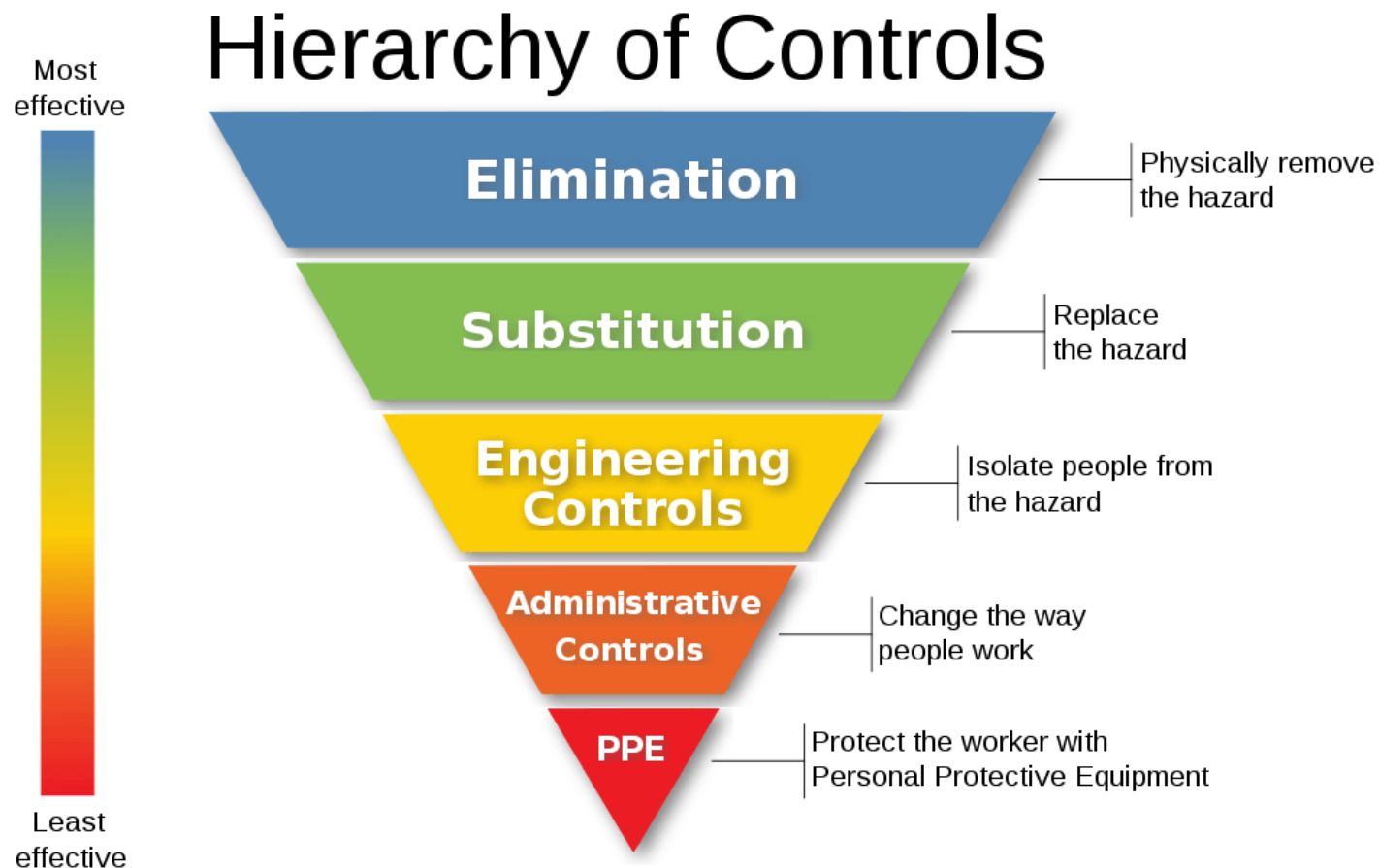
TABLE OF CONTENTS

1. INTRODUCTION.....	3
1.1 Purpose.....	3
2. GLOSSARY OF TERMS AND ABBREVIATIONS.....	3
2.1 Scope.....	4
2.2 Applicable Laws and Regulations.....	4
3. RESPONSIBILITIES.....	6
4. HEAT STRESS IN BRUNEI DARUSSALAM.....	6
4.1 Heat Stress Definition.....	6
4.2 Brunei Climate.....	6
4.3 Affected Occupations.....	7
Table 1: Example of activities or workplace at risk of heat stress.....	7
5. FACTORS CONTRIBUTING TO HEAT STRESS.....	7
5.1 Working Environment.....	8
5.2 Health Condition of Workers.....	8
5.3 The Nature of the Work.....	9
6. HEAT STRESS MEASUREMENT.....	10
6.1 Humidex.....	10

Page 1 of 31

RISK MANAGEMENT

1. Risk assessment shall include **hazard, risk and control measures related to heat stress** for both outdoor work activities and indoor hot processes
2. Identify **heat sources and workers** who may be **vulnerable** to heat stress
3. Monitor **Heat Stress Indices**, where feasible



Note: Risk Assessment is important to identify appropriate control measures

ENGINEERING CONTROLS

1) Ventilation

- Use exhaust fans, air-conditioning, or portable fans.

2) Heat Barriers

- Install barriers to reduce heat transfer from hot sources

3) Mechanical Aids

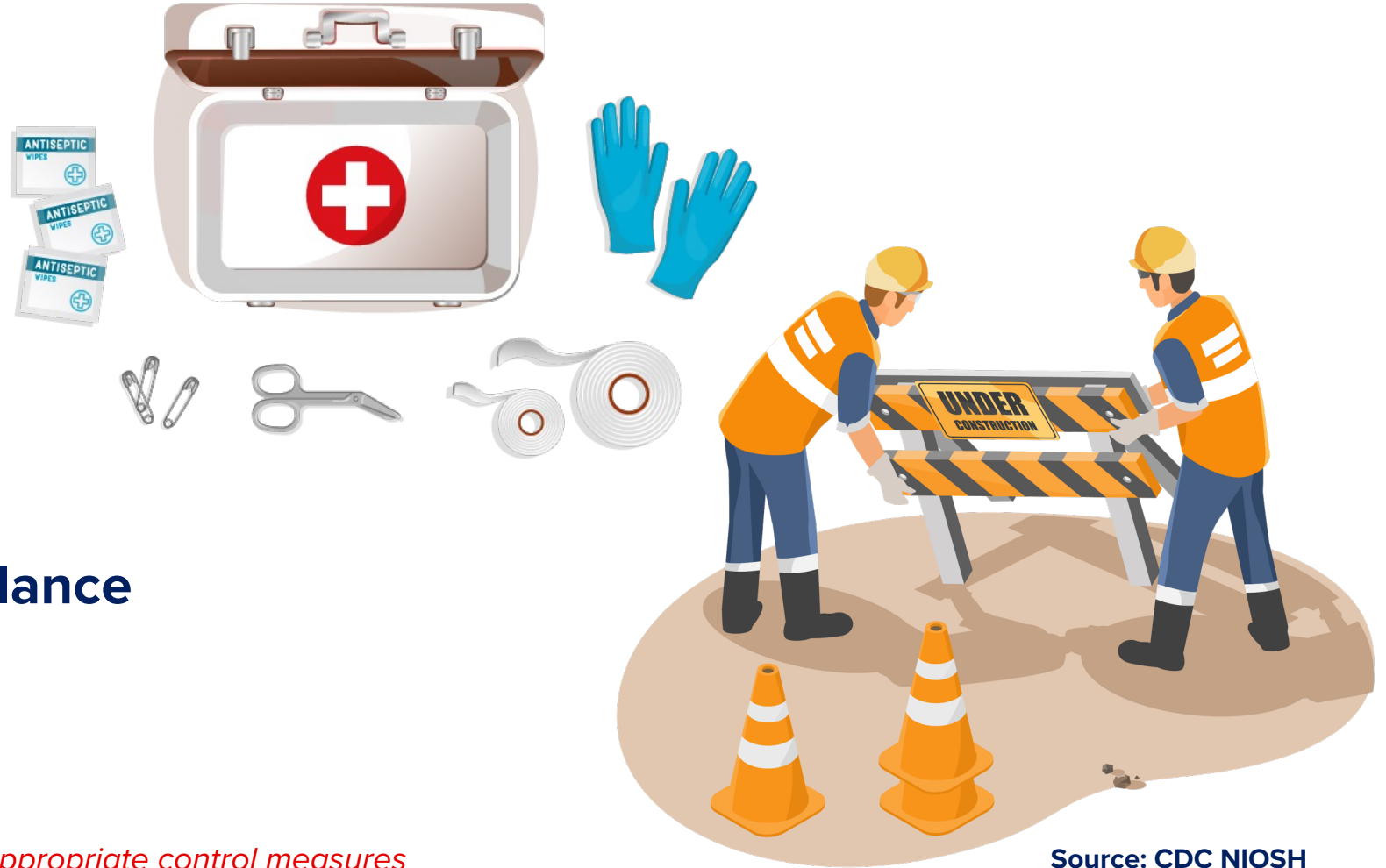
- Such as trolleys and conveyor belts



Note: Risk Assessment is important to identify appropriate control measures

ADMINISTRATIVE CONTROLS

1. Acclimatisation
2. First-aid Arrangements
3. Training & Awareness
4. Reporting Culture & Vigilance
5. Buddy System



Note: Risk Assessment is important to identify appropriate control measures

Source: CDC NIOSH

ADMINISTRATIVE CONTROLS (CONT)

6. Work Scheduling and Rotation

7. Access to Hydration Area

8. Health Surveillance

9. Toolbox Talks

10. Warning Signs



**DANGEROUS
HEAT STRESS AREA**

**HEAT STRESS-PROTECTIVE
CLOTHING OR EQUIPMENT REQUIRED
HEAT STROKE OR OTHER**

Note: Risk Assessment is important to identify appropriate control measures

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Wear **light-coloured, loose-fitting and breathable clothing**
- Use **light-coloured hard hats** or **wide-brimmed hats**
- Provide **reflective and lightweight PPE**
- If full body protection is needed, use **ventilated suits** or those with **built-in airflow systems**
- Ensure does **not pose an entanglement risks** when working near machinery



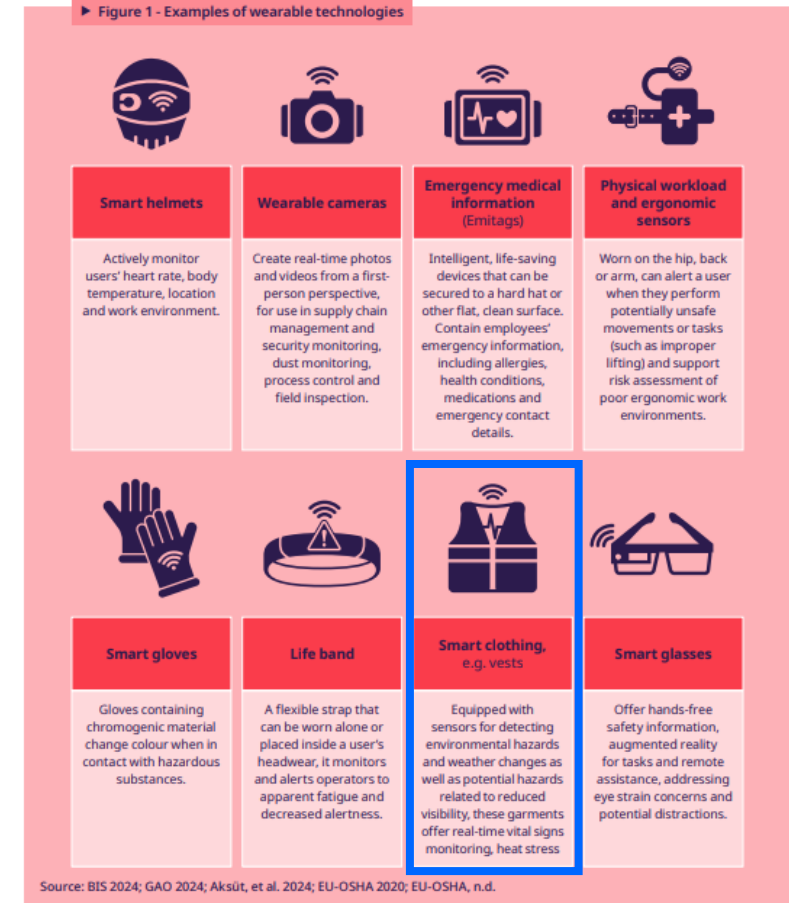
Note: Risk Assessment is important to identify appropriate control measures

ROBOTICS & SMART OSH TOOLS AS CONTROL MEASURES



Robotics in high-temperature environment

Source: International Labour Organization Report (2025)



Smart wearable devices



اوتوريٽي ڪي بيغسان ڪسلامتن
ڪصبيٽن دان عالم سڪيٽر
Safety, Health and Environment
National Authority

HEAT ACCLIMATISATION PROGRAMME

Acclimatisation is the **body's physiological adaptation to heat exposure**.
This typically taking **7 to 14 days of gradually increased exposure** to hot conditions.

Required for:-

1) New Workers

- First-time workers, especially from cooler or drier climates.

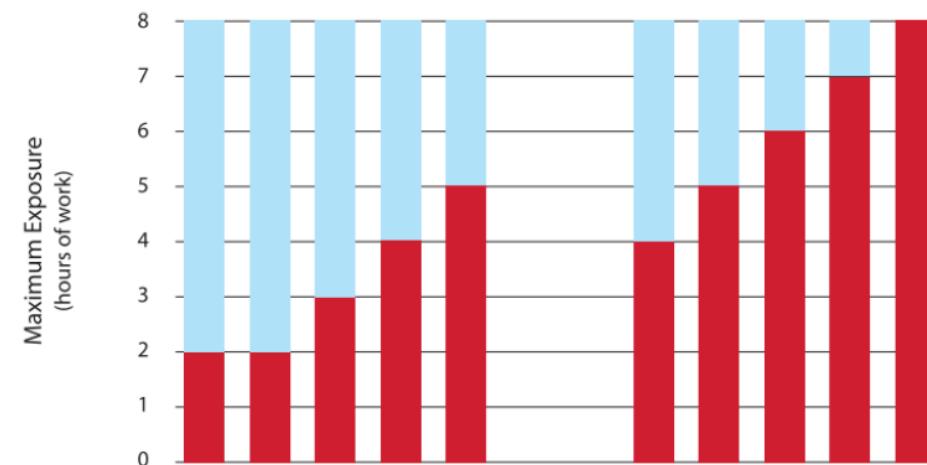
2) Returning Workers

- After a long break (e.g. 3+ days) or after indoor work may lose heat acclimatisation.

3) Post-Illness/Injury Workers

- Recovering from illness or injury, may require medical clearance before returning to hot environments.

Note: Risk Assessment is important to identify appropriate control measures



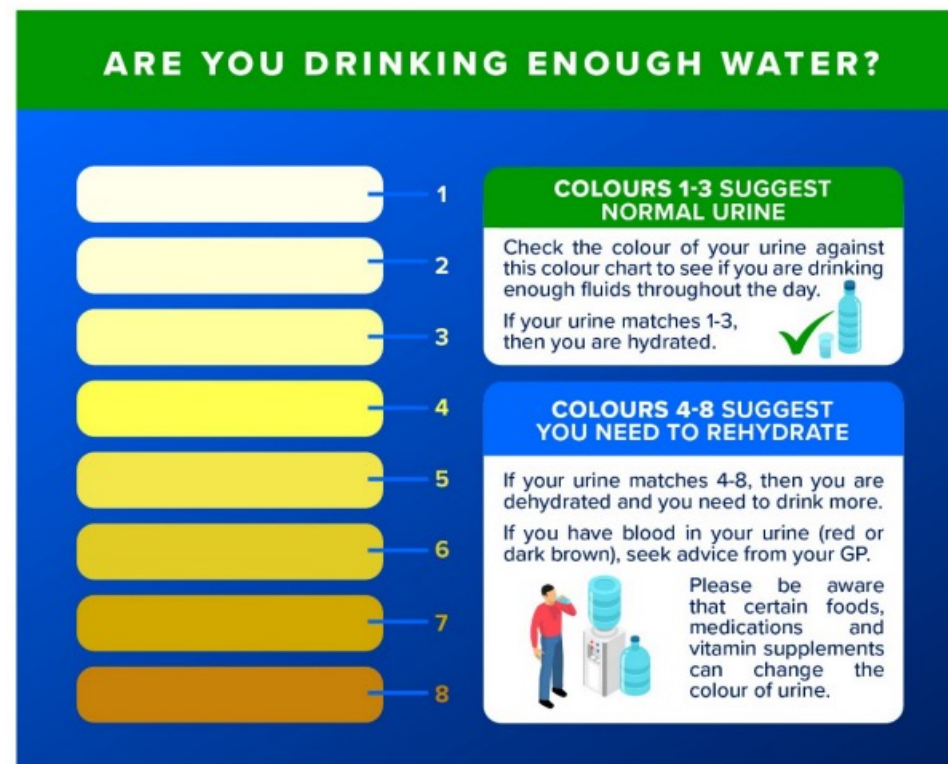
	Day 1	Day 2	Day 3	Day 4	Day 5	Sat	Sun	Day 6	Day 7	Day 8	Day 9	Day 10
Admin or light duties	6	6	5	4	3			4	3	2	1	0
Hot environment	2	2	3	4	5			4	5	6	7	8

Figure: Example of Heat Acclimatisation adapted from WSH Council's WSH Guidelines (2020): Managing Heat Stress

ADEQUATE WATER INTAKE

Urine Colour Chart: This urine colour chart is a simple tool to assess if you are drinking enough water throughout the day.

- Provide **shaded drinking water stations** (e.g. coolers, vending machines) near work areas.
- Ensure workers **hydrate every hour** under supervision.



Note: Risk Assessment is important to identify appropriate control measures



HEAT STRESS INDICES

Importance of Measuring Heat Stress Indices:

- 1. Accurate Risk Assessment** - WBGT and Humidex combine key factors to reliably gauge heat's impact on the body.
- 2. Preventive Action** - Helps employers adjust work practices and provide cooling to protect workers.
- 3. Health Protection** - Early detection prevents heat-related illnesses and long-term harm.
- 4. Productivity** - Maintains comfort and lowers fatigue-related mistakes.

MONITORING WBGT

- The Wet Bulb Globe Temperature (WBGT) is a **reliable heat stress device** for measuring workplace heat stress by assessing ambient temperature, humidity, wind and solar radiation.
- Monitor heat stress by logging **WBGT readings hourly or as per risk management plans**, especially in high-risk areas.
- WBGT meters should be **calibrated at least annually or as per manufacturer instructions**.
- Use WBGT limits to **set work-rest cycles** for acclimatised workers.



Figure 2A: An example of a standard WBGT device with black globe, wet bulb, and dry bulb thermometer attachments.

Figure 2B: An example of a handheld WBGT device using sensors.



WBGT LIMITS & WORK & REST CYCLES

Allocation of Rest in a Work and Rest Cycle	WBGT limit for acclimatised worker (°C)			
	Light	Moderate	Heavy	Very Heavy
Minimal rest or 15min/hour	31.0	28.0	-	-
15-30min/hour	31.0	29.0	27.5	-
30 to 45min/hour	32.0	30.0	29.0	28.0
45min/hour to no work	32.5	31.5	30.5	30.0

Table 2: Work and rest cycle suitable for acclimatised workers according to WBGT readings.

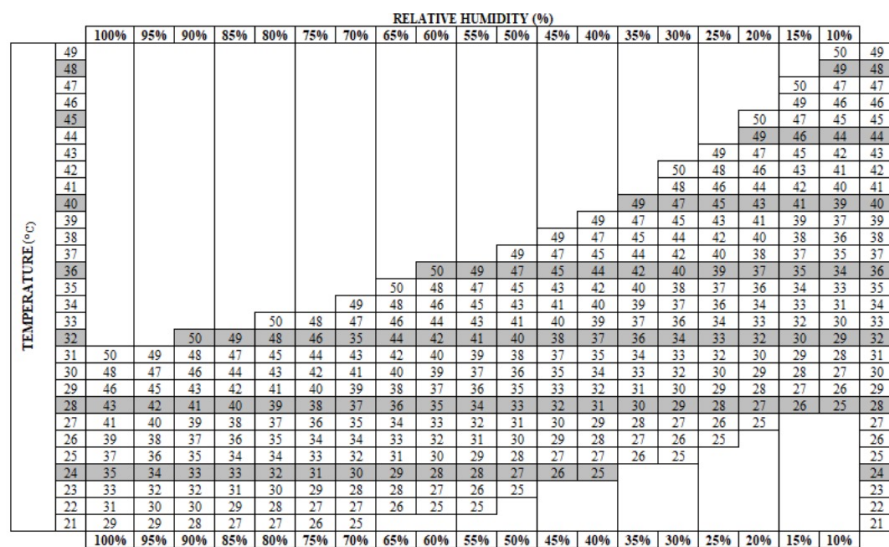
Allocation of Rest in a Work and Rest Cycle	WBGT limit for unacclimatised person (°C)			
	Light	Moderate	Heavy	Very Heavy
Minimal rest or 15min/hour	28.0	25.0	-	-
15-30min/hour	28.5	26.0	24.0	-
30 to 45min/hour	29.5	27.0	25.5	24.5
45min/hour to no work	30.0	29.0	28.0	27.0

Table 3: Work and rest cycle suitable for unacclimatised workers according to WBGT readings.

Physical Work Intensity			
Light	Moderate	Heavy	Very Heavy
<ul style="list-style-type: none"> Office tasks, slow walking, driving, equipment operation, seated work with arm movement and travel. 	<ul style="list-style-type: none"> Manual tasks with moderate effort, walking, harvesting, carrying 10–20 kg and light construction work. 	<ul style="list-style-type: none"> Strenuous arm/trunk work, heavy lifting/pushing, fast walking, climbing, carrying >20 kg and intense construction tasks. 	<ul style="list-style-type: none"> Intense arm work, running, climbing with heavy gear and fast-paced construction tasks.

MONITORING HUMIDEX

1. Measure Ambient Air Temperature
2. Measure Relative Humidity
3. Calculate Dew Point
4. Compute Humidex Value
5. Interpret the Humidex Reading
6. Take Preventive Actions



HUMIDEX 1	RESPONSE	HUMIDEX 2
1) Moderate physical work for unacclimatized worker		1) Light physical work for unacclimatized worker
2) Heavy physical work for acclimatized worker		2) Moderate physical work for acclimatized worker
25-29	Worker should be provided water	32-35
30-33	Heat Stress Alert notice. Start recording hourly T and RH.	36-39
34-37	Heat Stress Alert warning. Workers need to drink more water.	40-42
38-39	Work with 15 min/hr relief	43-44
40-41	Work with 30 min/hr relief	45-46
42-44	Work with 45 min/hr relief	47-49
45 or over	Only medically supervised work should be allowed	50 or over

Figure 1: Humidex Chart and recommended action plan to mitigate heat stress in a workplace adapted from Occupational Health Clinics for Ontario Workers, Canada, OHCOW, 2017.

Note: T and RH stand for temperature and relative humidity consecutively.

FIRST-AID ARRANGEMENTS

- If a worker shows signs of heat stress, **appointed first aiders must provide immediate treatment.**
- Suggested procedures include:
 - a) Assess consciousness using the **AVPU Scale**; and
 - b) Treat on-site using the **7R approach.**
- Appoint first aiders if **>25 persons are employed**; or if the workplace **has machinery, equipment or hazardous substance** specified in Schedule 5 of WSHA, Chapter 277.
- Set up **reporting and emergency procedures.**
- Conduct **heat stress drills.**

<u>A</u> lert	The worker is fully awake with spontaneous eye opening.
<u>V</u> erbal	Eyes do not open spontaneously but the worker responds appropriately when spoken to.
<u>P</u> ain	The worker does not respond to verbal stimuli but moves or groans in response to painful stimuli.
<u>U</u> nresponsive	The worker does not respond to stimuli.

Table 6: The AVPU scale shows the state of a casualty depending on their response.

PROCEDURE	EXPLANATION
<u>R</u> ecognise symptoms	Recognise the symptoms of heat stress and report them immediately.
<u>R</u> est casualty	Rest the affected worker in a cool area with good ventilation, away from any source of heat and direct sunlight.
<u>R</u> emove clothing	Remove or loosen excess clothing (while preserving the modesty of the worker).
<u>R</u> educe body temperature	Reduce the body temperature immediately by applying or massaging with ice packs or wet towels or cool water. Fanning may also help. If available, cooling blankets can be used, and workers can be subjected to cold water immersion.
<u>R</u> ehydrate	Rehydrate by providing fluids. Do not provide fluid by mouth for unconscious casualties as this may cause choking.
<u>R</u> esuscitate	Perform cardiopulmonary resuscitation (CPR) if a worker becomes unconscious and if the first aider is trained to do so. Immediately call for help.
<u>R</u> ush to hospital	Call for emergency services or ambulance if a worker is unconscious.

Table 7: 7R approach stating the steps for heat injury first aid.



SELF-ASSESSMENT CHECKLIST

SELF-ASSESSMENT CHECKLIST: HEAT STRESS AT WORKPLACE

PREVENTIVE MEASURES	YES	NO/NA	REMARKS
RISK ASSESSMENT			
Does your Risk Assessment cover work in a hot environment?			
Has an evaluation of the potential for heat injury been carried out based on a suitable heat stress index?			
Have all the heat sources e.g. hot machines, equipment, pipes, in the work area been identified?			
FITNESS TO WORK			
Have all workers passed their pre-employment medical screening and examination?			
Are supervisors/ line managers proactively checking for workers who are feeling unwell prior to starting work?			
Have workers, who have been ill, been certified by a doctor to be fit to return to work?			
HEAT ACCLIMATISATION			
Are new workers acclimatised to work in a hot environment?			
Are workers returning from prolonged leave, prolonged illness or returning from a colder climate, reacquainted to work in a hot environment?			
WORKER CLOTHING			
Are workers wearing loose-fitting and light-coloured clothing?			
WORK SCHEDULING			
Is heavy physical work or work under direct sun scheduled for the cooler parts of the day?			
Is there a work rotation for workers exposed to hot working conditions?			

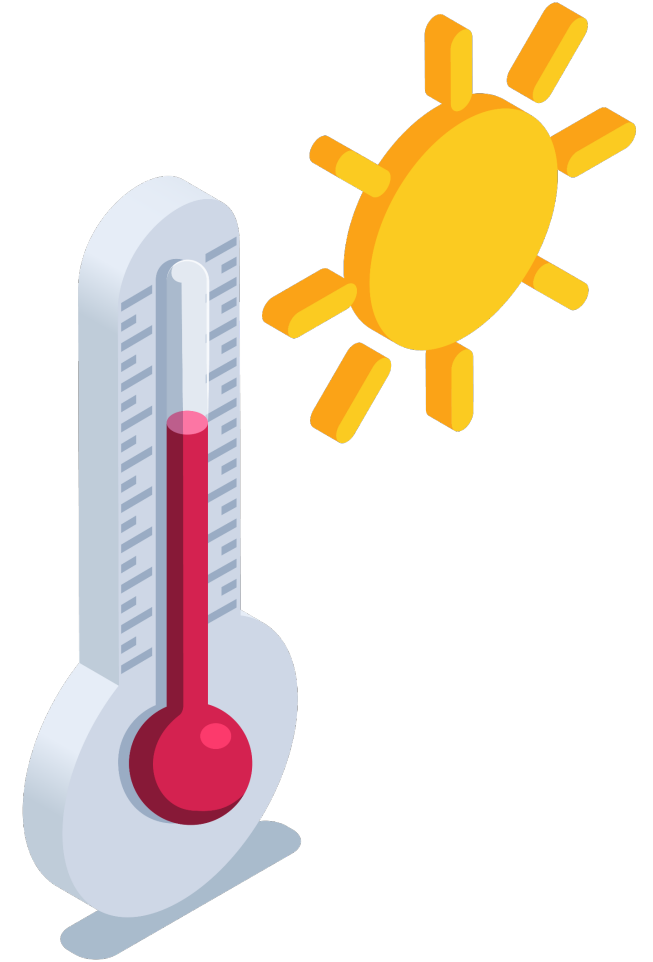
Are workers allowed to take additional rest breaks in very hot weather or after carrying out heavy physical work?			
PREVENTIVE MEASURES			
ADEQUATE WATER INTAKE			
Do workers have ready access to cool drinking water?			
Have the workers been advised to stay hydrated throughout the day?			
REST AREA			
Is there a cool or shaded area where workers can rest?			
USE OF MECHANICAL AIDS			
Are mechanical aids e.g. lifting equipment and power tools used to reduce the worker's physical workload?			
WORKPLACE VENTILATION			
Is there adequate ventilation (natural or mechanical) in the work area?			
INSULATION/SHIELDING OF HEAT SOURCES			
Are hot machines, equipment and pipes insulated and/or shielded to minimise heat transfer to the work environment?			
WORKER AWARENESS			
Have the workers been advised to report to their supervisor and/ or see a medical doctor if they are feeling unwell?			
Are the workers aware of the heat injury preventive measures they can take before starting work?			
Are WSH officers, supervisors, workers and appointed first-aiders able to identify the signs and symptoms of heat injury?			
Are emergency procedures established, emergency supplies available, and workers trained to render immediate on-site assistance?			

Appendix D: This heat stress self-assessment checklist is an example of a prevention checklist obtained from the Ministry of Manpower (MoM) of Singapore.

- Assist a WSH Officer/ Coordinator in **identifying heat-related hazards, assessing associated risks and recommending preventive measures.**

KEY TAKEAWAY MESSAGE

- Heat stress is an **emerging** occupational health hazard.
- Control measures can include **a combination of** engineering, administrative controls, PPE and heat stress monitoring (using WBGT or Humidex where feasible).
- Employers must act in line with **legal duties and best practices**.
- A proactive approach to heat stress management not only protects health but also **ensures productivity and legal compliance**.





اوتوريٽي ڪيٿڊن ڪسلا مٽن
ڪصيٽن دان عالم سڪيٽر
Safety, Health and Environment
National Authority

Join the Q&A
at Slido.com
#WDSHW25





اوتوريٽي ڪيٽسائن ڪسلامتن
ڪصيحتن. دان عالم سڪيتر

Safety, Health and Environment
National Authority



THANK
YOU