



International  
Labour  
Organization

**SAFETY  
HEALTH  
FOR ALL**



ILO/Japan  
Multi-bilateral  
Programme



**T-OSH**  
Thailand Institute Of Occupational  
Safety And Health (Public Organization)



# Be cautious of excessive heat

Excessive heat - combined interaction of increased air temperature, humidity, limited air flow and radiant heat sources can impact workers on the job, by leading to

**illnesses, injuries, and even death**

## Health impacts of heat stress

### Mild

Heat fatigue

Heat syncope  
(fainting)

Heat rash



### Serious

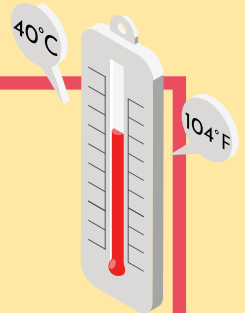
Heat exhaustion

Kidney disorders

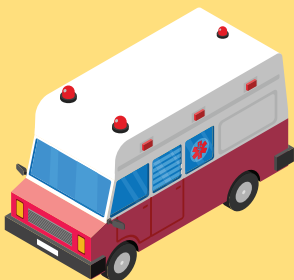
Heatstroke

Cardiovascular  
disease

Respiratory  
conditions



### Others



**Accidents  
and injuries**



**Mental health  
effects**

### Did you know?

In Thailand, a workplace with heat sources or at risk of harmful heat exposure has an obligation to measure and analyse working environment and submit the report annually.

# Factors increasing the risk of serious/severe illnesses during work in excessive heat conditions

## Individual factor



- Pregnancy
- Disability
- Lack of heat acclimatization
- Low physical fitness
- Hypohydration
- Advanced age
- High body mass index
- Limited work experience
- Underlying diseases (for example, Cardiovascular diseases, Diabetes mellitus)
- Certain drugs, substances and alcohol use

## Environmental factor



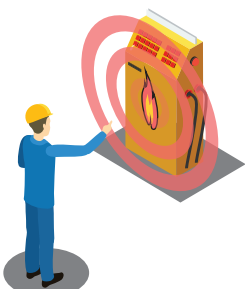
- Heavy/impermeable clothing
- Physical work/exercise
- Heatwave
- High temperature
- High relative humidity
- Little air movement
- Sources of radiant heat (sun and/or machinery)

## Workplace prevention measures against heat

### 1 Workplace-level risk assessment

#### Step 1

Identify the hazards



#### Step 2

Identify who might be harmed and how



#### Step 3

Evaluate the risk



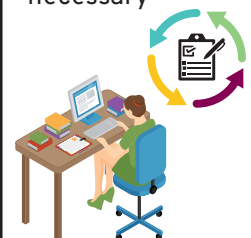
#### Step 4

Record who is responsible for implementing which control measure, and the timeframe

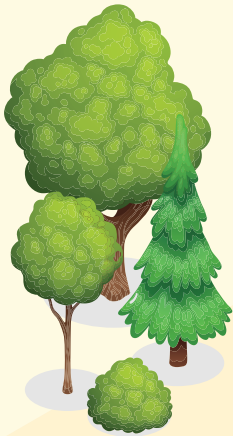


#### Step 5

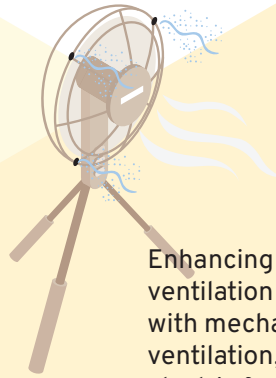
Record the findings, monitor and review the risk assessment and update when necessary



## ② Heat stress prevention and control practices



Adopting nature-based solutions for cooling and shading, for example, planting trees and vegetation



Enhancing natural ventilation combining with mechanical ventilation, such as electric fan, and water spray



Control risk factors, for instance, by frequent change of working posture



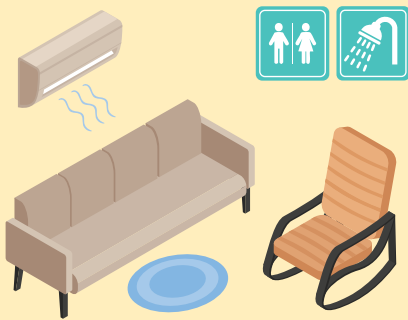
Improving workers' physical fitness based on a health examination



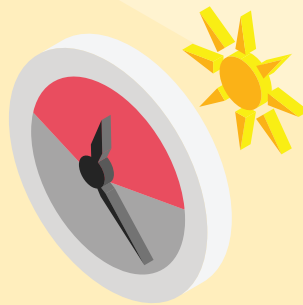
Wearing long, loose-fitting, light weight and breathable clothing, hats, and neck-covers, applying sunscreen with an SPF15 and over



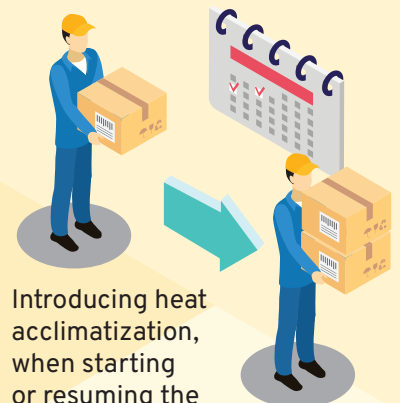
Ensuring adequate hydration, ensuring adequate supply of cold water and electrolyte beverage, even not feeling thirsty (In extremely hot weather, every 15-20 minutes)



Ensuring the availability of sanitary facilities and resting areas



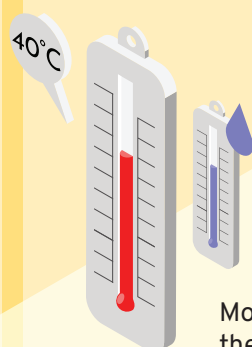
Introducing work-rest cycles, job rotation and schedules, for example, pause of work during 11:00 -15:00 hrs



Introducing heat acclimatization, when starting or resuming the work



Providing regular training, particularly before the onset of warmer seasons or assuming high-risk work



Monitoring the heat index regularly



Implementing job/task monitoring programmes, by tracking heart rate, core body temperature and hydration levels by observing the urine colour



Postings infographics and posters, and placing signs in high-risk and rest areas

# Response to heat-related illnesses

## Sign

## Actions

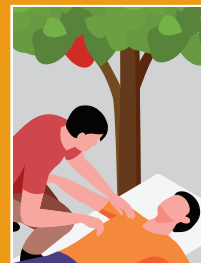
### Mild heat exhaustion



- Tired/fatigued
- Thirsty
- Dizziness
- Muscle cramps



Inform supervisor



Move worker to cool area for recovery

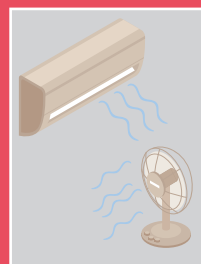


Encourage worker to drink water and consume electrolytes

### Severe heat exhaustion



- Slow reaction time
- Severe fatigue
- Severe muscle cramps
- Loss of appetite, nausea
- Headache, blurred vision



Move worker to cool/air-conditioned area



Cover head, neck, and shoulders with towels soaked in ice water

### Heat stroke (emergency)



- Vomiting
- Irritable behaviour, confusion/disorientation
- Garbled speech
- Shivering, convulsions
- Collapse/fainting, loss of consciousness



Aggressive cooling (cover the worker's body in ice or place in cold/ice water bath)

Flush water over person, or keep the skin wet and fan

1669



Call emergency services (1669)



**Factsheet :**  
“Promoting a safe and healthy working environment in Thailand and Cambodia”  
Project in Thailand

\*This tool was developed with the technical support of

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- World Health Organization Country Office for Thailand
- Other relevant agencies