مركز أبوظبي للسلامة والصحة المهنية
ABU DHABI OCCUPATIONAL SAFETY AND HEALTH CENTER

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Abu Dhabi Occupational Safety and Health System Framework

(OSHAD-SF)

OSHAD-SF Technical Guideline

Safety in the Heat

Version 3.0

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ABU DHABI PUBLIC HEALTH CENTRE | مركز أبوظبي للصحة العامة

Important Note:

(Document Republished for Continued Implementation under Abu Dhabi Public Health Center)

(إعادة نشر الوثيقة لاستمرار التطبيق بإشراف مركز أبوظبي للصحة العامة)

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1. Introduction

(a) The following guidance document provides information to employers in the Emirate of Abu Dhabi that have employees working in high temperature environments. High temperature environments includes both weather (working outdoors or open to the outdoors in hot conditions) and hot site operations (furnaces, ovens, other high temperature operations). This document is designed to incorporate requirements set at Emirate and Federal level. If guidance provided in this document conflict with requirements set by a relevant authority, employers must follow the regulatory requirement.

2. Assessing Environmental Heat Stress - Thermal Work Limit

(a) As per the requirements of Clause *3.2(b)(ii) of OSHAD-SF - CoP 11.0 – Safety in the Heat*, employers shall develop a process for assessing conditions to determine what control requirements are required for the level of risk in the particular work environment and to calculate correct work/rest breaks and fluid (rehydration) consumption rates.

2.1 Assessment of Environmental Heat Stress and the Thermal Work Limit (TWL) Heat Stress Index

(a) The Thermal Work Limit (TWL), which has been validated for Gulf conditions, is the heat stress index that has been researched and adopted by within the Emirate of Abu Dhabi to enable safe management of work in heat. It gives a measure of the maximum safe work rate for the conditions. If TWL is too low then even low rates of work cannot safely be carried out continuously.

(b) TWL, measured in watts per square meter (W/m^2), is the maximum rate at which heat can be lost to the environment in the conditions. TWL is calculated from environmental parameters assuming that employees are well hydrated and acclimatized to the conditions and are self-paced.

2.2 Determination of TWL

(a) To determine TWL the following must be measured:

Dry Bulb Temperature (ambient air temperature)	in degrees °C
Wet Bulb Temperature (determined by the humidity/evaporation)	in degrees °C
Globe Temperature (determined by the radiant heat)	in degrees °C
Wind speed	in meters per second

(b) Instruments are available that carry out all of these measurements and internally compute the TWL.

(c) Alternative single instruments measuring Dry Bulb (air temperature), Globe Temperature (radiant heat), Wet Bulb (evaporative cooling) and Air Velocity (wind speed) can be used and individual readings entered into the online Thermal Work Limit calculator available at: to calculate the overall TWL heat stress index result and working zone.

Thermal Work Limit - Working Zones

Control Interventions, Rest-Work and Rehydration Schedules

Working Zones	Interventions	Rehydration Schedule (per hr)	Work-rest Schedule (minutes)
Low Risk Unrestricted Zone TWL: 140 - 220 <	**No limits on self-paced work**[a] for educated, hydrated workers.	Light Work 600 ml - 1 Litre / hr	Safe for **all** continuous **self-paced work**[a]
Medium Risk Cautionary Zone TWL: 115 – 140	**Cautionary zone indicates situations in which environmental conditions require additional precautions.** • Practicable Engineering control measures to reduce heat stress should be implemented e.g. provide shade, improve ventilation etc. • Working alone to be avoided • No unacclimatised person to work[b] • Ensure adequate fluid intakes appropriate for type of work	Light Work 1 -1.2 Litres / hr	Safe for continuous **self-paced light work**[a]
		Heavy Work > 1.2 Litres / hr *	**Continuous paced work** 45 work - 15 rest
High Risk Zone TWL: < 115	• **Strict Work/Rest cycling required** • No person to work alone • No unacclimatised person to work[b] • High Risk induction required emphasising hydration and identifying signs of heat strain • Provide personal water bottle (2 litre capacity) on-site at all times	All Work >1.2 Litres / hr *	Light work[c] 45 work – 15 rest
			Heavy work[d] 20 work - 40 rest

Notes:

- Self-paced work[a] - workers must be allowed to adjust their work rate according to environmental conditions. Paced work is when the work rate is not under the worker's control
- Unacclimatised[b] workers are defined as new workers or those who have been off work for more than 14 days due to illness or on vacation leave (in a cool climate area)
- Light work[c] – sitting or standing, light arm work
- Heavy work[d] – carrying, climbing, lifting, pushing, whole-body work
- * At high workloads and or thermal stress, sweat rates exceed 1.2 Litres / hr. Increasing fluid intake much above this level is not practical due to gastric discomfort as the upper limit for gastric emptying and fluid absorption is ~ 1.5 Litres / hr so control solutions to improve thermal conditions should be implemented in addition to providing adequate hydration to replace sweat lost.

Table 1 – Thermal Work Limit Zones and Interventions for Management of Work

3. Guidelines for Acclimatization and Re-Acclimatization as a Percent of Effort

(a) As per the requirements of Section 3.2(b)(i) of *OSHAD-SF - CoP 11.0 – Safety in the Heat*, employers will develop a process for acclimatizing employees to high temperature work environments. This section provides guidance on how to acclimatize employees.

Acclimatization Guidelines		
Activity (percent of full work assignment)		
Day	Experienced Employee	New Employee
1	**50%**	**20%**
2	**60%**	**40%**
3	**80%**	**60%**
4	**100%**	**80%**
5	**100%**	**100%**

Re-Acclimatization Guidelines					
Days Away from Heat-Related Job Routine		Exposure Sequence (percent of full work assignment)			
Absence	Illness	1st	2nd	3rd	4th
< 4	**—**	**100%**			
4 - 5	**1 - 3**	**R/E***	**100%**		
6 - 12	**4 - 5**	**80%**	**100%**		
12 - 20	**6 - 8**	**60%**	**80%**	**100%**	
> 20	**> 8**	**50%**	**60%**	**80%**	**100%**

R/E – Reduced expectations

Table used courtesy of the National Safety Council, Itasca, IL

4. Heat Injuries and Illnesses Symptoms and Treatment

(a) As per the training and competency requirements of Section 2.0 of *OSHAD-SF - CoP 11.0 – Safety in the Heat*, employers shall ensure employees, supervisors, and first aiders know the signs and symptoms of heat related injuries and illnesses. This section provides guidance on the signs, symptoms and treatment of heat related injuries and illnesses.

(b) Heat injuries and illnesses results when the body cannot effectively get rid of heat as fast as it is generated. If not recognized and treated early this can lead to serious illness even death.

4.1 Heat Rash

(a) Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. The symptoms include:

(i) Heat rash looks like a red cluster of pimples or small blisters; and

(ii) It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

(b) First Aid for employees experiencing heat rash should include:

(i) Should try to work in a cooler, less humid environment when possible;

(ii) Should keep the affected area dry; and

(iii) May use dusting powder to increase comfort.

4.2 Heat Cramps

(a) Heat cramps usually affect employees who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture levels. Low salt levels in muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion.

(b) The symptoms for heat cramps includes:

(i) Muscle pain or spasms usually in the abdomen, arms, or legs.

(c) First Aid for employees with heat cramps should include:

(i) Stop all activity, and sit in a cool place;

(ii) Drink clear juice or a sports beverage;

(iii) Do not return to strenuous work for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke; and

(iv) Seek medical attention if any of the following apply:

1. The employee has heart problems;
2. The employee is on a low-sodium diet; and
3. The cramps do not subside within one hour.

4.3 Heat Syncope

(a) Heat syncope is a fainting (syncope) episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.

(b) The symptoms for heat syncope include:

(i) Light-headedness;

(ii) Dizziness; and

(iii) Fainting.

(c) First Aid for employees with heat syncope should include:

(i) Sit or lie down in a cool place when they begin to feel symptoms; and

(ii) Slowly drink water, clear juice, or a sports beverage.

4.4 Heat Exhaustion

(a) Heat exhaustion is the body's response to an excessive loss of the water and salt, usually through excessive sweating. Employees most prone to heat exhaustion are those that are elderly, have high blood pressure, and those working in a hot environment.

(b) Symptoms of heat exhaustion include:

(i) Heavy sweating;

(ii) Extreme weakness or fatigue;

(iii) Dizziness, confusion;

(iv) Nausea;

(v) Clammy, moist skin;

(vi) Pale or flushed complexion;

(vii) Muscle cramps;

(viii) Slightly elevated body temperature; and

(ix) Fast and shallow breathing.

(c) First Aid, treat an employee suffering from heat exhaustion with the following:

(i) Have them rest in a cool, shaded or air-conditioned area;

(ii) Have them drink plenty of water or other cool, nonalcoholic beverages; and

(iii) Have them take a cool shower, bath, or sponge bath.

4.5 Heat Stroke

(a) Heat stroke is the most serious heat-related disorder. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.

(b) Symptoms of heat stroke include:

(i) Hot, dry skin or profuse sweating;

(ii) Hallucinations;

(iii) Chills;

(iv) Throbbing headache;

(v) High body temperature;

(vi) Confusion/dizziness; and

(vii) Slurred speech.

(c) First Aid, take the following steps to treat an employee with heat stroke:

(i) Call emergency contact number and notify supervisor;

(ii) Move the sick employee to a cool shaded area;

(iii) Cool the employee using methods such as:

1. Soaking their clothes with water;
2. Spraying, sponging, or showering them with water; and
3. Fanning their body.

5. Prevention of Heat Illness

5.1 Acclimatization

(a) People accustomed to working in the heat have adapted to cope better with the conditions. It takes over two weeks to become fully acclimatized; however adaptation is rapid in the first few days.

5.2 Hydration

(a) Keeping well hydrated is one of the most effective ways to reduce the risk of heat illness, it is essential you drink before starting work and at frequent intervals during the day, as a guideline you should be drinking 4-6 liters of water per day while in the Gulf region (2 liters every 2-3 hours).

5.3 Reduce your risk

(a) Limit your heat exposure for new arrivals from overseas or the first days if you are returning after being out of a “heat zone”, refer to Section 3; and

(b) Drink regularly, even if you don’t feel thirsty. Water is the best; avoid caffeine containing drinks like coffee, cola and especially energy drinks.

5.4 Recommendations for Employers

(a) Employers should take the following steps to protect employees from heat stress:

(i) Schedule maintenance and repair jobs in hot areas for cooler months;

(ii) Schedule hot jobs for the cooler part of the day;

(iii) Acclimatize employees by exposing them for progressively longer periods to hot work environments;

(iv) Reduce the physical demands of employees;

(v) Use relief employees or assign extra employees for physically demanding jobs;

(vi) Provide cool water or liquids to employees:

1. Avoid drinks with caffeine, alcohol, or large amounts of sugar.

(vii) Provide rest periods with water breaks;

(viii) Provide cool areas for use during break periods;

(ix) Monitor employees who are at risk of heat stress;

(x) Provide heat stress training that includes information about:

1. Employee risk;
2. Prevention;
3. Symptoms;
4. The importance of monitoring oneself and co-workers for symptoms;
5. Treatment; and

6. Personal protective equipment.

5.5 Recommendations for Employees/Employees

(a) Employees should avoid exposure to extreme heat, sun exposure, and high humidity when possible. When these exposures cannot be avoided, employees should take the following steps to prevent heat stress:

(i) Wear light-colored, loose-fitting, breathable clothing such as cotton:

1. Avoid non-breathing synthetic clothing.

(ii) Gradually build up to heavy work;

(iii) Schedule heavy work during the coolest parts of day;

(iv) Take more breaks in extreme heat and humidity:

1. Take breaks in the shade or a cool area when possible.

(v) Drink water frequently. Drink enough water that you never become thirsty;

(vi) Avoid drinks with caffeine, alcohol, and large amounts of sugar;

(vii) Be aware that protective clothing or personal protective equipment may increase the risk of heat stress; and

(viii) Monitor your physical condition and that of your co-workers.

5.6 Choice of Fluid Replacement Drinks and Electrolytes

(a) The fluid intake required to maintain hydration is determined by the sweat rate which in turn is determined by the work rate and the conditions. Sweat rates vary considerably and increase with acclimatization. The following recommendations are for the average acclimatized employee. Replacement of the fluid lost in sweat requires intake of adequate quantities of water and salt. Drinking at mealtimes replaces both and is essential.

(b) Remember to encourage employees to:

(i) add a little extra salt to their meals during hot weather, salt tablets are not permitted;

(ii) drink water with meals;

(iii) limit consumption of soft drinks as the sugar content is high; and

(iv) limit consumption of caffeinated drinks (coffee, tea, cola) and ‘energy drinks’, as the caffeine may reduce fluid retention.

(c) If employees are sweating heavily between meals, an electrolyte replacement drink is recommended. Replacing salt as it is lost helps the body absorb and retain the water consumed:

(i) sports drinks are high in sugar and often quite acidic which can damage teeth. They are not designed for prolonged consumption at work;

(ii) for prolonged consumption, a fluid with 4% or less sugar is recommended;

(iii) appropriate products designed for industrial use are available commercially;

(iv) the suggested schedule is to drink the electrolyte replacement fluid at every second drink (i.e. one for one with water); and

(v) for diabetics or those on sugar restricted diets, medical advice is required on the preferred fluids for rehydration.

6. References

- *OSHAD-SF – Element 1 – Roles, Responsibilities and Self-Regulation*
- *OSHAD-SF– Element02 – Risk Management*
- *OSHAD-SF– Element 5 – Training, Awareness and Competency*
- *OSHAD-SF– Element 7 – Monitoring, Investigation and Reporting*
- *OSHAD-SF– Element 8 – Audit and Inspection*
- *OSHAD-SF– CoP 2.0 – Personal Protective Equipment*
- *OSHAD-SF– CoP 5.0 – Medical Surveillance*
- *OSHAD-SF– CoP 8.0 – General Workplace Amenities*
- *OSHAD-SF– CoP 9.0 – Workplace Wellness*
- *OSHAD-SF– CoP 30.0 – Lone Work and/or in Remote Locations*

7. Document Amendment Record

Version	Revision Date	Description of Amendment	Page/s Affected
2.0	Feb 2012	First Issue	All
2.01	April 2013	Change (in Clause 1(b)) website of the Safety in the Heat program	3
		Clarify requirements (in Clause 2.1.1(c)) for using the on-line Thermal Work Limit calculator, with reference to the new website	4
		Change Table 2.1 to introduce new simplified TWL charts and zones.	5
		Delete listed emergency number (in Clause 4.5, under First Aid)	10
		Make the use of salt tablets “not permitted” (in Clause 4.7).	11
		Replace urine colour chart (in Section 6)	13
		Replace dehydration and heat illness protocol (in Section 7)	15
		Edits (in Section 8) to harmonize safety limits with other information, and to delete a case for testing hydration levels that is not practical in all situations.	16
		Delete last two paragraphs and chart (in Section 11), being no longer required	22-23
		Add section 12 on references	23
3.0	1st July 2016	Change of Logo	All
		Change from AD EHS Center to OSHAD	throughout
		Change of document title: AD EHSMS RF to OSHAD-SF	Throughout
		EHS changes to OSH	Throughout

Appendix 1: Example of Educational Messages for Employees

As per the requirements of Section 2(b)(v) of OSHAD-SF - CoP 11.0 – Safety in the Heat, employers will provide informational and awareness campaigns to raise awareness and maintain awareness amongst the workforce. The following is an example of information that should be provided to employees:

"Working in extreme heat without proper controls can be fatal! Look out for yourself and your friends at work."

SUMMER IN THE UAE IS VERY EXTREME AND CAN LEAD TO DEATH FROM HEAT RELATED ILLNESS.

THE KEY POINTS TO REMEMBER ARE:

1. Drink at least 2 litres of water every 2-3 hours;
2. Add a little more salt to meals in summer to replace salt lost in sweat;
3. Slow down and rest in very hot weather conditions;
4. Get plenty of sleep and rest at night; and
5. When you feel unwell tell your supervisor or the work clinic if you have one.

Recommendations for employees:

1. Read, understand and follow the employer's occupational health and safety procedures and instructions regarding work in hot environments;
2. Report all signs of heat illness to the supervisor (feeling faint, dizziness, fatigue, headache, nausea, vomiting, and cramps);
3. Drink enough water during the day and maintain proper hydration:
    - Come to work fully hydrated (drink plenty of water before you get to work);
    - Drink plenty of water during the shift at least 2 liters every 2-3 hours in summer (or rehydration fluid approved by the employer);
    - Drink water regularly and make it a way of life; and
    - If you drink water only when you are thirsty it is too late-drink even when you are not thirsty in the heat.
4. Wear appropriate clothing (lightweight, light-colored, loose-fitting, cotton) and carry a water container with you of at least 1-2 liters to fill regularly;
5. Self-pace your work – do not push your body beyond its limits;
6. Report non-acclimatization to supervisor (if you have been away from work for more than 14 days) and try to acclimatize for 5-7 days before starting hard work in a hot environment; and
7. Look out for signs of heat illness in the people you work with and take them to a shady area and cool them down – call for help.

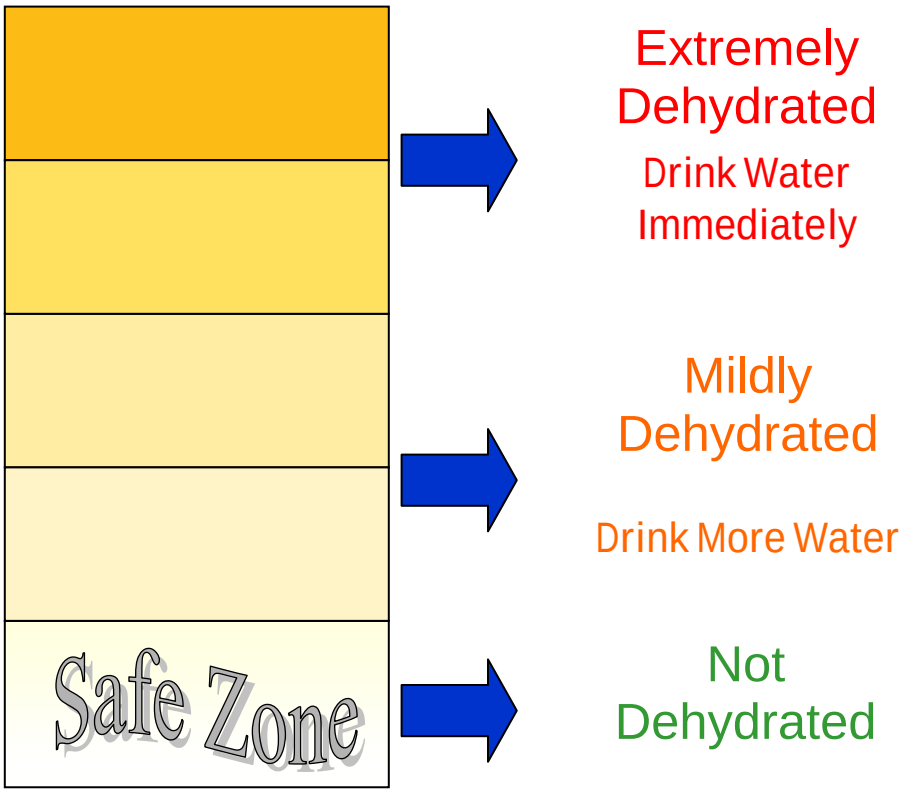
Appendix 2: Example Urine Charts to aid Employees to Self-Assess Hydration Levels

As per the requirements of Section 3.2(h) of *OSHAD-SF- CoP 11.0 – Safety in the Heat*, employers will post urine charts, informational fliers on heat stress, or other similar methods to help employees identify if they are becoming dehydrated. The following diagrams are examples of urine charts that can be posted in toilet facilities to help employees determine if they are drinking enough fluids to prevent a heat related injury or illness.

Are You Drinking Enough Water? Test yourself

Urine Specific Gravity (USG) is a measure of the concentration of the urine.

Heat Stress Prevention



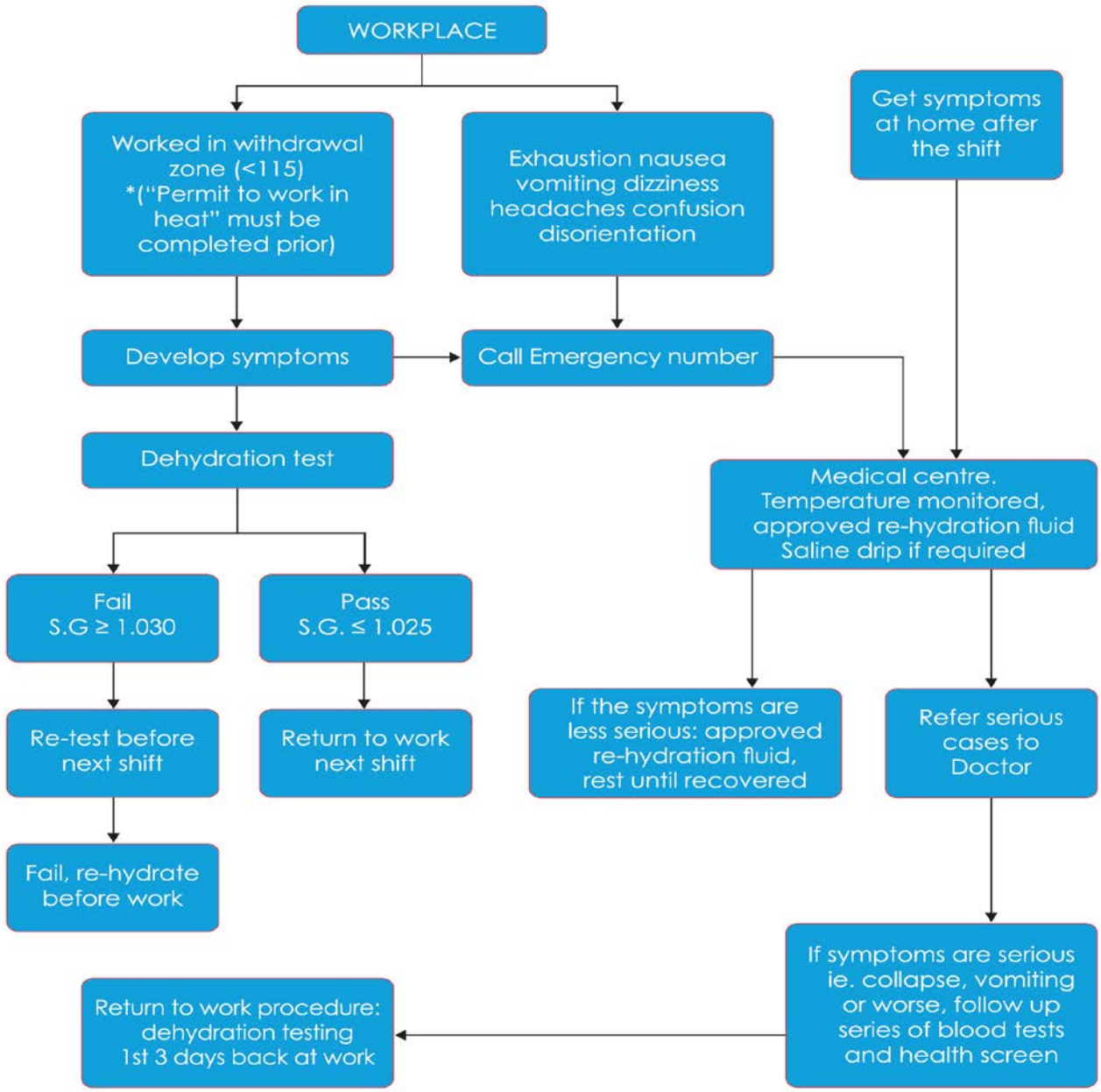
Are you dehydrated?

Keep Drinking Water.

Appendix 3: Example - Dehydration and Heat Illness Protocol

The on-site protocol and preparation for emergencies involving heat related illness and dehydration cases should be planned before heat exposure occurs and be part of the heat stress management process and understood by all personnel. Below is an example protocol that can be used onsite to plan what should be done to manage cases if they occur at the worksite. This can be modified for a particular worksite accordingly.

Dehydration and Heat Illness Protocol



Appendix 4: Hydration Testing (Conducted by Nurse or Medical Officer)

Hydration level is reflected in the specific gravity (SG) of the urine, a measure of its concentration. This can be used as a monitoring and educational tool to encourage employees to drink more fluids during the work shift and avoid heat related illness associated with dehydration. Testing must be carried out by suitably trained personnel (e.g. Nurse or Medical Officer).

1. Medical gloves must be worn when handling urine; and
2. A fresh midstream urine specimen is required.

Safety Limits

At the start of the shift	Not more than 1.015
Other times e.g. end of shift	Not more than 1.029

When to Test Hydration Levels

1. Anyone who reports sick or with an injury should be tested for hydration levels; and
2. Un-acclimatised employees returning or coming from a cooler climate.

Communication

1. Record the result and actions recommended on the Dehydration Test Report form (see Appendix 1); and
2. File the form and if required advise the supervisor of the result

Follow the actions prescribed in the table ‘Action levels according to urine specific gravity.

Failed Tests

If an employee fails a hydration test, DO NOT let them proceed to work station, ensure they drink water. Re-test after one hour and continue until correctly hydrated (SG<1.015).

In Case of Any Heat Illness Symptoms refer the person to the medical centre.

Action Levels According to Urine Specific Gravity (SG)

SG Level	Specific Gravity	Meaning	Action
Normal	1.000 to 1.015	Hydration adequate	• Fluid intake is adequate to maintain desired hydration status • Maintain fluid intake
Alert	1.016 to 1.020	Slightly dehydrated	• Extra fluids required • Rehydrate before starting the work
	1.021 to 1.029	Moderately dehydrated	• Extra fluids required • Rehydrate before starting the work and every 15 to 20 minutes during the shift
Action	1.030+	Significantly dehydrated	• Extra fluids required • Rehydrate before starting the work and every 15 to 20 minutes during the shift • Investigate cause of dehydration • Remove employee from hot workplace • Employee not to be allowed to perform this work until hydration levels improved • Recheck SG in 4 hours

Procedure (Digital Refractometer)

1. Check the instrument calibration daily, using distilled or de-ionised water.
2. Turn the instrument on.
3. Place a few drops of water on the glass plate (this should be covered evenly with no bubbles).
4. Press the zero button. The reading will be set at 1.000.
5. Place a few drops of urine on the glass plate using a disposable dropper pipette.
6. Press the start button.
7. Wipe the surface of the plate gently clean by using a tissue dampened with water.
8. Advise the person of any actions required (see action levels above).
9. Dispose of the urine into the toilet. Wash hands thoroughly.

Procedure (Optical Refractometer)

1. Check the instrument calibration daily, using distilled or de-ionized water (steps 3-5 below), this should give a specific gravity (SG) reading of 1.000. Re-calibrate if necessary according to manufacturer's instructions.
2. Place two drops of urine on the face of the prism of the refractometer using a disposable dropper pipette.
3. Close the daylight plate gently. The sample must spread over the prism surface – free of any bubbles.

4. Hold the instrument up to the eye and look into the light. Focus if necessary, using the eyepiece focusing ring. The SG is read on the left hand scale where the blue line intersects the scale.
5. Wipe the surface of the prism and daylight plate gently clean, by using a tissue dampened with water.
6. Advise the person of any actions required (see action levels above).
7. Dispose of the urine into the toilet. Wash hands thoroughly.
8. Use the color urine chart to educate employees to assess the color of their urine for hydration and place the charts in restrooms and ablution facilities as a reminder to drink enough.

Appendix 5: Example Dehydration Test Report

Name		**Employee Number:**	
Signature		**Date**	

Reason for Test	New Employee		Y	N
	Returning from Leave		Y	N
	Work in Withdrawal Zone	Before	Y	N
		After	Y	N
	Developed symptoms		Y	N
	Voluntary		Y	N

Dehydration Test Result	

Action Level	Normal	Alert	Action (moderate)	Action (severe)

Recommendations	Maintain Fluid Intake	
	Increase Fluid Intake	
	Rehydrate Before Work	
	Additional	

Re-check Required	N	Y	Time:

Result reported	N	Y	To:

Name of Testing Officer	
Signature	

Appendix 6: Example Working in Heat Inspection Checklist

A working in heat inspection checklist can be used to identify the requirements of a worksite heat stress management program and complete an audit of various elements to be considered and made available. Below is an example of a checklist that can be modified to suit the particular worksite and expected or measured environmental conditions onsite.

Inspection of Worksite	***Yes***	***No***
1. Does the worksite have rest areas and shade?		
2. Are there poster reminding employees (employees) to drink water?		
3. Is there a communication system for informing employees (employees) of the current environmental conditions? (e.g., flag system)		
4. Is there cool fresh water (or other fluids) available		
5. If cooler is used to supply water, is the lid sealed with tape and the date of filled written on the container?		
6. Are snacks/fruit available for employees (employees) during the workday to ensure they maintain a nutrient and caloric intake needed for working in the heat?		
7. Are there posters reminding employees (employees) of the signs and symptoms of heat injuries and illnesses?		
8. Are first aiders available on site?		
9. Are contact phone numbers available for medical emergencies?		
Training / Education	***Yes***	***No***
1. Do employees know the signs and symptoms of heat injuries/illnesses		
2. Is there a first aid trained provider onsite (response within 3 minutes)?		
3. Does the first aid provider have a training certificate that is current and issued by a valid training provider?		
4. Does the first aid provider know how to treat for heat injuries and illnesses?		
5. Does the first aid provider have a medical kit that is complete and stocked for the hazards of the worksite?		
6. Is there a way for the worksite to call for emergency medical services?		
7. Does the supervisor or first aid provider know how to call for emergency medical services and direct them to the site?		
8. Has the worksite had drills where the scenario is a heat related injury or illness?		
Site Procedures	***Yes***	***No***
1. Does the site have a process for evaluating the environmental conditions and heat stress?		
2. Are meals provided by the employer? o If yes, are they sufficient and well balanced for employees working in high temperature environments?		
3. Was there a pre-work briefing to remind employees of the hazards of working in the heat and ways to prevent heat related injuries and illnesses?		
4. Is the site following the Ministry of Labour's Mid-Day Break for employees (employees) that work outside in the summer months?		

Appendix 7: Example Flag System for Communicating Heat Condition

The following is an example of a flag system that can be used on large worksite as a visual communication means to inform employees of the TWL and actions to take to prevent heat related injuries and illnesses.

Flag poles shall be high enough that they can be seen above any surrounding structure. It may be necessary to post multiple flagpoles around large worksites (e.g., constructions sites) to ensure employees can see them from their work location. When multiple contractors are located at a worksite, it is important that the Principle Contractor and/or site owner coordinate to ensure all flags are changed as needed to reflect the current worksite conditions.

Signs should also be posted around the sites and at any rest/shade shelter to remind employees what actions should be taken to prevent heat related injuries and illness depending on the color of the flag that is raised.