CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Heat Stress Assessment Checklist

Contents of table adapted from the following documents (1) City of Cape Town Heat Stress Workplace Management Guideline and Heat Stress Assessment Tool, (2) Workplace Heat Stress Risk Assessment, Hong Kong Labour Department, (3) Occupational Safety and Health Administration, United States Department of Labour

Name of organisation/department/team:			
Name and surname of assessor:			
Line manager name, surname		**Line manager contact details:**	
Job being assessed:		**Work location:**	
Work description:		**No. of workers (approx.):**	
		Time of day work is conducted in a hot environment:	

Risk factor	Yes	No	Examples of controls to address risk factor
Ambient air temperature			
Is the workplace located outdoors?			Pay attention to the weather forecast, as provided by the South African Weather Service (SAWS). Take particular note of any warnings or advisories issued for Cape Town in relation to hot weather. Avoid relying on weather forecasts provided by other organisations or apps – these are likely to be significantly less accurate than the official SAWS forecast. To ensure that staff are prepared for the hot season, implement initiatives such as raising awareness on heat stress and resulting health impacts, encourage the use of hats, sunscreen, and sunglasses, remind staff to stay hydrated and carry a hand towel to wet with cold water as an additional cooling measure. When the weather is forecast to be very hot (35 °C or more) or if a heat wave is forecast (32 °C or more for three or more days in a row), activate control measures to reduce exposure to heat. These measures could include, but are not limited to: • Rescheduling work for cooler periods of the day (e.g. before 10:00 or after 16:00). • Postponing non-essential work to a cooler day. • Relocating to a cooler workplace if possible.
Is the indoor work environment directly affected by the temperature of the outdoor environment? (e.g. workplace ventilated by opening windows)			
Does the air in the workplace feel hot?			
Are there any cool and shaded areas located on the premises of the workplace?			

Risk factor	Yes	No	Examples of controls to address risk factor
			• Implementing more frequent rest breaks. • Providing a shaded rest area for outdoor work locations, and ensure that indoor spaces are well ventilated. • Consider investing in temporary outdoor shading and cooling structures, including large outdoor umbrellas, gazebos, sun shades, outdoor mist systems, and removable shade canopies. • Make cold drinking water freely available. If possible, install or motivate for the installation of air conditioning in buildings that do not currently have air conditioning.
Humidity			
Is the workplace directly affected by the humidity of the outdoor environment? (e.g. indoor workplace ventilated by opening windows)			When the weather is forecasted to be humid in conjunction with high temperatures, activate control measures to reduce exposure to heat as above, and including: • If possible, install or motivate for the installation of air conditioning in buildings that do not currently have air conditioning. • Ensure that all window openings and doors are serviceable and able to operate effectively. • Ensure sufficient ventilation. • Remove steam or moisture by exhausting it out of the workplace, particularly workplaces in a confined area.
Does the workplace often feel humid?			
Is there any source/equipment that produces steam or other sources of humidity?			
Heat radiation			
Do the workers work under direct sunlight?			Ensure workers are supplied with sufficient PPE for working in direct sunlight, including: • A wide-brimmed sun hat • Sunscreen (SPF of between 20 and 50) • Sunglasses (UV400 protection rating) • Lightweight, light-coloured clothing in predominantly natural fibres • Consider rescheduling work for cooler periods of the day (e.g. before 10:00 or after 16:00), or postponing non-essential outdoor work to a cooler day. • Ensure that shaded rest areas and well-ventilated indoor spaces are available for workers. • Ensure that sufficient amounts of cold drinking water is freely available.
Air movement			
Is the air stagnant in the workplace when the environment is hot?			Ensure that air conditioning or ventilation systems are in working order or repaired timeously if required. If there is no mechanical ventilation system in the building, ensure that windows are opened and fans are provided in the workplace to ensure movement of air.
Is any warm or hot air blowing onto the workers?			Eliminate or relocate the sources of hot air, or exhaust hot air out of the workplace.

Risk factor	Yes	No	Examples of controls to address risk factor
Disruption in water and electricity supply			
Is there back-up water supply in the event of either planned maintenance or unexpected supply disruptions?			Ensure that sufficient emergency cold water supplies are in place. Emergency stock should ideally consist of sealed bottles of water that have been refrigerated or kept in a cool area of the room. In addition, the expiry dates should be checked as frequently as required and replaced as needed. Emergency stock should ensure sufficient supplies for each staff member. • The recommended intake of water per person per day is 2 - 4 litres. However, during hot weather and if physical activity is undertaken by an individual, water requirements will increase. It is therefore recommended that, during heat waves or days of high temperatures (35 °C or more), a minimum of 3 litres of water per person per day should be made available. Ensure that consumption is spaced out throughout the day rather than drinking excessive amounts all at once. • If water supply is disrupted during a heat event and emergency water supplies are insufficient, any strenuous or heat-exposed work should be stopped until sufficient water supplies are made available.
If you have back-up supplies, are they enough for all the staff for the duration of the working day?			
Is the workplace affected by load-shedding or frequent power outages?			In addition to load-shedding, unforeseen power outages during heat events may affect thermal comfort, cold storage (refrigerator), elevators and electronic access to the office space. It is therefore important that the load-shedding schedule is made available to all staff. If the building does not have back-up electricity supply, ensure that a contingency plan is in place during heat events and load-shedding to ensure that: • The office and building is still accessible to enter and exit, enabling staff to get fresh and cool air outside if required; • Staff are made aware of out of order elevators (climbing stairs can increase body temperature and add additional stress in a building with a lack of cooling); and • In addition to keeping water in the refrigerator, back-up supplies are kept in a cool, dark area and are not exposed to direct heat or sunlight.
If so, does load-shedding affect the thermal comfort in the workplace?			If thermal comfort is impacted, ensure that the following measures are put in place for implementation during periods of electricity outages: • Open windows and doors if it is safe to do so and if there is a breeze cooler than the air inside – this will mainly be in the early morning and towards the evening. • Close blinds or shutters to prevent direct sunlight affecting the workplace. • Where possible, encourage the use of battery or USB-operated desk fans. • Identify the coolest area in the workplace, and ensure that the area can accommodate staff if necessary until the electricity is restored.
Workload			
Is the workload heavy? (e.g. carrying a heavy object over a long distance)			Consider lightening workloads during heat events or rescheduling work involving heavy workloads for cooler parts of the day.

Risk factor	Yes	No	Examples of controls to address risk factor
Do the workers perform intensive manual work at a fast pace?			Consider reducing the intensity of manual labour during heat events or rescheduling intensive work for cooler parts of the day.
Exposure to chemicals			
Does the work include the use of paint?			Certain chemical substances can affect the thermoregulatory mechanism of the body, accelerate the uptake of certain insecticides, and can exacerbate the toxicity of airborne pollutants such as ozone and particulate matter. Consider the following guidelines to ensure staff safety when working with chemicals: • Ensure that the manufacturer's material safety data sheet has been reviewed and that any specified temperature thresholds are adhered to. • Ensure that correct PPE (e.g. mask, gloves, eye protection) is used as per the manufacturer's directions and worn at all times while working with a chemical that has been flagged as potentially contributing to heat-related risk. • Ensure that the team working with the chemicals is aware of the dangers and treatments if symptoms should arise.
Does the work include the use of pesticides?			
Does the work include the use of other chemicals?			
Clothing			
Do the workers wear thick or impermeable clothing?			Consider revising existing uniforms and clothing if applicable, to ensure that these are more suitable for heat conditions. In some cases, it will be necessary to identify whether the clothing (uniform/PPE) of an employee may contribute to the risk of heat stress. If relevant, uniforms as well as general suggestions to staff should include the following considerations: • Artificial fibres, thick fabrics, and dark colours should be avoided. Wherever possible, uniforms should consist of natural fibres, lightweight and breathable fabrics, and light colours. • Ensure that summer appropriate PPE is provided, including wide-brimmed sun hats, sunglasses, and sunscreen. • If workers are required to wear thick or impermeable clothing or any PPE that may limit breathing or increase heat stress (e.g. masks, goggles, helmets), consider rescheduling tasks that require this clothing or PPE for cooler parts of the day, or postponing non-essential work until after the heat event has passed. • In some cases, it might be best to engage in a quantitative assessment with the worker if they wear or remove clothing depending on the job or task.
Do outdoor workers wear dark colours?			
Do outdoor workers have correct summer PPE including hats, sunglasses, sunscreen and appropriate lightweight clothing?			
Acclimatisation			
Are the workers not yet acclimatised to the hot work environment?			Heat acclimatisation is the improvement in heat tolerance that comes from gradually increasing the intensity or duration of work performed in a hot working environment. The following considerations should be taken into account: • The best way to acclimatise yourself is to increase the workload performed in a hot setting gradually over a period of one to two weeks. • Note that you begin to lose your acclimatisation after about one week away from working in the heat. • Staff that had time off from work may need to reacclimatise on their return.
Are there any staff members that recently returned to work due to illness?			

Risk factor	Yes	No	Examples of controls to address risk factor
Vulnerable groups			
Are any of the workers over the age of 60?			Rising global ambient temperatures affect all age groups and populations. However, some groups are more at risk during heat events due to factors such as existing medical conditions, age, cultural practices, and the conditions people are exposed to when moving between work and home. High-risk groups include: • People with existing medical/chronic conditions, including heart disease; lung disease and other respiratory illnesses; kidney conditions and diabetes; as well as people using medication that may impact the body's ability to thermoregulate (staff to confirm with medical doctor) • Pregnant women • People over the age of 60 • Women and girls, who are generally more vulnerable to heat • People with disabilities • People with special needs • People abstaining from water and food due to religious or cultural practices such as Ramadan • People with limited literacy and non-native language speakers To ensure that the health and safety of these groups are considered, the following guidelines are proposed: • Ensure that all staff and management are aware of the main vulnerable groups related to heat, and the relevant risk mitigation interventions. • If possible, identify staff linked to the different vulnerable groups, especially those working in outdoor environments or in workshop settings with limited airflow. • If required, additional information on specific vulnerable groups and associated health impacts should be researched.
Are any of the workers physically disabled or living with a serious chronic respiratory or cardiac condition?			
Are any of the workers using medication that can affect body temperature regulation?			
Are female workers part of your team?			
Are any of the female workers pregnant?			
Are any of the workers fasting due to Ramadan or for other religious/cultural reasons?			
Heat health information and training			
If a heat health incident occurs, is there a cool or shaded space that the employee can be moved to?			Access to updated information on heat risk and heat health plays a critical role in ensuring that staff can reduce their own risk to heat, as well as ensure the safety of colleagues in the workplace. • Ensure that the relevant staff receive frequent training on heat health symptoms and treatment, and have access to relevant information. • Ensure that all signage is available in the different languages spoken by the team, and that the wording is clear and easy to understand. • Signage or communication material should include tips and advice on keeping cool, and should be based on the employee's workspace.
If working outdoors, is there a portable or wireless cooling device (fan) available that can be used in the case of a heat health incident?			
For outdoor work environments, is there an onsite cooler box or mini fridge available for storing cold water and items such as cold packs?			

Risk factor	Yes	No	Examples of controls to address risk factor
Is the onsite health and safety representative aware of heat health symptoms and treatment options?			
Are there clear and readable signage on heat health accessible to staff?			
Are staff able to access information on heat health symptoms and treatment?			
Cooling kits			
Create a cooling kit that include the following items:			In addition to items in cooling kits, it is advised that a cooling kit be created with key items that can assist in the event of a heat health incident. The following should be considered for the cooling kit: • Ensure that the cooling kit has sufficient items to cater to all staff in the case of a heat health incident. • Items such as ice packs, cold compresses, cool patches, etc. should be prioritised for purchase and inclusion in the cooling kit. • If these items are not available, alternative items that can be used include a cold wet towel that can be draped over the shoulders, placing a rolled up cold wet hand towel or cloth on the back of the neck, under the underarm or between upper legs, or submerging feet into a bucket of water. • The cooling kit should be checked ahead of the summer season, and before a hot day or heat wave announcement. Include heat health communication in the kit for those using the kit.
Ice packs			
Cold compress			
Cool patches			
Electrolyte solution/tablets/oral rehydration solution			
Thermometer			
Heat health communication pamphlets			