Sun & Heat Management Policy

VC/SC/EC/02/SHMP

Controlled Document

THE ENGLISH COLLEGE
DUBAI

Contents

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Aim

The Sun & Heat Management Policy for The English College, Dubai (referred to as EC)) has been developed to ensure that all students and staff are adequately protected from medical risks directly associated with exposure to sun and heat, and related illness caused as a result of high temperatures, natural ultraviolet radiation and humidity levels.

Objective

This policy provides guidelines on recording exposure to sun, temperature and humidity, and the responsibilities of the EC team, students and parents. It explains the action that will be taken as a result of data collected and the impact upon day-to-day operations within the school.

Introduction

The combination of sun exposure, heat and high levels of humidity poses significant health risks, especially to young children. Dubai has a hot and humid climate for majority of the academic year, with high temperatures and humidity combining to make the temperature feel considerably warmer and uncomfortable. In order to safeguard the EC community from risk of heat related ailments, the school employs 4 methods for gathering data on temperature and humidity levels:

1. Hygrometer - This measures the humidity in the air and is positioned permanently in a shaded outside location.
2. Temperature checks – Vesta Care Clinical Team (VCC) shall measure the temperature on site at EC at various times during the day.
3. AccuWeather (https://www.accuweather.com/) - An online weather platform that provides weather forecast.
4. WGBT or Wet Bulb Globe Temperature (https://www.weather.gov/arx/wbgt) - This online site provides data on heat related stress on the human body (temp, humidity and wind speed) in direct sunlight.

This data is collected 4 times a day, recorded and converted into comfort ranges using the Humidex scale by tracking the temperature and the humidity data. Humidex converts the temperature and humidity data into a range providing guidance on the degree of comfort or human body stress level, thereby providing an indication of health risk.

Additionally, the PE Instructors are encouraged to use their judgement to assess the safety of outdoor activity and exertion levels by students.

Refer Appendix 1

Refer Appendix 2

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Excerpts from World Health Organization

How should children be protected from the sun in schools?
Educational programmes in schools to enhance children's knowledge and modify attitudes and behaviour regarding sun protection can significantly decrease adverse health effects and health care costs. Schools are an excellent place to teach healthy behaviours that can prevent overexposure to UV radiation. In an environment that is geared towards learning school children are especially susceptible to fashion trends, while teachers can play a major role in influencing children's knowledge, attitudes and behaviour regarding sun protection.

A school program on sun protection should adopt an integrated approach to help students, teachers, and the wider community to avoid health risks of UV radiation exposure. The program should include sun protection education, a healthy school environment, a school-endorsed sun protection policy, and community and family involvement. An evaluation of school programs to promote sun protection is a powerful tool that WHO recommends for implementing and strengthening school health programs. Activities are most effective if they have a practical focus and are relevant to the students' own experiences. Sun protection can easily be integrated into a range of curriculum areas.

WHO has developed a comprehensive package of materials for children's sun protection education. It is intended for Ministries of Health and Education, as well as national and local authorities and non-governmental organizations active in the area of health promotion and sun protection programs.

Procedure

1) Four heat index (Humidex) checks shall be recorded every day preferably at 07.30 am, 10.00 am, 12.00 pm and 02.00 pm employing the methods mentioned above. The data shall be recorded and Humidex will be used to calculate the degree of comfort level.
2) All staff leading lessons or activities outdoors, or undertaking outdoor duties, should be aware of responses needed at any given humidex level.
3) If the heat index reaches the top end of Level 3 range (40-45) or above, the VCC Team will inform the Facilities Management, Health & Safety Coordinator, designated Leadership Team Members and Head of Physical Education, and shall recommend course of precautions.
4) Thereupon, the EC Management will ensure that the recommendations are carried forward and implemented.
5) At Level 4 range (46-53) or above, the VCC Team will instruct indoor breaks/lunches where appropriate and no avoidable physical activities outdoors. An internal email will be sent to all academic staff providing instructions. Health & Safety Coordinator shall ensure all academic staff are aware and compliant.
6) Some occasions may warrant outdoor activities be undertaken / modified / stopped at Humidex indices outside of the range recommendations. In such instances, the judgement of those leading outdoor activities, Health and Safety Coordinator and EC Leadership Team, will be applied in consultation with the VCC Team. All planned precautions shall be followed by staff members and responsible individuals to ensure safety and wellbeing of students and other members of the school at all times.
7) Young children and certain individuals have delicate skin that can get damaged by the sun's UV rays, particularly during the midday. Such children and individuals should protect themselves with hats, caps, umbrellas and / or sunscreen from the harmful effects of UV rays.
8) Refer Appendix 3 for common symptoms of heat related ailments

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9) The EC community shall refer and follow recommendations made by bodies including:
   a) The Ministry of Health, UAE
   b) Dubai Health Authority
   c) Dubai Municipality
   d) World Health Organization
   e) CDC
   f) Cancer Research UK SunSmart sun protection guidelines.
   g) NHS

Recognizing Heat Stress – Heat Related Illness (Excerpts from CDC)

1) Heat Stroke

Heat stroke is the most serious heat-related illness. It occurs when the body can no longer 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°F or higher within 10 to 15 minutes. Heat stroke can cause permanent disability or death if the person does not receive emergency treatment.

a) Symptoms of heat stroke include:
   i) Confusion, altered mental status, slurred speech
   ii) Loss of consciousness (coma)
   iii) Hot, dry skin or profuse sweating
   iv) Seizures
   v) Very high body temperature
   vi) Fatal if treatment delayed

b) First Aid
   i) Call 998 for emergency medical care.
   ii) Stay with the child / individual until emergency medical services arrive.
   iii) Move the individual to a shaded, cool area and remove outer clothing.
   iv) Cool the individual quickly, using the following methods:
      (1) With a cold water or ice bath, if possible
      (2) Wet the skin
      (3) Place cold wet cloth on the skin
      (4) Soak clothing with cool water
   v) Circulate the air around the worker to speed cooling.
   vi) Place cold wet cloth or ice on the head, neck, armpits, and groin; or soak the clothing with cool water.

2) Heat Exhaustion

Heat exhaustion is the body's response to an excessive loss of water and salt, usually through excessive sweating. Heat exhaustion is most likely to affect the very young and elderly, people with high blood pressure, those working in a hot environment.

a) Symptoms of heat exhaustion include:
   i) Headache
   ii) Nausea
   iii) Dizziness
   iv) Weakness
   v) Irritability
   vi) Thirst

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vii) Heavy sweating
viii) Elevated body temperature
ix) Decreased urine output

b) First Aid
   i) Escort the individual to the clinic for medical evaluation and treatment.
   ii) Call 998 if medical care is unavailable.
   iii) Have someone stay with the individual until help arrives.
   iv) Remove the individual from the hot area and give liquids to drink.
   v) Remove unnecessary clothing, including shoes and socks.
   vi) Cool the individual with cold compresses or have the worker wash their head, face, and neck with cold water.
   vii) Encourage frequent sips of cool water.

3) Rhabdomyolysis

Rhabdomyolysis (also commonly referred to as Rhabdo) is a medical condition associated with heat stress and prolonged physical exertion. Rhabdo causes the rapid breakdown, rupture, and death of muscle. When muscle tissue dies, electrolytes and large proteins are released into the bloodstream. This can cause irregular heart rhythms, seizures, and damage to the kidneys.

a) Symptoms of Rhabdo include:
   i) Muscle cramps/pain
   ii) Abnormally dark (tea or cola-colored) urine
   iii) Weakness
   iv) Exercise intolerance
   v) Asymptomatic

b) First Aid
   i) Stop activity
   ii) Drink more liquids (water preferred)
   iii) Seek immediate care at the nearest medical facility.
   iv) Ask to be checked for rhabdomyolysis (i.e., blood sample analyzed for creatine kinase).

4) Heat Syncope

Heat syncope is a fainting (syncope) episode or dizziness that usually occurs when standing for too long or suddenly standing up after sitting or lying. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.

a) Symptoms of heat syncope include:
   i) Fainting (short duration)
   ii) Dizziness
   iii) Light-headedness from standing too long or suddenly rising from a sitting or lying position

b) Individuals with heat syncope should:
   i) Sit or lie down in a cool place.
   ii) Slowly drink water, clear juice, or a sports drink.

5) Heat Cramps

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

a) Symptoms
   i) Muscle cramps, pain, or spasms in the abdomen, arms, or legs

b) Individuals with heat cramps should do the following:
   i) Drink water and have a snack or a drink that replaces carbohydrates and electrolytes

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every 15 to 20 minutes.

ii) Avoid salt tablets.

iii) Get medical help if the worker:

(1) Has heart problems.

(2) Is on a low sodium diet.

(3) Has cramps that do not subside within 1 hour.

6) Heat Rash

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather.

a) Symptoms of heat rash include:

i) Red clusters of pimples or small blisters

ii) Usually appears on the neck, upper chest, groin, under the breasts, and in elbow creases

b) Individuals who have heat rash should:

i) Work in a cooler, less humid environment, if possible.

ii) Keep the rash area dry.

iii) Apply powder to increase comfort.

iv) Don't use ointments and creams.

Additional Suggestions & Recommendations

1) Educate Parents and Students about sun and heat exposure
   a) Children to be educated during PE lessons and assemblies about sun and heat safety.
   b) Make parents aware of EC's Sun & Heat Management Policy via school communications channels.
2) Ensure students protect themselves
   a) Encourage all students, especially primary students to wear hats / caps whilst outdoors.
   b) School uniform and PE kit shall be planned and designed appropriately for hot climatic conditions.
   c) Encourage the application of sunscreen when outdoors.
3) Encourage students to avoid dehydration
   a) Students shall carry water bottles in class, during PE activities and while on trips outside the school.
   b) Students aged 13 Years and above engaged in physical activity should be encouraged to drink between 1 and 1.5 Liters of water (about 200 to 250ml every 1 hour) to avoid dehydration.
   c) Students below the age of 12 should be encouraged to drink 100 to 250 ml of water every 20 to 30 minutes (a few sips at the end of every class would be ideal).
4) Curriculum Planning & School Facilities Development Plans (Annually)
   a) Plan awnings and shade providing structures during renovation and new projects.
   b) Physically demanding activities, outdoor competitive games, external trips should ideally be planned for months, and indoor activities and swimming pool use can be maximized during the warmer months.
5) Monitor the weather and issue advice (Daily)
   a) Monitor, record and share temperature and humidity throughout the day at specified times.
   b) Warnings of extreme temperature and inclement weather shall be shared with designated officials of EC for dissemination.

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References

1) Dubai Municipality, Health & Safety Department. Ref. Doc. : DM-HSD-GU38-MHSW2. V2.0
2) https://publications.cancerresearchuk.org/categories/sun-smart
3) https://publications.cancerresearchuk.org/sites/default/files/publication-files/Let%27s%20stay%20safe%20in%20the%20sun%20-%20printer%20friendly%20version%20%281%29.pdf
4) https://www.nhs.uk/live-well/seasonal-health/sunscreen-and-sun-safety/#:~:text=Sunscreen%20should%20be%20applied%20to,according%20to%20the%20manufacturer's%20instructions.

Version History

Historical Record				
Rev. #	**Date**	**Brief Description of Change**	**Approved by**	**Next Review:**
0	25/05/2021	New Policy	Principal	Jun 2022
1	17/04/2022	Updated	Principal	Apr 2023
2	18/11/2022	Measure updated table aligned to humidex ranges	WSLT	Jul 2023
3	01/05/2023	Annual Review & Update	WSLT	Jul 2024
4	20/06/2024	Annual Review & Update	WSLT	Jun 2025
5	23/08/2024	References to Dubai Municipality, DHA, WHO, NHS, CDC taken into consideration.		Aug 2025

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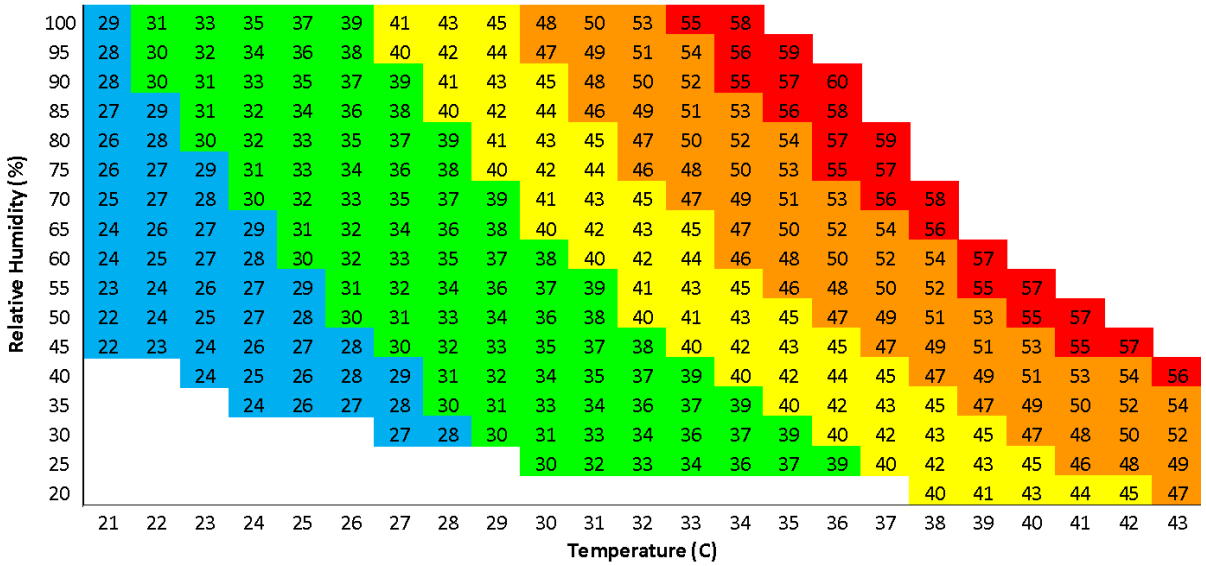
Appendix 1

Humidex Based on Temperature and Relative Humidity Readings



Level	Humidex Range	Degree of Comfort
1	Less than 30	No Discomfort
2	30 - 39	Moderate Discomfort
3	40 - 45	Significant Discomfort
4	46 - 54	Dangerous (Heat Stroke Imminent)
5	Above 54	Heat Stroke

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Appendix 2

Level	Humidex / Comfort Range	Action / Response	Possible Heat Related Signs
1	Less than 30 (No Discomfort)	1) The school shall provide adequate drinking water supply easily accessible near or at all teaching and activity stations. 2) Staff should advise students to apply sun lotion before lessons, games and activities. 3) Primary students must wear hats when venturing outside school building for break, lunch and PE lessons. 4) All students should be encouraged to bring water bottles to training and PE classes. 5) Mandatory regular water breaks should be incorporated to prevent dehydration. 6) Where possible, rest periods and teaching sessions should be conducted in shaded areas provided in EC. 7) Students that wish to take a break should be permitted to do so at any time. 8) Staff should monitor students during PE and outdoor sports activities carefully.	Fatigue with prolonged exposure and activity.
2	30 - 39 / (Moderate Discomfort)	1) Staff should advise students to apply sun lotion before going outside. 2) Staff to be mindful of those students with higher risk of suffering from heat related illnesses and provide opportunities to take less-active parts in the lesson. 3) Primary students - no hat, no time outside. 4) Staff should brief students of possible heat illness and associated risk. 5) Outside activities with high physical exertion should be moved to shaded areas where possible. 6) Students showing signs and symptoms of heat related illness should be escorted to the Clinic. 7) Mandatory regular water breaks and rest periods. 8) During competitive and training matches, students should be rotated out on a regular basis. 9) Maximum duration of exposure at the top end of range without a cooling down period is one hour for secondary and 30 minutes for Primary.	Heat cramps and heat exhaustion are possible in the lower range and likely in the upper range if precautions are not taken. Heat stroke is probable with prolonged exposure.
3	40 - 45 / (Significant Discomfort)		

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Level	Humidex / Comfort Range	Action / Response	Possible Heat Related Signs
		10) Secondary Sport Practices and or Fixtures can be cancelled at the discretion of the Head of Physical Education in consultation with the school medical staff. 11) Outside activities with high physical exertion cancelled - field G playground closure. 12) Reduction to time outside (in shade) during breaks and lunches.	
4	46 - 54 / (Dangerous)	1) Staff should advise students regarding extreme risk of heat related illness and to apply sun screen before going outside. 2) No physical exertion. Field and playground should be closed. 3) Reduced break times - in shade only. 4) Indoor lunch breaks.	Heat stroke imminent
5	Above 54 / (Heat Stroke)	All outdoor activities are to be stopped immediately. All indoor activities shall be conducted in a controlled manner in an air-conditioned environment	Heat stroke

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Appendix 3

Heat Related Illness	Nature of the illness	Signs and Symptoms
Heat Cramps	Heat cramps are experienced from fluid loss due to heavy sweating. Heat cramps usually occur in the abdomen or legs.	1) Profuse Sweating 2) Fatigue 3) Thirst 4) Muscle Cramps
Heat Exhaustion	Heat exhaustion derives from prolonged exposure in hot conditions with high fluid loss due to heavy sweating and an elevated body temperature below 40° degrees Celsius.	The signs above and: 1) Headache 2) Dizziness and Lightheadedness 3) Weakness 4) Nausea and Vomiting 5) Cool Moist Skin 6) Dark Urine
Heat cramps and Heat exhaustion can quickly turn to heat stroke if signs and symptoms are not recognized and treatment is not administered quickly.		
Heat Stroke	This is a life - threatening emergency condition due to the body's inability to cool itself as a result of exposure to extreme heat. Heat stroke is a condition when the core body temperature is higher than 40° degrees Celsius. Heat stroke can lead to complications involving the central nervous system after prolonged exposure to high temperatures.	1) Throbbing headache 2) Dizziness and light-headedness 3) Lack of sweating despite heat 4) Red, hot and dry skin 5) Muscle weakness or cramps 6) Nausea and vomiting 7) Seizures 8) Rapid, shallow breathing 9) Unconsciousness 10) Rapid heartbeat 11) Confusion, disorientation, or staggering

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