College of the Canyons Sports Medicine

Environmental Conditions Policy & Procedures

The College of the Canyons Sports Medicine Department recognizes that environmental conditions can pose a significant health risk for student-athletes participating in intercollegiate athletics at the College. College of the Canyons, in accordance with the CCCAA Constitution Bylaw 9.7 requirements, has implemented this written policy to outline how the College will acquire environmental data, what constitutes safe participation parameters, and the College's plan regarding modification and cancellation of practices and competitions.

For the purpose of this document, the medical staff refers to the Certified Athletic Trainers (AT) employed at College of the Canyons (COC) and administrator refers to the College Athletic Director (AD) or Dean of Kinesiology/Athletics. The following components have been identified by the National Athletic Trainers Association (NATA) as a recommended best practice for each specified environmental condition.

Chain of Command for Adverse Environmental Conditions

It is the duty of the College medical staff to monitor the environmental conditions for every College hosted practice and/or competition. Weather data will be acquired using the method(s) identified under each adverse weather condition listed below. For each condition, once an unsafe environment has been documented using real-time readings measured on-site, the following protocol for relaying this data up the chain of command will be utilized:

- AT notes unsafe environment conditions
- AT notifies AD or Game Management Administrator of unsafe environment conditions and work together to determine appropriate action (i.e. postponing play, seeking safe shelter, extra hydration time-outs, etc.) needed to be taken for the health and safety of the student-athletes
- Coaches, Officials, and student-athletes are informed of modifications and/or cancellation
- If necessary, AT, AD, Coaches and Officials will relocate student-athletes to safe location until it is deemed safe to return
- Visiting team's AD will be notified by the host AD of the environment readings at time of decision and the subsequent decision made based on the environment readings.

Heat Guidelines

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When weather conditions are at such levels to create a potentially unsafe environment for studentathletes to train or compete in, the AT will measure temperature, humidity, and playing surface temperature before and during the practice or competition. It is prudent that the AT also take into consideration the acclimation status of the student-athletes participating and the weather patterns in the days leading up to the practice and/or competition in question. The wet-bulb globe temperature (WBGT) is the best means of measuring actual weather conditions as it takes into account humidity, ambient temperature, and radiant heat (which includes heat radiating from the field of play). College of the Canyons uses the Kestrel 5400 Heat Stress Tracker to capture WBGT readings in real-time on the playing surface and will make recommendations using the following chart(s) provided by the American College of Sports Medicine:

WBGT ^b			Training and Noncontinuous Activity					
°F °C		Continuous Activity and Competition	Nonacclimatized, Unfit, High-Risk Individuals ⁶	Acclimatized, Fit, Low-Risk Individuals ^{9,4}				
≲50.0	≤10.0	Generally safe; EHS can occur associated with individual factors	Normal activity	Normal activity				
50.1-65.0	10.1-18.3	Generally safe; EHS can occur	Normal activity	Normal activity				
65.1-72.0	18.4-22.2	Risk of EHS and other heat illness begins to rise; high-risk individuals should be monitored or not compete	Increase the rest:work ratio. Monitor fluid intake.	Normal activity				
72.1-78.0	22.3-25.6	Risk for all competitors is increased	Increase the rest:work ratio and decrease total duration of activity.	Normal activity. Monitor fluid intake.				
78.1-82.0	25.7-27.8	Risk for unfit, nonacclimatized individuals is high	Increase the rest:work ratio; decrease intensity and total duration of activity.	Normal activity. Monitor fluid intake.				
82.1-86.0	27. 9 –30.0	Cancel level for EHS risk	Increase the rest:work ratio to 1:1, decrease intensity and total duration of activity. Limit intense exercise. Watch at-risk individuals carefully	Plan intense or prolonged exercise with discretion ¹ ; watch at-risk individuals carefully				
86.1-90.0	30.1–32.2		Cancel or stop practice and competition.	Limit intense exercise ⁴ and total dally exposure to heat and humidity; watch for early signs and symptoms				
≥90.1	>32.3		Cancel exercise.	Cancel exercise uncompensable heat stress ^e exists for all athletes ^f				

wet bulb globe temperature.

while wearing shorts, T-shirt, socks and sneakers.

acclimatized to training in the heat at least 3 wk.

internal heat production exceeds heat loss and core body temperature rises continuously, without a plateau.

Differences of local climate and individual heat acclimatization status may allow activity at higher levels than outlined in the table, but athletes and coaches should consult with sports medicine staff and should be cautious when exceeding these limits.

Because American football wears more gear (helmets, shoulder pads, and pants) which significantly reduces the body's ability to cool itself via the normal means of evaporation of sweat, the following chart provided by the National Athletic Trainers Association in its "Inter-Association Task Force on Exertional Heat Illnesses Consensus Statement" will be used in addition to the WBGT chart to make further appropriate recommendations for football practices and/or competitions:



Heat stress risk temperature and humidity

graph. Heat stroke risk rises with increasing heat and relative humidity. Fluid breaks should be scheduled for all practices and scheduled more frequently as the heat stress rises. Add 5° to temperature between 10 a.m. and 4 p.m. from mid-May to mid-September on bright, surny days. Practices should be modified for the safety of the athletes to reflect the heat stress conditions.

Regular practices with full practice gear can be conducted for conditions that plot to the left of the triangles.

Cancel all practices when the temperature and relative humidity plot is to the right of the circles; practices may be moved into air-conditioned spaces or held as walk through sessions with no conditioning activities.

Conditions that plot between squares and circles: use work/rest ratio with 15 to 20 minutes of activity followed by 5- to 10-minute rest and fluid

breaks, practice should be in shorts only (with all protective equipment removed, if worn for activity).

Conditions that plot between triangles and squares: use work/rest ratio with 20 to 25 minutes of activity followed by 5- to 10minute rest and fluid breaks; practice should be in shorts (with helmets and shoulder pads only, not full equipment, if worn for activity).

Conditions that plot beneath triangles (through remaining range of chart): use work/rest ratio with 25 to 30 minutes of activity followed by 5- to 10-minute rest and fluid breaks.

If at any time the Kestrel 5400 Heat Stress Tracker is unavailable then temperature readings can be assessed and participation recommendations made using dry bulb temperature (ambient temperature) and relative humidity readings measured in real-time on the site of participation. These two readings will determine the heat index and then recommendations will be made using the following chart provided by the NOAA's National Weather Service:

						Те	Hea mpe	t Ind	ex e (°F)							
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	13
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Caution

At a minimum, during times of elevated heat stress, fluid breaks should be scheduled for all practices and scheduled more frequently as the WBGT or heat index increases.

Danger

Extreme Danger

Extreme Caution

**For further information regarding the prevention, assessment, and management of heat illness, please reference *College of the Canyons Sports Medicine Exertional Heat Illness Protocol* document.

Air Quality

To monitor the air pollution for safety during athletic events the College will determine Air Quality Index by consulting the South Coast Air Quality Management District (www.aqmd.gov) to determine precautions and recommendations for athletic events including practices and games. The below chart is how Air Quality Index recommendations will be implemented:

Good 0-50	Air quality is good	No precautions are needed
Moderate 51-100	Air quality is a concern for extra sensitive individuals	Plan strenuous outdoor activities when air quality is better
Unhealthy for sensitive groups 101-150	Air quality is unhealthy for sensitive groups	Cut back or reschedule strenuous outdoor activities
Unhealthy 151-200	Air quality is unhealthy for everyone	Avoid strenuous outdoor activities
Very unhealthy 201-300	Air quality is unhealthy for everyone	Avoid physical outdoor activities
Hazardous 301-500	Air quality is hazardous for everyone	Avoid all outdoor activities

Lightning

If inclement weather is anticipated that could potentially produce lightning then the medical staff will monitor the weather forecast before any outdoor practices or events through the National Weather Service (<u>www.weather.gov</u>) or other cellular apps and computer sites.

- The AT will monitor thunder and lightning in the immediate area.
- Prior to the event beginning administrators, coaches, and officials will be made aware of the closest lightning-safe location for all student-athletes as well as spectators.
 - o Stadium
 - Teams & team personnel Assigned locker rooms in West PE building
 - Officials Officials locker room
 - Spectators Under stadium stairs on home side or West PE building
 - Soccer Field
 - Teams & team personnel Assigned locker rooms in East PE building
 - Officials East PE building
 - Spectators East or West PE building
 - Baseball & Softball Field
 - Teams & team personnel Field house
 - Officials Officials locker room
 - Spectators –West PE building
 - o Tennis
 - Teams & team personnel Athletic Training Clinic in East PE building
 - Officials Athletic Training Clinic in East PE building
 - Spectators East or West PE building
- Activities will be postponed or suspended with the first sound of thunder because lightening is likely within eight to ten miles and capable of striking your location when thunder is heard. Lightning can strike from blue sky and in the absence of rain.
- Play will not resume until 30 minutes after both the last sound of thunder and the last flash of lightning. This 30-minute clock restarts each time a lightening flash is seen and/or each time thunder is heard.