



Office of Interscholastic Athletics

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City Schools Athletics Health & Safety Resource



HEALTH & SAFETY INFORMATION

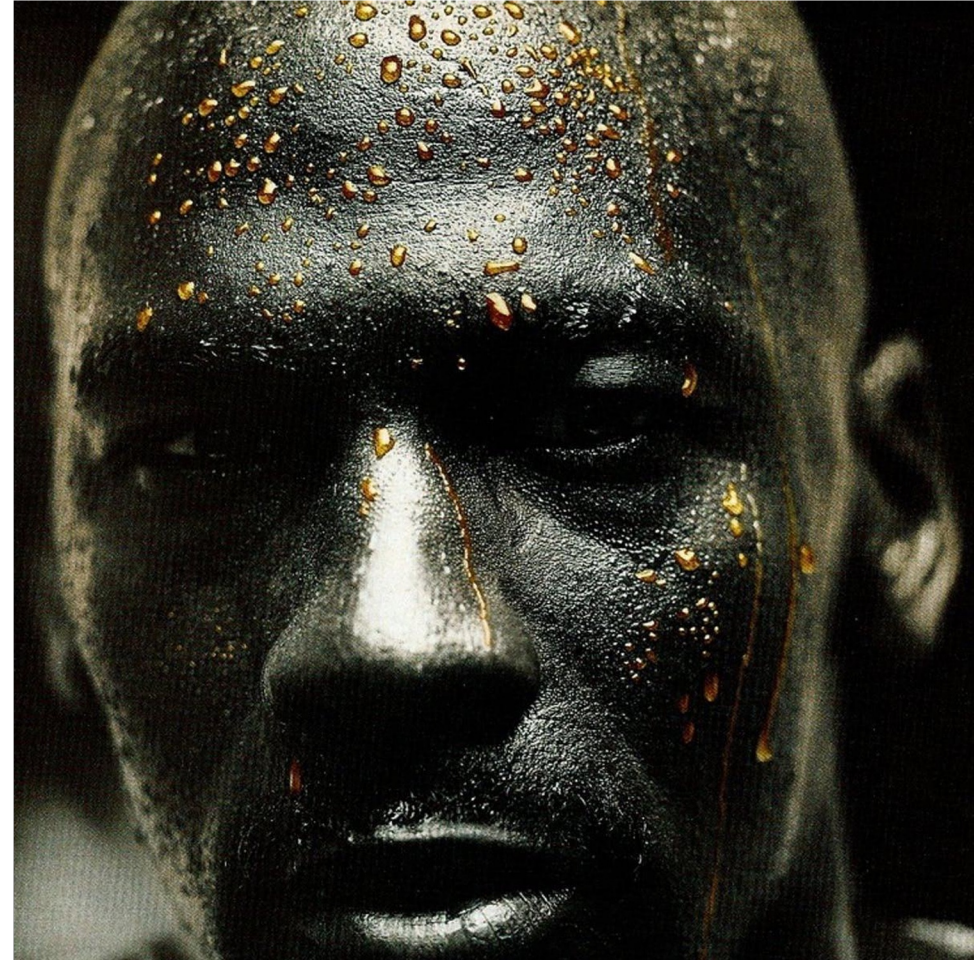
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HEAT ACCLIMATIZATION

Guidance for Fall Sports from the MPSSAA &
City Schools


Please reference the following link from
MPSSAA which outlines guidance for fall
sports (not just football).

[https://www.mpssaa.org/assets/1/6/Model
Policy for Heat Acclimatization Guideline
s1.pdf](https://www.mpssaa.org/assets/1/6/Model_Policy_for_Heat_Acclimatization_Guidelines1.pdf)



HEAT ILLNESS 2012-13 THROUGH 2020-21

 7% of heat illness were recurrent

 Types of treatment used by medical staff (as reported by the athletic trainer on scene; they were asked to check all that apply)

- Athlete removed from play 85%
- Given fluids by mouth 79%
- Cooled by wet towels/ice bags 61%
- Equipment removed 59%
- Athlete moved to shaded area 58%
- Athlete taken into air conditioning 38%
- Top layer of clothing removed 21%
- Athlete transported to hospital 16%
 - Given IV fluids 12%
- Cooled by ice bath/cold water immersion 12%
- Cooled by fans 10%
- Other methods of cooling 7%
- Athlete received **NO AID** 1%

OVERALL HEAT ILLNESS RATES PER 100,000 ATHLETE EXPOSURES

- Football: 4.58
- Field Hockey: 3.99
- Cross Country(Girls): 2.32
- Soccer (Girls): 1.18
- Cross Country (Boys): 1.16
- Soccer (Boys): 0.38





Reminder:
ALL Coaches must take the
FREE NFHS Course on Heat
Illness Prevention!

***YES: All includes volunteer
coaches***

HEAT ACCLIMATIZATION

Sample Practice Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						Day 1
Rest Day	Day 2	Day 3	Day 4	Day 5	Day 6 Full Contact 1 st two-a-day	Day 7
Rest Day	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13
Rest Day	Day 14	Day 15	Day 16	Day 17	First Play Date	

Note: Shaded days reflect Heat Acclimatization Period

HYDRATION

Incredibly IMPORTANT step in the process is EDUCATION & “reminders”



Pre-hydrate **before** (even a day or two before practice/game)

- 16 to 20 oz. of water or sports beverage at least four hrs before activity
- 8 to 12 oz. of water ten to fifteen minutes before activity



During activity

- Water breaks every 15-20 mins of sustained activity (or more frequently based on environmental conditions)



After activity (this is a CRUCIAL step)

- 16-24 oz. of fluids for EVERY POUND LOST within two hours post activity
 - Sports beverage, chocolate milk, electrolyte replacement drink
 - Something that can replace the nutrients lost through sweating/urine loss



Water is a good **THIRST QUENCHER** but does NOT REPLACE the nutrients lost through sweat & waste removal!

HOW DO I KNOW HOW HYDRATED MY ATHLETES ARE??

The colour and volume of your urine is one of the most accurate signs of your hydration level. Make sure that the colour matches 1-3. Any darker and you will need to drink more.



GOOD



GOOD



FAIR



DEHYDRATED



DEHYDRATED



VERY
DEHYDRATED



SEVERLY
DEHYDRATED

WET BULB GLOBE TEMPERATURE (WBGT) READING

Kestrel LiNK

Get Connected with Kestrel LiNK
Wirelessly access current and historical data with a mobile device.
Retrieve months of stored data for download.

76.8°
Temperature

22.7% 72.7°
Relative Humidity Heat Stress Index

WBGT Out °F
70.7

HEAT STRESS TRACKER

LINK

The image shows a Kestrel LiNK weather station on the left, a smartphone in the center displaying a WBGT reading of 76.8°F, and a person on the right using the device. The background is a baseball field.

WBGT QUESTIONS



Where are the readings done?

- In the same place/location before each practice/game



What it does/why we are using it

- This provides a much more detailed and thorough view of the environmental conditions (more advanced than using JUST the heat index)
- Collection of data including temperature in the sun, relative humidity, wind speed, cloud cover and sun angle



How it works

- Watch the how to video on YouTube
- Download the Kestrel LINK app for your mobile device (Apple App Store or Google Play)



What the information means

- Provides the athletic staff with information that is critical in maintaining a safe practice/game environment



How to record and log the data

- City Schools Heat Participation Log [BCPSS Heat Participation Form](#)



Compliance checks from the IA Office

- Monthly check-ins with athletic directors who will gather this information weekly from each HC

STEP BY STEP PROCESS OF USING THE HEAT STRESS TRACKER

Wet Bulb Globe Thermometer



Temperature Humidity Wind Speed Sun Angle Cloud Cover

[Click Here to Access Video Link](#)

WBGT READING	Flag	Risk for Heat Illness	ACTIVITY GUIDELINES AND REST BREAK GUIDELINES
Under 82.0F	Green	Very Low	Normal activities – Provide at least three separate rest breaks each hour of minimum duration of 5 minutes each during workout.
82.1 F – 86.9 F	Yellow	Low	Use discretion for intense or prolonged exercise; watch at-risk players carefully; Provide at least three separate rest breaks each hour with a minimum duration of 4 minutes each.
87.0 F – 90.0F	Orange	Moderate	Maximum practice time is 2 hours, <u>For Football and Lacrosse</u> : All helmets and shoulder pads must be removed for practice and conditioning activities. If the WBGT rises to this level during practice, football players may continue to work out wearing football pants without changing into shorts. <u>For All Sports</u> : provide at least four separate rest breaks each hour with a minimum duration of 4 minutes each.
90.1 F – 92.0 F	Red	High	Maximum length of practice is 1 hour. <u>For Football and Lacrosse</u> : No protective equipment may be worn during practice and there must be no conditioning activities. <u>For All Sports</u> : there must be no conditioning and there must be 20 minutes of rest breaks distributed throughout the hour of practice.
Over 92.1 F	Black	Very High	NO OUTDOOR WORKOUTS. Delay practice until a cooler WBGT level is reached.

HIGHLIGHTS OF MARYLAND HB0836 FOR COACHES/ADS

- 🏆 Automated External Defibrillator (AED) location, accessibility, training
 - Know where each unit is in proximity to your practice/game venues
 - Know who is trained to use them
 - Identify who will be responsible for the weekly condition check of each unit
- 🏆 Heat Acclimatization for student-athletes
 - Fall student-athletes
 - Following MPSSAA guidelines
 - Cold water immersion for EHS (TACO method)
- 🏆 Emergency Action Plans (EAPs)
 - Thorough & detailed
 - Venue specific
 - Uploaded to website for accessibility; copy saved with Office of IA
 - Visibly posted at each athletic venue (AD's)
 - Who are your trained personnel
 - CPR/AED/First Aid

WHAT CAN “WE” DO TO REDUCE THE RISK?



Hydrate!

- Pre-hydrate before (even a day or two before practice/game)
- During activity
- After activity
 - Something that can replace the nutrients lost through sweating/urine loss



Know the CURRENT environmental conditions at the venue

- Use your WBGT and follow the guidelines
- Follow the IA/MPSSAA heat guidelines



Immediately cool the athlete appropriately based on the severity of the heat illness presented (remember what you heard in our Care & Prevention class!)




Know and practice your venue specific EAP

- Everyone knows their specific role
- Don't be afraid to use student leadership to help coordinate the efforts
 - Team captains, upperclassmen, etc.



**TACO METHOD OFFERS
RAPID COOLING**

 **Health Care**



Click Link to Access Video

TACO Cooling Method


Tarp Assisted Cooling & Oscillation


Video courtesy of the
University of Missouri

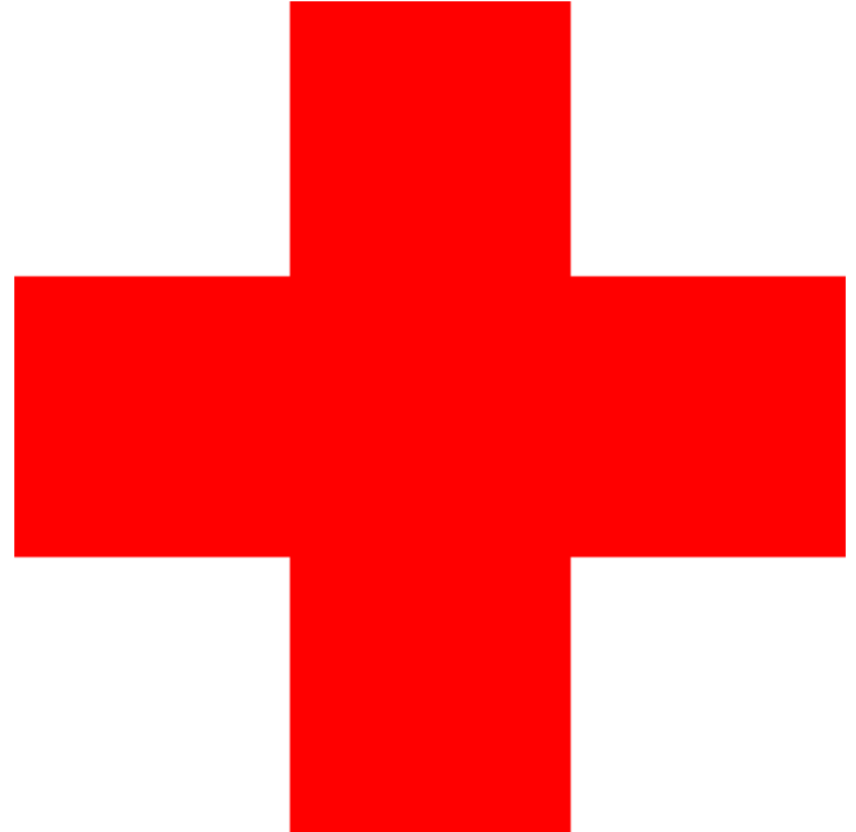
EMERGENCY ACTION PLANS (EAP)

-  Emergency action plans (EAPs) are concrete written plans that outline what to do in the event of a catastrophic injury during any athletic event (practice, conditioning, strength training or competition).
-  Practicing a comprehensive hydration and acclimatization plan minimizes but does not eliminate the risk of heat illness or exertional heat stroke (EHS). Developing, distributing and practicing an effective EAP provides the best chance of survival in the event of a catastrophic event.

EAPs

 It is critical that each school have in place specific preparedness measures should they encounter a heat emergency. Knowing what to do and reviewing specific protocols can minimize potentially catastrophic injuries and death.

 As local conditions render each school setting unique, any emergency plan needs to be tailored to suit individual school needs and should be specific to each venue within each school



EMERGENCY ACTION PLAN



Who is trained??

- CPR/AED/First Aid
- EpiPen/inhaler



Chain of command

- Who does what?
 - Send...to get the AED and med kit
 - Send...to grab the ice, cooler and tarp
 - Send...to the main entrance to direct the ambulance
 - Coach...call 9-1-1 and provide the information they need
 - Captains...huddle up our team over under those trees/on our sideline/in that endzone

WHAT TO TAKE AWAY?

- 🏈 High school football accounts for the most deaths due to EHS
- 🏈 Once heat stroke occurs, you have 30 minutes to effectively cool that athlete
 - **Death from EHS is 100% preventable**
- 🏈 Use the tools at your disposal to help guide your practices/games
 - WBGTT information/guidance
 - What condition are your players in post practice?
 - Rehydrate!
- 🏈 Review and practice your venue specific EAP!
- 🏈 **Your MED KIT & AED should be at EVERY practice and EVERY game NO EXCEPTIONS!**
 - Health & Safety items to be prepared for preseason
 - Fully stocked med kits, coolers for ice AND water, an AED that is in good working condition, tarps, supplies for cooling (ice towels, spray bottles, etc.)

REMINDERS ABOUT PHYSICALS

🏆 City Schools in conjunction with MedStar Health held a successful FREE physicals clinic last Saturday, July 30th, 2022 at their Union Memorial facility. Many City Schools student athletes took advantage of this opportunity.

🏆 Coaches: Please review the uploaded physical forms for ALL of your athletes in Dragonfly BEFORE your first practice!

🏆 Areas of medical concern will be FLAGGED and identified for your review.

- Those student athletes with
 - Asthma (inhalers)
 - Anaphylaxis-level allergies (Epi-Pen)
 - Pre-existing medical conditions to be aware of
 - How will that modify what they can/can not do



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- 🏆 Dr. Neha P. Raukar, MD
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- 🏆 National Athletic Trainers Association
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- 🏆 Baltimore City Public Schools-Office of Interscholastic Athletics