

## MINUTES OF THE IHSA SPORTS MEDICINE ADVISORY COMMITTEE MEETING

**April 20, 2016**

The IHSA Sports Medicine Advisory Committee met at the IHSA office in Bloomington, Illinois on Wednesday, April 20, 2016, beginning at 10:00 a.m. Committee members present were William Dill, Dr. Richard Everett, Gregory Gaa, Dr. Cynthia LaBella, Liz Short; David Vieth, and Dr. Preston Wolin. Also in attendance were Associate Executive Director Kurt Gibson and guests Kelly Altom and IATA representative Phil Dryer, Tinley Park (Andrew). Not present was member Dr. James Green.

### **RECOMMENDATIONS:**

1. Continuation of the IHSA PES Testing Program

**Recommendation:** The committee recommends the continuation of the IHSA PES Testing Program.

**Rationale:** The committee believes the PES Testing Program is still an important initiative and continues to serve an important role in helping student-athletes make good decisions regarding their training for interscholastic sports.

**Approved**

2. **Specific Guidelines for Managing Heat and Heat Illness**

**Recommendation:** The committee recommends the adoption of specific guidelines for managing heat and heat illness. ([Managing Heat and Heat Illness guidelines link](#))

**Rationale:** Knowing that heat-related illness or injury is preventable, the committee believes that adopting the following guidelines for all IHSA state series events is appropriate. Implementation of these guidelines should not create an undue burden on managers and will follow similar procedures member schools are using for practices and regular season contests. If approved, these guidelines would be posted in all IHSA sport-specific manuals for managers, replacing the current section entitled, "Prevention of Heat Illness Guidelines."

**Approved**

### **ITEMS OF GENERAL DISCUSSION:**

1. The committee reviewed the minutes of their December 2015 meeting.

2. The committee reviewed the minutes of the March 2016 Play Smart! Play Hard! Player Safety Advisory Council. As a part of that review, the committee discussed the following topics:
  - a. *Addressing mental health issues of student-athletes*: the committee discussed ways through a survey or focus group the IHSA could try to identify what stressors students are facing; they also discussed putting together a list of resources students, parents, and schools could review; the committee thought the SAC could be a great group to partner with to work on this topic
  - b. *Skin issues*: the committee reinforced the importance of officials conducting skin checks prior to the start of meets, invites, tournaments, etc., as well as the importance of making sure equipment and practice and competition areas are consistently and properly cleaned; the committee also suggested that an emphasis be placed on starting the season clean by encouraging coaches to conduct skin checks at the start of the season and continuing throughout the season
  - c. *College Football Safety Summit recap*: IHSA Staff shared with the committee recent developments regarding full contact by Ivy League schools beginning next season
  - d. *Concussion Biomarkers*: IHSA staff shared with the committee some concussion biomarkers that are being piloted by the Big 10 and Ivy League Conferences. Brain markers and hearing tests are two such biomarkers that are showing the possibility of having some scientific value through some early studies
  - e. *NATA 'Safe Schools' program*
  - f. *Concussion Management recap*: the committee acknowledged that tools like those listed below are sometimes helpful in concussion management and could be used by those schools who have the means to implement them; however, the committee also stressed the importance that member schools understand the limitations of these tools in that they are not stand-alone tests that can either make a diagnosis of concussion or determine readiness for return to play.
    - i. King-Devick
    - ii. C3 Logix
3. The committee reviewed reports submitted by contest officials this year following contests in which student-athletes were removed from contests with possible head injuries. Through March 22nd, 336 students had been removed from contests during the 2015-16 school year, and of those, 288 (86%) student-athletes did not return to the same contest.
4. The committee reviewed reports that have been submitted by schools that utilize (in some capacity) an athletic trainer regarding concussions sustained by student-athletes at IHSA member schools. As of February 1st, 652 concussions had been reported, with about an equal number of those reported occurring in practice sessions and games. In total, 52% of the IHSA membership has reported using the services of an athletic trainer in some capacity.

5. The committee reviewed the association's PPE form and found no reason to change it at this time.
6. The committee suggested IHSA staff work with a member school to craft a by-law proposal for next year that would make the use of the association's PPE mandatory for all student-athletes. The committee also suggested trying to see if the state form for in-coming freshmen (i.e., 9th graders) could be 'merged' with the IHSA form so only one form for school enrollment and athletic participation would need to be used.
7. The committee heard a presentation from Kelly Altom regarding the possibility of establishing a body fat assessor certification/recertification scheme that would require IHSA Body Fat Assessors to attend an in-person, "live" three hour training program every four (4) years and pass an annual online home-study exam to maintain certification. The committee, which had approved this previously, again pledged its support for the recertification scheme.
8. The committee agreed to reconvene on June 1 to further review the four (4) programs that have been submitted by outside groups wishing to become approved concussion education providers as allowed for in the Youth Sports Concussion Safety Act.
9. As a part of their ongoing discussion regarding weekly quarter limitations for high school football, the committee requested IHSA staff reach out to the Illinois FB Coaches Association to have their leadership and/or membership offer a suggested limit(s) for the SMAC to review at their December meeting. The committee continues to believe this is an important topic and believes getting more broad-based input from the football coaching community is critical.
10. The committee reviewed a presentation submitted by Player's Health, a provider of health/injury management services for schools or institutions. The committee was appreciative of the presentation and think groups like these offer good solutions for schools with the means to utilize those services.
11. The committee discussed the growing problem of overuse injuries by K-12 student-athletes. The committee discussed ways to advocate for students (possibly through a position statement) and agreed to make this a part of their December meeting.
12. Dr. Preston Wolin agreed to represent the SMAC at the Baseball Advisory Committee meeting in August to discuss recent steps taken in Alabama concerning pitch counts.
13. The committee thanked outgoing members Short and Vieth for their service.

## Managing Heat and Heat Illness (draft)

These guidelines represent minimum standards that IHSA member schools should follow for athletic competitions. Schools with more restrictive guidelines are not expected to modify any pre-existing guidelines in order to meet this policy. These guidelines will be used during by managers or their designees at all IHSA state series events when the Wet Bulb Globe Temperature (WGBT) is above 80 degrees Fahrenheit. State series tournament managers will make the decisions to suspend and resume activity in accordance with these guidelines using those devices or systems usually used at the state series venue/site.

1. Thirty minutes prior to the start of an activity, and again 60 minutes after the start of the activity, temperature and humidity readings will be taken at the site of the activity. Using a Wet Bulb Globe Thermometer is recommended, although a conversion to WGBT can be made from air temperature and relative humidity using chart 2. Record the readings in writing and maintain the information in files of the tournament manager and/or host school administration. Tournament managers may designate someone other than themselves to take these readings. Use the Table 1 (see below) with an on-site WGBT reading for appropriate exercise modifications during exercising in the heat:

**Table 1**

<p><b>a. ≤79.9 degrees F</b></p> <ol style="list-style-type: none"><li>i. All sports<ol style="list-style-type: none"><li>1. Provide ample amounts of water. This means that water should always be available and athletes should be able to take in as much water as they desire.</li><li>2. Optional water breaks every 30 minutes for 10 minutes in duration. Coordinate breaks with assigned contest officials.</li><li>3. Ice-down towels for cooling.</li><li>4. Watch/monitor athletes carefully for necessary action.</li></ol></li></ol> <p><b>b. 80.0-84.5 degrees F</b></p> <ol style="list-style-type: none"><li>i. All sports<ol style="list-style-type: none"><li>1. Provide ample amounts of water. This means that water should always be available and athletes should be able to take in as much water as they desire.</li><li>2. Optional water breaks every 30 minutes for 10 minutes in duration. Coordinate breaks with assigned contest officials.</li><li>3. Provide cooling stations using methods such as ice towels.</li><li>4. Watch/monitor athletes carefully for necessary action</li></ol></li><li>ii. Contact sports and activities with additional protective equipment (in addition to the above measures)<ol style="list-style-type: none"><li>1. Helmets and other possible equipment removed while not involved in contact.</li></ol></li><li>iii. Reduce time of outside activity. Consider postponing activity to later in the day.</li><li>iv. Recheck air temperature and humidity every 30 minutes to monitor for increased Heat Index or sooner if personnel on the field suspects potential heat stress.</li></ol> <p><b>c. 84.6-87.5 degrees F</b></p> <ol style="list-style-type: none"><li>i. All sports<ol style="list-style-type: none"><li>1. Provide ample amounts of water. This means that water should always be available and athletes should be able to take in as much water as they desire.</li></ol></li></ol>
--

2. Schedule at least 4 separate 4:00 breaks within each hour, or a 10:00 break every 30:00 of training or competition.
  3. Coordinate breaks with assigned contest officials.
  4. Have cooling stations for before, during, and after exercise/training/competition.
  5. Watch/monitor athletes carefully for necessary action
  6. Reduce time of outside activity as well as indoor activity if air conditioning is unavailable.
  7. Consider postponing activity to later in the day or another day (with approval from IHSA Administration)
  8. If practicing, maximum of 2 hours of training/practice while temperature is in this range.
- ii. Contact sports and activities with additional protective equipment (in addition to the above measures)
    1. Helmets and other possible equipment removed if not involved in activity or necessary for safety. If necessary for safety, suspend activity.
  - iii. Recheck air temperature and humidity every 30 minutes to monitor for increased Heat Index.

**d. 87.6-89.9 degrees F**

- i. All sports
  1. Provide ample amounts of water. This means that water should always be available and athletes should be able to take in as much water as they desire.
  2. Schedule at least 4 separate 4:00 breaks within each hour, or a 10:00 break every 30:00 of training or competition.
  3. Coordinate breaks with assigned contest officials.
  4. Have cooling stations for before, during, and after exercise/training/competition.
  5. Watch/monitor athletes carefully for necessary action
  6. Reduce time of outside activity as well as indoor activity if air conditioning is unavailable.
  7. Consider postponing activity to later in the day or another day (with approval from IHSA Administration)
  8. If practicing, maximum of 2 hours of training/practice while temperature is in this range.
- ii. Contact sports and activities with additional protective equipment (in addition to the above measures)
  1. Helmets and other possible equipment removed if not involved in activity or necessary for safety. If necessary for safety, suspend activity.
- iii. Recheck air temperature and humidity every 30 minutes to monitor for increased Heat Index.

**e. 90 degrees F**

- i. All sports
  1. No training/competition
  2. Cancel and/or postpone activity to cooler time of the day

NOTE: While most attention will be given to outdoor sports in the fall and spring, indoor venues/facilities (gymnasiums, wrestling rooms, and swimming/diving facilities) that are not air conditioned should not be neglected for the purposes of this policy. Additionally, sometimes conditions

will vary for different aspects of the same competition. For example, one part of a cross-country course may be hotter or more humid than other parts. The best course of action for managers is to take the heat index at the place of the most severe conditions.

**Table 2.** Estimate WBGT from ambient temperature and relative humidity assuming full sun conditions

Wet Bulb Globe Temperature (WBGT) from Temperature and Relative Humidity																															
Temperature in Degrees Fahrenheit																															
	68.0	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2	104.0	105.8	107.6	109.4	111.2	113.0	114.8	116.6	118.4	120.2	122.0
0	59.0	60.8	60.8	62.6	64.4	64.4	66.2	66.2	68.0	68.0	69.8	71.6	71.6	73.4	73.4	75.2	75.2	77.0	78.8	80.6	80.6	82.4	82.4	84.2	84.2	86.0	87.8	87.8	89.6	89.6	
5	60.8	60.8	62.6	64.4	64.4	66.2	66.2	68.0	69.8	69.8	71.6	71.6	73.4	75.2	75.2	77.0	78.8	80.6	80.6	82.4	84.2	84.2	86.0	87.8	87.8	89.6	91.4	91.4	93.2	95.0	
10	60.8	62.6	62.6	64.4	66.2	66.2	68.0	69.8	69.8	71.6	73.4	73.4	75.2	77.0	77.0	78.8	80.6	80.6	82.4	84.2	86.0	86.0	87.8	89.6	89.6	91.4	93.2	95.0	96.8	96.8	
15	62.6	62.6	64.4	66.2	66.2	68.0	69.8	69.8	71.6	73.4	73.4	75.2	77.0	78.8	78.8	80.6	82.4	84.2	84.2	86.0	87.8	89.6	91.4	91.4	93.2	95.0	96.8	98.6	100.4	102.2	
20	62.6	64.4	64.4	66.2	68.0	69.8	69.8	71.6	73.4	75.2	75.2	77.0	78.8	80.6	80.6	82.4	84.2	86.0	87.8	89.6	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2			
25	64.4	64.4	66.2	68.0	68.0	69.8	71.6	73.4	75.2	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	98.6	100.4	102.2					
30	64.4	66.2	68.0	68.0	69.8	71.6	73.4	73.4	75.2	77.0	78.8	80.6	82.4	84.2	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	102.2							
35	64.4	66.2	68.0	69.8	71.6	73.4	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2								
40	66.2	68.0	69.8	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2									
45	66.2	68.0	69.8	71.6	73.4	75.2	77.0	78.8	80.6	80.6	82.4	84.2	86.0	89.6	91.4	93.2	95.0	96.8	98.6	100.4											
50	68.0	69.8	71.6	73.4	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	91.4	93.2	95.0	96.8	98.6	102.2												
55	68.0	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	93.2	95.0	96.8	98.6	100.4													
60	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	95.0	96.8	98.6	100.4														
65	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	87.8	89.6	91.4	93.2	96.8	98.6	100.4															
70	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	91.4	93.2	95.0	96.8	100.4	102.2															
75	71.6	73.4	75.2	77.0	78.8	80.6	84.2	86.0	87.8	89.6	91.4	95.0	96.8	98.6	102.2																
80	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	89.6	91.4	93.2	96.8	98.6	100.4																	
85	73.4	75.2	77.0	78.8	82.4	84.2	86.0	87.8	89.6	93.2	95.0	98.6	100.4	102.2																	
90	75.2	77.0	78.8	80.6	82.4	84.2	87.8	89.6	91.4	95.0	96.8	98.6	102.2																		
95	75.2	77.0	78.8	80.6	84.2	86.0	87.8	91.4	93.2	95.0	98.6	100.4																			
100	75.2	78.8	80.6	82.4	84.2	87.8	89.6	91.4	95.0	96.8	100.4	102.2																			

NOTE: This table is compiled from an approximate formula which only depends on temperature and humidity. The formula is valid for full sunshine and a light wind. Table adapted from Bureau of Meteorology

### Cooling Methods Due to Heat Related Illness

Exertional heat stroke (EHS) is relatively uncommon among exercise associated medical conditions, but is a frequent cause of exercise related death. The majority of evidence shows that early institution of body cooling is the most effective method of decreasing mortality in EHS. The following contains recommendations regarding the methods of body cooling, including tubs, ice bags, iced towels (towels with water that have been frozen) water, fans, and shade. The recommendations are classified as essential (foundational to the implementation of treatment, should have resources and personnel directed towards implementation), and desirable (important in maximal implementation, should have resources and personnel directed towards implementation as budget and resources allow). The recommendations are only guidelines, are not intended as a standard of care, and should not be considered as such. These guidelines should only be considered in the care of athletes who can be expected to be at risk of EHS due to the sport or the environmental situation of the activity. Sports especially at risk include football with and without equipment, soccer, and long distance track. Other sports and activities, such as cycling, golf, baseball, tennis, track and field, and band, may also be at risk due to long duration exposure to extreme environmental conditions.

It is essential that member schools and school administrators/officials:

- Establish a written plan coordinated with local EMS for emergency treatment of EHS that includes transport to a hospital and conduct drills in the implementation of the plan as practicable.
- Know how to assess environmental conditions and determine when extreme conditions exist.
- Identify a specific spot at the athletic facility that has shade.
- Have immediate access to ice and bags to contain ice.

- Have access to water, and provide water breaks as outlined in the IHSA Managing Heat and Humidity Policy.
- Know the most effective sites for application of ice to the body.
- Obtain and use, when environmental conditions are determined to be extreme, a tub or pool, filled with water and ice before activity begins, to be used in body immersion for maximal cooling, and have personnel trained in this technique.

It is desirable that member schools and school administrators/officials:

- Have a certified athletic trainer (ATC) on staff, as budget and resources allow, to develop and implement these guidelines.
- Have immediate access to water.
- Provide shade breaks.
- Provide fans when environmental conditions are determined to be extreme.
- Have close access to an air conditioned room.
- Have access to and use iced towels that can be rotated to appropriate areas of the body, including the axilla, groin, and back of the neck.

#### Resources

1. *Procedure for Avoiding Heat Injury/Illness through Analysis of Heat Index and Restructuring of Activities and Recommendations for Cooling Methods Due to Heat Related Illness.* Kentucky Medical Association/Kentucky High School Athletic Association. 2010.
2. Binkley HM et al. *NATA Position statement: Exertional heat illness.* J Ath Training 2002; 37: 329-343.
3. Casa DJ et al. *Survival strategy: Acute treatment of exertional heat stroke.* J Strength Conditioning Res 2006; 20: 462.
4. Armstrong LE et al. *ACSM position stand: Exertional heat illness during training and competition.* Med Sci Sports Exerc 2007; 41: 556-572.
5. *Model Policy for Managing Heat & Humidity.* Michigan High School Athletic Association. 2013.