



Kentucky High School Athletic Association

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KENTUCKY MEDICAL ASSOCIATION / KENTUCKY HIGH SCHOOL ATHLETIC ASSOCIATION PROCEDURE FOR AVOIDING HEAT INJURY / ILLNESS THROUGH ANALYSIS OF HEAT INDEX AND RESTRUCTURING OF ACTIVITIES

Complete listing of support documents available at <http://www.khsaa.org/sportsmedicine/>

Original Procedure Made by the Kentucky Medical Association Committee on Physical Education and Medical Aspects of Sports to and for the Kentucky High School Athletic Association and adopted by the KHSAA Board of Control as recommendation for all schools, May, 2002

On site Procedures Revised by KHSAA Board of Control, February 13, 2003

On site procedures further Revised and Made Mandatory for all schools by the KHSAA Board of Control, May, 2005

On site procedures further revised with respect to testing instruments, March, 2007

INTRODUCTION

Following months of study, after one year of implementation and in an effort to help protect the health and safety of student-athletes participating in high school sports, the Kentucky Medical Association Committee on Physical Education and Medical Aspects of Sports issued a recommended procedure to the Kentucky High School Athletic Association for immediate implementation in 2002. This procedure called for the determination of the Heat Index (using on site devices to measure Temperature and Relative Humidity), and a guideline for activity to be conducted at that time based on the Heat Index reading. Though other procedures and measurements were considered, the application of the Heat Index appeared to be most readily implementable on a state wide basis, and appeared to be reliably tested in other areas.

Through the first five years of use of the procedure, minor adjustments were made in the reporting requirements, and the on site devices to be used. In May, 2005, the Board of Control through its policies directed that all member school comply with the testing and reporting requirements. In October, 2006, the member schools of the Association overwhelming approved at their Annual Meeting, a proposal to make such reporting not simply a Board of Control policy, but a school supported and approved Bylaw as it approved Proposal 9 to amend KHSAA Bylaw 17 (full details are available at

<http://www.khsaa.org/annualmeeting/20062007/annualmeetingproposals20062007.pdf>)

In March, 2007, the Kentucky Medical Association Committee on Physical Education and Medical Aspects of Sports recommended the elimination of all devices with the exception of the Digital Sling Psychrometer as a means of measuring at the competition/practice site.

GENERAL PROCEDURE

The procedure calls for the determination of the Temperature and Relative Humidity at the practice / contest site using a Digital Sling psychrometer. It is important to note that media-related temperature readings (such as the Weather Channel, local radio, etc.), or even other readings in the general proximity are not permitted as they may not yield defensible results when considering the recommended scale. The readings must be made at the site.

Neither the KHSAA nor KMA has endorsed any particular brand of psychrometer and receives no endorsement fee or other consideration for any device sold. There are several models on the market that will properly perform the functions, including companies such as Medco and others. The KHSAA or your local Certified Athletic Trainer has easy access to catalogs with this type of equipment. In addition, the KHSAA web site has a variety of links to various dealers.

INDOOR AND OUTDOOR VENUES

While much of the original discussion concerning this package centered on outdoor sports, the Kentucky Medical Association Committee on Physical Education and Medical Aspects of Sports has advised the KHSAA that indoor sports, particularly in times of year or facilities where air conditioning may not be available, should be included in the testing. Such has been approved by the Board of Control as policy requirement. The recommendations contained in this package clearly cover both indoor and outdoor activity, as well as contact and non-contact sports.

PROCEDURE FOR TESTING

Thirty (30) minutes prior to the start of activity, temperature and humidity readings should be taken at the practice / competition site.

The information should be recorded on KHSAA Form GE20 and these records shall be available for inspection upon request. All schools will be required to submit this form. For 2007, there will be online reporting for submitting this form.

The temperature and humidity should be factored into the Heat Index Calculation and Chart and a determination made as to the Heat Index. If schools are utilizing a digital sling psychrometer that calculates the Heat Index, that number may be used to apply to the regulation table.

If a reading is determined whereby activity is to be decreased (above 95 degrees Heat Index), then re-readings would be required every thirty (30) minutes to determine if further activity should be eliminated or preventative steps taken, or if an increased level of activity can resume.

Using the following scale, activity must be altered and / or eliminated based on this Heat Index as determined –

Under 95 degrees Heat Index	<ul style="list-style-type: none"> ❖ All sports <ul style="list-style-type: none"> ➤ 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. ➤ Optional water breaks every 30 minutes for 10 minutes in duration ➤ Ice-down towels for cooling ➤ Watch/monitor athletes carefully for necessary action.
95 degrees to 99 degrees Heat Index	<ul style="list-style-type: none"> ❖ All sports <ul style="list-style-type: none"> ➤ 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. ➤ Mandatory water breaks every 30 minutes for 10 minutes in duration ➤ Ice-down towels for cooling ➤ Watch/monitor athletes carefully for necessary action. ❖ Contact sports and activities with additional equipment <ul style="list-style-type: none"> ➤ Helmets and other possible equipment removed while not involved in contact. ❖ Reduce time of outside activity. Consider postponing practice to later in the day. ❖ Re-check temperature and humidity every 30 minutes to monitor for increased Heat Index.
100 degrees to 104 degrees Heat Index	<ul style="list-style-type: none"> ❖ All sports <ul style="list-style-type: none"> ➤ 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. ➤ Mandatory water breaks every 30 minutes for 10 minutes in duration ➤ Ice-down towels for cooling ➤ Watch/monitor athletes carefully for necessary action. ➤ Alter uniform by removing items if possible ➤ Allow for changes to dry t-shirts and shorts. ➤ Reduce time of outside activity as well as indoor activity if air conditioning is unavailable. ➤ Postpone practice to later in day. ❖ Contact sports and activities with additional equipment <ul style="list-style-type: none"> ➤ Helmets and other possible equipment removed if not involved in contact or necessary for safety. If necessary for safety, suspend activity. ❖ Re-check temperature and humidity every 30 minutes to monitor for increased Heat Index.
Above 104 degrees Heat Index	<ul style="list-style-type: none"> ❖ All Sports <ul style="list-style-type: none"> ➤ Stop all outside activity in practice and/or play, and stop all inside activity if air conditioning is unavailable.

This procedure is to be used until such time as the temperature is below 80 degrees as no combination of heat and humidity at that level will result in a need to curtail activity. The KHSAA will use September 15 as the standard date for the return of the Heat Index forms but reminds its member schools that the monitoring shall continue until such a time that no combination of heat and humidity at that level will result in a need to curtail activity.

SUMMARY

Though much more scientific information and other alternative methods for determining Heat Index and participation restrictions are being studied, these initial steps should help ensure the health and safety of the participants in high school sports. Adherence to these guidelines represents a conscious effort by the interscholastic community to emphasize health and safety on a much higher level than any loss of competitive preparation. Any further revisions or enhancements will be distributed to the members of the KHSAA.