



The NFHS Voice



Preparing for the Heat as High School Sports, Other Activities Begin

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By the end of this month, high school students will be returning from the summer break and beginning preparations for another year of participation in high school sports and other activity programs.

In the outdoor fall sports and activities of football, cross country, soccer, field hockey and marching band, more than 3.5 million students will be gearing up for another season of competition and performances.

As is usually the case this time of year, heat and its effects dominate the headlines in many parts of the country. So, as practices begin in the coming weeks, preparations must include a return to one of the basic tenets of high school sports and other activity programs – minimizing risk of injury for everyone involved in these programs.

Coaches, athletic administrators and athletic trainers must have effective prevention plans in place so that student participants are fully protected from heat-related illnesses and injuries. With regard to heat-related deaths in football, the emphasis must continue on an annual basis.

According to the National Center for Catastrophic Sports Injury Research (NCCSIR), during the most recent five-year period (2017-2021), football averaged 2.4 Exertional Heat Stroke (EHS) deaths per year, up from 1.4 per year during the previous five-year period (2012-2016). This increase supports urgent efforts to educate coaches, school administrators, medical providers, players and parents concerning the proper procedures and precautions when practicing or playing in the heat.

Regarding the heatstroke deaths the past five years, the NCCSIR report urges appropriate oversight and monitoring of conditioning sessions and precautions for lineman positions in football. Five of the 11 deaths occurred during conditioning sessions, and nine of the 11 deaths were linemen.

Although there are about one million participants in high school football annually, one heatstroke death is too many because EHS is preventable. It is, in fact, the leading cause of preventable death in high school athletics.

In addition to football and other outdoor fall sports, participants in marching band are just as susceptible to the effects of heat illness. Like their counterparts on the athletic fields, band directors should provide for a slow and progressive period of acclimatization prior to marching season.

The NFHS, through its Sports Medicine Advisory Committee (SMAC) and the NFHS Learning Center, offers many educational tools to assist schools in developing a proper heat acclimatization and heat illness prevention program. In

addition, many state associations have developed state-specific guidelines for dealing with heat issues and safety challenges.

The SMAC has developed a "[Heat Acclimatization and Heat Illness Prevention Position Statement](#)" which is available on the NFHS website. This document contains seven fundamentals of a Heat Acclimatization Program. In addition, the SMAC's "[Position Statement and Recommendations for Maintaining Hydration to Optimize Performance and Minimize the Risk for Exertional Heat Illness](#)" is also available on the sports medicine page of the NFHS website.

In addition, the NFHS offers a **free** online course entitled [Heat Illness Prevention](#). This course, which is available at www.nfhslearn.com, also reviews the seven fundamentals of a Heat Acclimatization Program. In addition, to address the necessary precautions for participants in marching band, the NFHS has a free course entitled [Band Safety](#).

Among the fundamentals of a Heat Acclimatization Program are 1) a slow progression in activity level – duration and intensity; 2) adjusting workouts as heat and humidity increase, including close monitoring and a prompt response to developing problems; and 3) proper hydration.

Three other Learning Center courses should be a part of the preseason tutorials for all key members of the school's team: [The Collapsed Athlete](#), [Sudden Cardiac Arrest](#) and [Concussion in Sports](#).

As an additional resource, earlier this year the NFHS Foundation announced a grant program to distribute 5,000 wet bulb globe thermometers (WBGT) to high schools across the country. The WBGT measures the heat stress in direct sunlight, accounting for temperature, humidity, wind speed, sun angle and cloud cover. High schools can use the thermometer's reading to help determine if the weather is appropriate to hold outdoor activities.

While coaches only have a prescribed number of practices before that first contest in fall sports, the rush to have the team in prime shape for the first game cannot come at the expense of the players' health. The varying physical conditions of players must be considered, and special attention should be directed to higher-risk students.

Deaths from EHS will not be eliminated unless school leaders make this a top priority. We encourage every athletic coach and band director to take the **free** online courses – *Heat Illness Prevention* and *Band Safety* – at www.nfhslearn.com. It could be the best investment of time this year.

Dr. Karissa L. Niehoff is in her fourth year as chief executive officer of the National Federation of State High School Associations (NFHS) in Indianapolis, Indiana. She is the first female to head the national leadership organization for high school athletics and performing arts activities and the sixth full-time executive director of the NFHS. She previously was executive director of the Connecticut Association of Schools-Connecticut Interscholastic Athletic Conference for seven years.