
SENATE COMMITTEE ON EDUCATION

Senator Josh Newman, Chair

2023 - 2024 Regular

Bill No:	AB 1653	Hearing Date:	June 28, 2023
Author:	Sanchez		
Version:	March 30, 2023		
Urgency:	No	Fiscal:	Yes
Consultant:	Kordell Hampton		

Subject: Interscholastic athletic programs: emergency action plans: heat illness: guidelines

SUMMARY

This bill requires the California Interscholastic Federation (CIF), in consultation with the California Department of Education (CDE), to develop guidelines, procedures, and safety standards for the prevention and management of exertional heat illness, as specified, by July 1, 2024

BACKGROUND

Existing Law:

Education Code (EC)

- 1) Requires each high school sports coach to complete a coaching education program developed by their school district or the California Interscholastic Federation (CIF) that meets the guidelines outlined in the California High School Coaching Education and Training Program (CHSCTP). (EC § 49032)
- 2) States that the Legislature intends that school districts administer CHSCTP and emphasizes the following components:
 - a) Development of coaching philosophies consistent with school, school district, and governing board of a school district goals.
 - b) Sport psychology: emphasizing communication, reinforcement of pupils' efforts, effective delivery of coaching regarding technique and motivation of the pupil athlete.
 - c) Sport pedagogy: how pupil athletes learn and how to teach sports skills.
 - d) Sport physiology: principles of training, sports fitness, development of a training program, nutrition for athletes, and the harmful effects of using steroids and performance-enhancing dietary supplements by adolescents.
 - e) Sport management: team management, risk management, and working within a school program context.

- f) Training: certification in CPR and first aid, including, but not limited to, a basic understanding of the signs and symptoms of concussions and heat illness and the appropriate response to concussions and heat illness. Concussion or heat illness training may be fulfilled through entities offering free, online, or other training courses. “Heat illness” includes cramps, syncope, exhaustion, and exertional heat stroke.
 - g) Knowledge of and adherence to statewide rules and regulations, as well as school regulations, including, but not necessarily limited to, eligibility, gender equity, and discrimination.
 - h) Sound planning and goal setting. (EC § 35179.1(c))
- 3) Specifies that the CHSCTP does not endorse a particular coaching education or training program. (EC § 35179.1)
 - 4) Requires an LEA or charter school that elects to offer any interscholastic athletic program, the governing board of the school district or the governing body of the charter school shall ensure that there is a written emergency action plan in place that describes the location and procedures to be followed in the event of sudden cardiac arrest and other medical emergencies related to the athletic program’s activities or events. (EC § 35179.4.)

ANALYSIS

This bill requires the CIF, in consultation with the CDE, to develop guidelines, procedures, and safety standards for the prevention and management of exertional heat illness, as specified, by July 1, 2024. Specifically, this bill:

- 1) Requires CIF, in consultation with CDE, to develop guidelines, procedures, and safety standards for the prevention and management of exertional heat illness.no later than July 1, 2024.
- 2) Specifies guidelines developed by CIF must identify the environmental conditions at which a school shall limit and prohibit the practice and play and include information regarding the accurate measurement of environmental heat stress at the site of the athletic activity, including the use of Wet Bulb Globe Temperature (WBGT) to determine ambient temperature, relative humidity, wind speed, and solar radiation from the sun, including sun angle and cloud cover.
- 3) Specifies that the guidelines developed by CIF must identify the environmental conditions at which a school shall have a method to institute whole-body cooling to treat a student-athlete with exertional heat illness, especially heat stroke, that is easily accessible at all practice and contest venues.

STAFF COMMENTS

- 1) ***Need for the bill.*** According to the author, “

- 2) **What is Heat Illness?** Heat Illness is a severe medical condition resulting from the body's inability to cope with a particular heat load and includes heat cramps, heat exhaustion, heat syncope, and heat stroke

What Happens to the Body. According to the Department of Industrial Relations, "Humans must maintain their internal body temperature within a few degrees above or below 98.6° F. People suffer from heat illness when their bodies cannot get rid of excess heat and adequately cool. The body loses its "heat balance" because it can not shed heat quickly enough.

The blood vessels get more significant when the body overheats and the heart beats faster and harder. More blood flows to the outer layers of the skin from the internal "core" so that the heat can be released into the cooler outside environment. If this process does not cool the body fast enough, or the outside air is warmer than the skin, the brain triggers sweating to cool the body. Sweat glands in the skin draw water from the bloodstream, making sweat. The sweat evaporates and releases the heat from the body. During an hour of heavy work in hot weather, the body can easily sweat out one quart of water.

Shifting blood to outer body layers (the "shell") causes less blood to go to the brain, muscles, and other organs (the "core"). Prolonged sweating can deplete the body of water and salt, causing dehydration. Muscle cramping may occur because the body loses water and the salts needed for the muscles to work. The physiological strain on the body from heat illness may cause the person to become dehydrated, weak, tired, and confused.

As dehydration worsens, the body can no longer keep its temperature within the normal range, sweating stops and severe heat illness occurs. In heatstroke, the person's body temperature rises rapidly, damaging the brain, muscles, and vital organs, causing death."

On June 1, 2018, AB 2800 (Chu), Chapter 21, Statutes of 2018 - was signed into law by Governor Brown, which requires coaches, when renewing their CPR/FIRST AID, Concussion and Sudden Cardiac Arrest (SCA) certification that they also complete separate training in the signs and symptoms of heat illness. Information about heat illness (prevention and treatment) can be found on CIF's website.

According to CIF's 2022-23 Constitution and Bylaws, "A student-athlete who exhibits signs of heat illness while participating in, or immediately following, an athletic activity must be removed immediately from participating in a practice or game for the remainder of the day. A student-athlete who has been removed from play after displaying signs and symptoms associated with heat illness may not return to play until the athlete is evaluated by a licensed health care provider and receives written clearance to return to play from that health care provider. On a yearly basis, a Heat Illness information sheet shall be signed and returned by all athletes and the athlete's parent(s)/guardian(s)/caregiver before the athlete's initial practice or competition."(Article 50, Bylaw 503(K))

- 3) **How Wet Bulb** Globe Temperature Can Help Prevent Heat Illness. According to the National Weather Service, "WBGT is a measure of the heat stress in direct

sunlight, which takes into account: temperature, humidity, wind speed, sun angle, and cloud cover (solar radiation). This differs from the heat index, which considers temperature and humidity and is calculated for shady areas.”

As environmental temperature and humidity increase, there is an increase in the heat stress that is placed on the exercising individual. Exercise in the heat causes athletes to rely on the evaporation of sweat from the skin as the primary method of dissipating heat produced by the working muscles. As humidity increases, the ability to dissipate heat through evaporation is further hindered, thus causing the body to have an increased body temperature, which increases the risk of heat illness.

According to CIF’s website, “Coaches should ideally be aware of the Web Bulb Globe Temperature which measures not only temperature and humidity (the "heat index") but also wind speed, sun angle, and cloud cover. The WBGT is the most accurate measure of environmental heat stress. For example, the higher the temperature and humidity, with minimal wind and cloud cover, and with the sun directly overhead at 12 noon, the higher the WBGT and the more difficult for the body to cool itself. Knowing the WBGT using a device or an estimation (go to "Wet Bulb Globe Temperature Monitoring" below) will guide precautions for athletic activity. Athletes with heat illness risk factors should be closely supervised during strenuous activities, especially in hot and/or humid conditions.”

- 4) ***Training Requirements Currently Set By CIF.*** According to CIF’s website, “The purpose of the CIF Coaching Education Program is to enhance student-athletes experience by assuring their coaches meet a minimum level of professional training. The program provides strong, pragmatic, and comprehensive instruction for coaches of interscholastic athletics in California consistent with the highest national standards set by the legislature, state Department of Education, California Interscholastic Federation, and National Federation of State High School Associations.”

Primary Requirements. The prior requirements for coaching high school sports in California:

- A General Coaching Education Course;
- A Concussion Course;
- Sudden Cardiac Arrest;
- Heat Acclimatization Course; and
- First Aid and CPR Certification.

Courses to meet these requirements are posted on CIF’s website. Training is provided by **the** National Federation of State High School Associations (NFSH), Human Kinetics Coach Education (HKCE), and the American Society of Exercise Physiologists (ASEP) websites. In addition to the requirements above, cheer coaches must complete The Cheer and Dance Safety Certification course through the NFHS and USA Cheer.

- 5) ***Who Receives Training?*** Existing law requires each high school sports coach to complete a coaching education program developed by their school district or the

CIF that meets the guidelines outlined in the CHSCTP. Additionally, CIF Bylaw 22.B. (9) defines a coach, either paid or unpaid, as “any individual that the school/district is required to approve under California Education Code 33190-33192, 45125.01 and 45125.1.” According to the CIF, “Simply stated, the law applies to anyone who must be fingerprinted and is approved by their local school board/directors to have contact with students. This applies to all CIF member schools, public and private.”

6) **Related Legislation**

AB 245 (McKinnor, 2023) would add to the California High School Coaching Education and Training Program (CHSCTP) by July 1, 2024, training in recognizing and responding to the signs and symptoms of concussions, heart illness, and cardiac arrest.

AB 2800 (Chu), Chapter 21, Statutes of 2018, added requirements to the CHSCTP for training on understanding the signs and symptoms of heat illness and the appropriate response.

AB 2009 (Maienschein), Chapter 646, Statutes of 2018, added requirements that a school district or charter school that elects to offer any interscholastic athletic program ensure that there is a written emergency action plan in place and acquire at least one automated external defibrillator (AED) for each school for emergency care in the event of cardiac arrest and other related medical emergencies. The bill also clarified that existing law providing conditional liability protections to those acquiring or using these AEDs would apply.

AB 141 (Hayashi), Chapter 173, Statutes of 2012, added requirements to the CHSCTP for training on understanding the signs and symptoms of concussions and the appropriate response.

AB 2741 (Miller) Chapter 744, Statutes of 1998, established the 1998 California High School Coaching and Education Program to be administered by school districts and to emphasize, among other things, sport psychology, sport pedagogy, sports physiology, CPR, and first aid.

SUPPORT

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OPPOSITION

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