

GUIDELINES FOR POLICIES ON HEAT-RELATED ILLNESS PREVENTION IN STUDENT ATHLETES

Code of Virginia § 22.1-271.9

Updated August 2025



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Superintendent of Public Instruction

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Introduction

Heat-related illness is a general term encompassing four specific conditions: heat stroke (a medical emergency), heat exhaustion, heat syncope (fainting), and heat cramps. The prevention of heat-related illness includes proper acclimatization for exercise in hot and humid environments and maintaining appropriate hydration levels.

Heat-related illness is a serious condition that results from the body's inability to regulate its temperature, often caused by prolonged exposure to high temperatures and humidity. It exists on a spectrum, ranging from mild issues like heat cramps and heat edema to severe, life-threatening heatstroke. As temperatures rise, the body's primary cooling mechanisms, such as sweat evaporation, become less effective, increasing the risk of overheating. Athletes are particularly vulnerable due to intense physical exertion, leading to significant fluid and electrolyte loss. Without timely intervention, moderate heat illness can quickly escalate, potentially causing organ failure, neurological damage, or even death (Leiva & Church, 2023).

Understanding risk factors—such as high temperatures, inadequate hydration, and underlying health conditions—can help in preventing these conditions and ensuring athlete safety.

Ensuring the well-being of athletes requires a proactive approach to heat illness prevention, including education, proper hydration, and acclimatization strategies. Coaches, trainers, and healthcare professionals must work together to recognize early signs of heat-related illness, such as dizziness, confusion, excessive sweating, and muscle cramps, and take immediate action to cool the affected individual (Leiva & Church, 2023).

Additionally, local monitoring of ambient temperature and humidity levels combined with policies that limit practice duration, activity intensity, and the wearing of protective equipment during periods of high temperatures and humidity levels is critical to preventing heat-related illness and promoting student-athlete health and safety.

By prioritizing athlete safety and fostering a culture of awareness, schools and sports organizations can significantly reduce the incidence of heat illness and safeguard the health of their athletes.

Background

Pursuant to [Senate Bill 161](#), (2022), the Department of Education, in conjunction with stakeholders, is to develop and biennially update guidelines on policies to inform and educate coaches and student-athletes and their parents or guardians of the nature and risk of heat-related illness, how to recognize the signs of heat-related illness, and how to prevent heat-related illness.

In 2025, [House Bill 1663 \(SB 1104\)](#) was approved to amend the *Code of Virginia* by adding a section numbered [§ 22.1-271.9](#), relating to public schools; interscholastic sports and athletics; guidelines and policies on student-athlete extreme heat safety and protection; development and implementation.

The Code of Virginia is amended by adding section numbered [§ 22.1-271.9](#) as follows:

A. The Board shall develop, biennially review and update as necessary, and distribute to each local school division guidelines on policies relating to extreme heat safety and protection for student-athletes that inform coaches, student-athletes, and student-athletes' parents of risks associated with and best-practices and strategies for ensuring the safety and protection of student-athletes when engaging in outdoor physical activity in times of extreme heat.

B. Each school board shall develop and update, in accordance with the guidelines developed by the Board pursuant to subsection A, policies on student-athlete extreme heat safety and protection. Such policies shall:

- 1. Be consistent with any heat guidelines based on Wet Bulb Globe Temperature (WBGT) levels developed by an organization or entity whose purpose it is to regulate or govern interscholastic athletics programs in the Commonwealth;*
- 2. Include parameters relating to the scheduling of outdoor athletics practices or games during different WBGT levels and establishing the WBGT levels at which outdoor athletics practices or games shall be cancelled;*
- 3. Establish a heat-acclimatization and modification procedure for outdoor athletics practices or games consisting of at least five tiers of procedures for outdoor athletics practices or games based on heat or humidity levels, with the first tier outlining heat-acclimatization and modification procedures for the lowest heat or humidity level requiring special student-athlete safety and protection precautions and the final tier*

outlining heat-acclimatization and modification procedures for the most severe heat or humidity level before the level at which all outdoor athletics practices or games shall be cancelled pursuant to subdivision 2. Such tiered heat-acclimatization and modification procedures shall include required equipment modification, if applicable for the sport, modification of work-to-rest ratios, modification of water break requirements, and procedures relating to the use of shaded areas for rest breaks;

- 4. Require (i) each student-athlete to be given unhindered access at all times to hydration and a cooling space, which may be a shaded or air-conditioned area, and (ii) each student-athlete and each coach to be provided ice at any time there is a WBGT level of 80 degrees Fahrenheit or higher;*
- 5. Include procedures relating to preventing, recognizing, and addressing heat-related illnesses, including dehydration, heat syncope, heat exhaustion, and heat stroke; and*
- 6. Establish a process for reporting and investigating any instance in which a student-athlete experiences a severe heat-related illness requiring emergency medical treatment or resulting in death.*

Definitions

The Centers for Disease Control ([CDC](#)) and the National Oceanic and Atmospheric Administration ([NOAA](#)) provide terms and definitions that may be helpful to coaches, student-athletes and their parents or guardians in identifying the signs of a heat-related illness. The definitions below reflect the most pertinent definitions available for heat-related illness. Additional definitions have also been added by the stakeholder group.

Acclimatization is the body's way of adapting to hot environments. By gradually increasing exposure time in hot conditions over a seven to 14-day period, you can significantly improve your heat tolerance. This reduces the risk of heat stress and allows the body to perform better in hot weather.

Ambient Temperature refers to the average temperature of an environment, and it may vary depending on the location, time of year, or even the time of day.

Cooling Zone is an area out of direct sunlight with adequate air flow to assist in cooling. A cold-water or ice tub and ice towels should be available to immerse or soak a patient with suspected heat illness. This may be outdoors or indoors, depending on proximity to the field.

Emergency Action Plan is an essential component of a school's safety framework, serving as a structured response to various emergencies that may threaten students and staff.

Exertional sickling is a medical emergency in which the red blood cells of a person carrying the sickle cell trait change shape (sickle), leading to decreased blood flow. This decrease in blood flow can lead to a breakdown of muscle tissue and cell death, a condition known as fulminant rhabdomyolysis. While not a heat-related illness, exertional sickling is associated with intensive exercise in hot and/or humid conditions, particularly with individuals who may be poorly acclimatized or deconditioned and may be confused with heat cramps.

Heat acclimatization describes a complex series of changes occurring within the body in response to heat stress over a period of one to two weeks. Adaptations in heat tolerance that come from gradually increasing the intensity or duration of work performed in hot settings allow the body to better cope with activity in hot and humid environments

Heat cramps are a type of exercise-related muscle cramp characterized by painful cramping usually occurring in the arms and legs. Heat cramps may be caused by exercising in hot or humid environments, dehydration, or excess sodium and electrolyte loss commonly associated with exercise in those environments. While not a medical emergency, heat cramps may be confused with a more serious condition, exertional sickling.

Heat exhaustion is the body's response to an excessive loss of water and salt, usually through excessive sweating.

Heat Index is a number in degrees Fahrenheit (F) that tells how hot it feels when relative humidity is added to the air temperature. Exposure to full sunshine can increase the heat index by 15 degrees.

Heat-related illness is a general term describing several medical conditions associated with dehydration, poor acclimatization, and exposure to or prolonged exercise in hot and humid environments.

Heat stroke is the most serious heat-related illness. It occurs when the body can no longer control its temperature, the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Heat stroke can cause permanent disability or death if the person does not receive emergency treatment.

Heat syncope refers to fainting (syncope) episodes experienced by individuals exercising in hot and humid environments and results from a temporary decrease in blood flow to the brain, causing a brief loss of consciousness. Factors that contribute to heat syncope include dehydration and lack of acclimatization.

Korey Stringer Institute is a not-for-profit organization housed at the University of Connecticut, dedicated to preventing sudden death in sports, particularly focusing on exertional heat stroke, through research, education, advocacy, and consultation.

Local Educational Agency is a public entity responsible for the administration and direction of public schools within a specific geographic area.

Non-practice activities are activities that include meetings, injury treatment, and film study.

Preventative Recovery Period is a period of time to recover from the heat in order to prevent heat illness.

Rest breaks are the period of time during practice, which is a non-activity time occurring in a ‘cool zone’ out of direct sunlight.

Walk through is a period of time where players review positional strategy and rehearse plays. Players do not experience contact and thus they do not wear equipment, and the intensity of the activity is minimal, often involving walking. It is not considered part of the practice time regulation. It may not involve conditioning or weight room activities. Players may not wear protective equipment during the walk through.

Wet Bulb Globe Temperature is a measure of the heat stress in direct sunlight, which takes into account: temperature, humidity, wind speed, sun angle, and cloud cover. Monitoring the WBGT is essential for protecting athletes’ health and safety during outdoor practices, games, and events.

Guidelines for Policies on Heat-Related Illness and Prevention for Student-Athletes

The Virginia Department of Education, in collaboration with various stakeholders, highly vested in student wellness and safety, has developed the following guidance and resources. This guidance is to support Local Educational Agencies (LEAs) in developing comprehensive policies on heat-related illness prevention in student-athletes.

I. Wet Bulb Globe Temperature (WBGT) Monitoring and Activity Scheduling

- A. WBGT is a measure of the heat stress in direct sunlight, which considers: temperature, humidity, wind speed, sun angle, and cloud cover (NOAA, National Weather Service, 2011). Monitoring the WBGT is essential for protecting athletes' health and safety during outdoor practices, games, and events.
- B. WBGT guidelines must be region (geographic) specific since temperatures fluctuate by region. Individual responses to exercising in heat may vary by the geographic region in which their usual exercise sessions take place.
- C. WBGT modifications should be flexible, meaning if the conditions get more restrictive during the day or a particular practice, modifications should be more restrictive. As environmental conditions become milder, modifications should be less restrictive.
- D. When developing guidelines for activity modification using WBGT, it is necessary to include work-to-rest ratios, length of activity, hydration breaks, equipment to be worn (if applicable), and a level at which activity is cancelled.
- E. The Virginia High School League ([VHSL](#)) provides **Table 1** to outline the [WBGT Participation Recommendations](#), the specific effects that can be expected at certain temperatures, and the precautions taken to avoid heat-related issues.

II. Heat Safety Guidelines

- A. Schools are to be consistent with any heat guidelines based on WBGT developed by an organization or entity whose purpose is to regulate or govern interscholastic

athletics programs in the Commonwealth. The Virginia High School League (VHSL) is the governing body for athletics programs in the Commonwealth. The Heat Stress Policy and Activity Recommendations are provided on the [VHSL Heat & Hydration](#) webpage.

Table 1. WBGT Participation Recommendations

Level	WBGT	Duration	Fluid Consumption	Practices	Scrimmages and Contests
1	<80°	3 hours maximum	Insist that adequate fluid be ingested	Full gear; minimum of 3 water breaks per hour	No modifications
2	80.0°-82.4°	3 hours maximum	Insist that 4 – 6 oz fluid be ingested every 20 minutes; ensure ice is available	Full gear; minimum of 3 water breaks per hour	No modifications
3	82.5°-84.9°	3 hours maximum	Insist that 6 – 8 oz fluid be ingested every 20 minutes; ensure ice is available	Remove helmets unless active in drill; minimum of 3 water breaks per hour	Monitor athletes, rest as needed
4	85.0°-87.4°	3 hours maximum; includes max of 45 minutes of work and ≥ 15 minutes of rest in a shaded or air-conditioned space each hour	Insist that 8 – 10 oz fluid be ingested every 15 minutes; ensure ice is available	No equipment during non-contact drills; remove helmet unless active in contact drill; remove equipment when instructional periods exceed 10 minutes; minimum of 4 water breaks per hour	Monitor athletes, rest as needed
5	87.5°-89.9°	2 hours maximum; includes max of 40 minutes of work and ≥ 20 minutes of rest in a shaded or air-conditioned space each hour	Insist that 8 – 10 oz fluid be ingested every 15 minutes; ensure ice is available	No equipment- shirts and shorts only; reduce intensity of activity; minimum of 4 water breaks per hour	Monitor athletes, rest as needed. Remove helmets if not actively participating
6	90.0° +	NO OUTDOOR PRACTICES, SCRIMMAGES or COMPETITIONS	Re-hydrate 24 oz for every pound of body weight loss per day	Practices conducted indoors must follow the Heat Policy	Delay/postpone scrimmage or game until conditions improve

- B. Schools are encouraged to develop policies that include regular monitoring of local conditions, ideally WBGT, and requirements to moderate or postpone athletic activities when temperature or humidity levels reach dangerous levels (Carter et al., 2020).

III. Heat Acclimatization and Tiered Acclimatization Plan

- A. Heat acclimatization describes the process of gradually increasing the duration and intensity of physical activities and exercise in hot and humid environments to increase the body's ability to cope with heat exposure.
 - 1. Heat acclimatization occurs over a seven to 14-day period.
 - 2. Schools should develop policies that limit practice duration, activity intensity, and the wearing of protective equipment during the early portion of an athletic season.
- B. Tiered Procedures Overview
 - 1. There is no “one-size-fits-all” approach to heat acclimatization. The [Virginia High School League Handbook](#) requires schools to follow practice guidelines which would apply to all students in all fall sports except golf, and includes Fall Practice Guidelines and additional resources to support schools in the development of effective heat acclimatization policies. Additional resources are available from the [National Federation of High Schools](#) (NFHS).

IV. Recognizing, Preventing, and Treating Heat Illness

- A. Heat-related illnesses are not part of a continuum in the sense that an individual experiencing heat exhaustion who continues to exercise will in turn develop heat stroke. While some of the signs and symptoms are similar, these are unique conditions. That said, experiencing heat cramps or syncope one day may predispose an individual to more significant heat-related illnesses in the future.
- B. Maintaining appropriate hydration levels during exercise promotes participant safety and increases performance. Hydration level is influenced by several factors, including exercise intensity, duration, environmental conditions, and intake of fluids before, during, and after exercising. As a person becomes more dehydrated, performance deficits become noticeable as body temperature and heart rate increase, which in turn increases the risk of developing a heat-related illness.

1. Student-athletes should strive to begin exercise properly hydrated while minimizing fluid loss during activity, followed by fluid replacement after activity.
2. Water or other palatable fluids should be easily accessible before, during, and after activity for optimal rehydration.
3. Additional guidance on maintaining appropriate hydration levels is available in **Appendix D** of this document.

C. Student-athletes displaying the following signs and symptoms detailed in Table 3 may be experiencing heat exhaustion or heat stroke (the two most concerning forms of heat-related illness) and should be removed from play immediately.

Table 3. Signs and Symptoms of Heat Exhaustion and Heat Stroke

Symptom	Heat Exhaustion	Heat Stroke	Heat Syncope	Heat Cramps
Temperature	Elevated, but usually elevated to more than 100°F but not above 104°F (40°C)	Very high, 105°F (40°C) or higher		
Skin	Cool, pale, clammy skin	Flushed, hot, dry skin		
Sweating	Profuse sweating	May not be able to sweat at all		Dehydration
Pulse	Rapid and weak	Rapid, low blood pressure		
Mental State	Irritability, emotional instability	Confusion, disorientation	Dizziness or lightheadedness Loss of consciousness	
Other	Headache, Nausea or vomiting, Dizziness, Light-	Fainting, seizures, rapid shallow breathing,	Weakness Tunnel vision	Fatigue Painful, involuntary muscle

	headedness, Weakness	vomiting, loss of consciousness , coma		spasms
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Differentiating heat cramps and exertional sickling

- While both conditions present with pain, the pain associated with cramping usually occurs in a specific area, while the pain associated with exertional sickling is more generalized.
- Cramping muscles appear tight and will “lock-up” limiting function and leading individuals to stop activity. With exertional sickling, muscles become weak, leading the individual to try to push through the experience.
- Cramping generally occurs during or after activity. Exertional sickling typically occurs within the first 30 minutes of an intense workout.

D. Risk Factors and Strategies to Mitigate

- Effective mitigation of heat illness hinges on prompt recognition and tailored interventions based on specific risk factors. By emphasizing the importance of addressing both intrinsic and extrinsic factors that could lead to heat exhaustion or heat stroke, the risk to student-athletes can be minimized.

Table 4. Risk Factors and Strategies to Mitigate

Risk Factor		Strategies to Mitigate	
Intrinsic			
High-intensity exercise		Gradually phase in exercise and conditioning	
Fever or illness		Monitor and remove at-risk athletes as necessary	
Dehydration		Educate coaches/athletes on proper hydration Provide adequate access to water	
Overweight/obesity		Gradually phase in exercise and conditioning	
Lack of heat acclimatization		Follow heat acclimatization program	
Medications (antihistamines, diuretics, ADHD drugs)		Monitor and remove at-risk athletes as necessary	
Skin disorder or sunburn		Monitor athletes closely, advise sunscreen use/application	
Predisposing medical conditions		Monitor and remove at-risk athletes as necessary	
Extrinsic			
High ambient temperature or humidity		Avoid exercise in hotter parts of the day	
Heavy gear or equipment		Gradually introduce equipment	

Lack of education for coaches	Educate coaches regarding strategies to minimize risk
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V. Possible Treatment Steps for Common Heat Illnesses

Table 5. Possible Treatment Steps for Common Heat Illnesses

Condition	Treatment Steps
Heat Cramps	• Remove from activity to a cool or shaded area. • Stretch and/or massage the affected area. • Provide water and/or a sports drink to replenish fluids. • Return to activity the same day after rest and fluid replacement. Cramps may return if fluids are not adequately replaced.
Heat Syncope	• Remove from activity to a cool or shaded area. • Have the student-athlete sit or lie down. • Monitor for signs of other medical conditions. • Elevate the student-athlete's legs. • Provide water and/or a sports drink. • Return to activity after rest and resolution of symptoms. Medical clearance is advised.
Heat Exhaustion	• Remove to a cool or shaded area and remove excess clothing/protective equipment. • Cool by dousing with cold water (cold shower), rotating ice towels/ice bags, or using fans. • Monitor for central nervous system function changes. • Elevate the legs. • Provide water and/or a sports drink. • If CNS changes occur or recovery is slow, suspect heat stroke and treat accordingly. • Rest and hydrate for 24–48 hours before gradual return to play. Medical clearance is strongly recommended.
Heat Stroke	• Immediately remove all clothing and protective equipment if possible. If not, proceed with rapid cooling. • Use whole-body cold-water immersion (35–58°F) for rapid cooling. • If not available, douse with cold water, rotate ice towels/ice bags, and/or use fans. • Monitor and maintain airway, breathing, and circulation. • Activate EMS/call 911 after cooling begins. • Monitor vital signs and CNS changes continuously. • Continue cooling until rectal temperature reaches 101–102°F (if available). • Requires extended rest, hydration, and formal medical evaluation before return to activity.

VI. Management

- A. Each school division will ensure each school has staff trained in the management of heat-related illnesses, including the development of Emergency Action Plans.

1. Schools and other organizations sponsoring athletic programs are encouraged to develop comprehensive Emergency Action Plans (EAPs) specific to the athletic environment. These valuable resources are intended to help staff prepare for a wide variety of emergency medical situations that may occur during athletic participation. Advanced planning can save valuable time when responding to an emergency. The [Virginia High School League](#) has developed an EAP template to help schools develop this important planning tool.
2. Individuals experiencing or suspected of experiencing a heat-related illness should be removed from activity immediately. Additional information and guidance are available from the Resources listed at the end of this document.
3. The specific treatment and any return to activity requirements will depend on the condition.

VII. Reporting Severe Heat-Related Illness or Death

- A. As LEAs conduct their due diligence to prevent heat-related illnesses and deaths, prompt activation of emergency response systems is crucial in the event a student experiences a heat-related illness or emergency.
 1. Effective communication is essential for building trust with the community and demonstrates a commitment to student safety.
 2. Reporting protocols will be outlined in the Emergency Action Plan (EAP), including guidelines for prompt notification to parents/guardians.
 3. Following the guidance outlined in the EAP, coaches and other relevant athletic staff members are to be notified immediately upon recognizing signs and symptoms of a health-related illness.
 4. Following the EAP, detailed information regarding the student's condition, including symptoms noted, the time and place of the incident, as well as immediate actions and interventions, will be documented.
- B. Documentation will include established division protocols, such as incident reports, and may also be maintained in electronic health record systems. Informing stakeholders and pertinent staff is also imperative through established division-wide communication protocols, to include:
 1. Documenting the dates, time, location, student symptoms, and immediate actions taken:
 - a. Medical interventions provided as outlined in the EAP.
 - b. Was the school nurse/athletic trainer/coach notified?

- c. Was EMS called to the scene? Was the student transported to the emergency department?
 - 2. Parents and guardians are to be notified as soon as signs of HRI are recognized in their child:
 - a. Provide parents/guardians with concise information, including symptoms, immediate actions taken, medical interventions provided, and how the student tolerated/responded to these interventions.
 - b. Support the student and the family throughout the recovery process.
 - c. Provide additional information, education, and resources to the student and their family as needed.
 - d. Assist family and medical provider with effective return-to-play, return-to-learn plan.
 - 3. Report the incident to vested parties according to divisionwide protocols. For example:
 - a. Superintendent
 - b. School Board
 - c. School Health Advisory Board
 - d. School Nurse
 - e. School Principal
 - f. Local Health Department's Director for Adverse Events
 - g. Any other relevant school staff
 - 4. Follow-up and Prevention:
 - a. Check in with the impacted student, their family, and provide support.
 - b. Ensure the student is medically cleared before returning to physical activity.
 - c. Re-check and implement any additional preventative measures as indicated by the medical care team to prevent another incident.
 - d. Identify causes to prevent future incidents.
 - e. Review Health Related Illness Guidelines and Hydration Protocols and update as needed
 - f. Provide additional education and training for students and staff as needed.
- C. Pursuant to [Code of Virginia § 22.1-279.3:1](#), athletic team leads shall report any event of loss of student life due to a heat-related illness or emergency, on a school bus, on school property, or at a school-sponsored activity to the school's principal, the division's Superintendent, or their designee. These incidents must be reported immediately to the local law enforcement agency. The division superintendent shall

annually report all such incidents to the Department of Education, recording the frequency of such incidents on forms provided by the Department, and shall make this information available to the public.

D. Considerations for reporting a death due to a heat-related emergency:

1. Provide enduring support for the student's family. Maintain confidentiality and respect the family's privacy. Provide the family with precise, comprehensive details leading up to the heat-related illness/emergency. Include environmental circumstances, signs and symptoms, and immediate actions taken.
2. School staff are to complete an incident report, including details of symptoms experienced and actions and interventions taken by the appropriate staff.
3. Engage school counselors, social workers, psychologists, and crisis response teams to provide resources and support for students, faculty, and staff.
4. Engage the division-wide communications team to inform the community and stakeholders appropriately within 24 to 48 hours. Reporting to the community should be done in consultation with the student's family, and consideration for their loss should be prioritized.
5. Consult the division's risk management and legal teams for additional guidance and support.
6. Consult with the local health department to assist with investigating the incident and document findings.
7. Review protocols and procedures.
8. Review Health Related Illness Guidelines and Hydration Protocols and update as needed
9. Provide additional education and training for students and staff as needed.

VIII. Return-to-learn and return-to-play for severe heat-related illnesses

- A. Return-to-learn and return-to-play considerations are based on the heat-related illness experienced by the student-athlete, as well as the severity of the illness. Recovery time is also indicative of the severity of the illness experienced. To ensure the student's safe and active participation in play and instruction, impacted students are to receive written clearance from a qualified medical provider.
- B. This written clearance will be reviewed by all appropriate, need-to-know staff, including teachers, coaches, athletic trainers, school nurses, administrators, and other relevant personnel. If advised by medical providers, LEAs will ensure that

students are provided with appropriate instructional and/or athletic accommodations necessary to access the school environment.

Appendix A

Resources for Preventing Heat-Related Illness in Student-Athletes and Training Resources

[Recognizing, Preventing, and Treating Heat-Related Illness](#) Course offered by the Centers for Disease Control and Prevention

[Heat and Hydration Information](#) to assist coaches with preventing heat-related illnesses and injuries

[Heat Illness Prevention Course](#): Information for coaches, students, and school staff.

[National Weather Service Heat Index Chart](#): Heat Safety, Tips and Resources from The National Weather Service.

[National Athletic Trainers' Association Heat Illness Handout](#): Comprehensive one-page on how to beat the heat.

[Korey Stringer Institute Heat Acclimation](#): Information on the body's ability to respond and cope with heat exposure.

[Korey Stringer Institute Hydration](#): Information on appropriate and effective hydration.

[Korey Stringer Institute: Emergency Action Plans](#): Information on developing effective Emergency Action Plans

[Korey Stringer Institute: Wet Bulb Globe Temperature Monitoring](#): Monitoring is essential in preventing Exertional Heat Stroke

[How to Prepare for Extreme Heat Situations](#): Practical information from Ready.gov

Heat Stroke

[Exertional Heat Stroke Prevention](#): List of preventative strategies.

[An Athlete's Guide to Exertional Heat Stroke](#): Comprehensive and informative guide to EHS

[Exertional Heat Stroke Emergency Kit](#): Informative list of preventative items to have in stock to prevent EHS

[CDC Guidelines for Treating Heat Stroke](#): Responsive guide with appropriate actions in the event of a heat-related illness event.

Heat Exhaustion

[Heat Exhaustion and Prevention Guidelines](#): Signs, symptoms, and prevention of heat exhaustion.

[Heat Cramps and Prevention Guidelines](#): Signs, symptoms, and prevention of heat cramps.

[Heat Syncope and Prevention Guidelines](#): Signs, symptoms, and prevention of heat syncope.

Appendix B
Code of Virginia
CHAPTER 428

An Act to direct the Department of Education, in conjunction with stakeholders, to develop guidelines on policies to inform and educate coaches and student athletes and their parents or guardians on heat-related illness to be distributed by August 1, 2022.

[S 161]

Approved April 11, 2022

Be it enacted by the General Assembly of Virginia:

1. § 1. *The Department of Education shall, in conjunction with relevant stakeholders, including the Virginia High School League, the Department of Health, the Virginia Athletic Trainers' Association, representatives of the Children's Hospital of the King's Daughters and the Children's National Medical Center, the Virginia Chapter of the American Academy of Pediatrics, the Virginia College of Emergency Physicians, the Virginia Academy of Family Physicians, the Medical Society of Virginia, and the Virginia Association of School Nurses, develop guidelines on policies to inform and educate coaches and student athletes and their parents or guardians of the nature and risk of heat-related illness, how to recognize the signs of heat-related illness, and how to prevent heat-related illness. The guidelines shall be distributed to local school divisions by August 1, 2022.*

Appendix C

2025 SESSION

A BILL to amend the Code of Virginia by adding a section numbered 22.1-271.9, relating to public schools; interscholastic sports and athletics; guidelines and policies on student-athlete extreme heat safety and protection; development and implementation.

Patron—Hashmi

Referred to Committee on Education and Health

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered 22.1-271.9 as follows:

§ 22.1-271.9. Guidelines and policies on student-athlete extreme heat safety and protection policies.

A. The Board shall develop, biennially review and update as necessary, and distribute to each local school division guidelines on policies relating to extreme heat safety and protection for student-athletes that inform coaches, student-athletes, and student-athletes' parents of risks associated with and best-practices and strategies for ensuring the safety and protection of student-athletes when engaging in outdoor physical activity in times of extreme heat.

B. Each school board shall develop and update, in accordance with the guidelines developed by the Board pursuant to subsection A, policies on student-athlete extreme heat safety and protection. Such policies shall:

1. Be consistent with any heat guidelines based on Wet Bulb Globe Temperature (WBGT) levels developed by an organization or entity whose purpose it is to regulate or govern interscholastic athletics programs in the Commonwealth;

2. Include parameters relating to the scheduling of outdoor athletics practices or games during different WBGT levels and establishing the WBGT levels at which outdoor athletics practices or games shall be cancelled;

3. Establish a heat-acclimatization and modification procedure for outdoor athletics practices or games consisting of at least five tiers of procedures for outdoor athletics practices or games based on heat or humidity levels, with the first tier outlining heat-acclimatization and modification procedures for the lowest heat or humidity level requiring special student-athlete safety and protection precautions and the final tier outlining heat-acclimatization and modification procedures for the most severe heat or humidity level before the level at which all outdoor athletics practices or games shall be cancelled

pursuant to subdivision 2. Such tiered heat-acclimatization and modification procedures shall include required equipment modification, if applicable for the sport, modification of work-to-rest ratios, modification of water break requirements, and procedures relating to the use of shaded areas for rest breaks;

4. Require (i) each student-athlete to be given unhindered access at all times to hydration and a cooling space, which may be a shaded or air-conditioned area, and (ii) each student-athlete and each coach to be provided ice at any time there is a WBGT level of 80 degrees Fahrenheit or higher;

5. Include procedures relating to preventing, recognizing, and addressing heat-related illnesses, including dehydration, heat syncope, heat exhaustion, and heat stroke; and

6. Establish a process for reporting and investigating any instance in which a student-athlete experiences a severe heat-related illness requiring emergency medical treatment or resulting in death.

Appendix D

Hydration Resources

- [The science of hydration](#) provides strategies offered for essential performance and recovery.
- [Healthy hydration for young athletes](#) offers essentials of hydration for young athletes.
- [Benefits of drinking water](#) and how this helps the body to properly function.
- [Hydration tips for student athletes](#) offers hydration and nutritional tips to keep student athletes well.
- [Healthy hydration campaign](#) toolkit by the American Academy of Pediatrics

Appendix E

References

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