2024-25 ACPS ATHLETIC

HEAT MANAGEMENT GUIDELINES

Albemarle County Public Schools

ACPS is committed to safe practice and provides Heat Management Guidelines to ensure that on an annual basis administrators, athletic directors, athletic trainers, coaches, volunteers, student athletes and their parents are educated about heat illness.

ACPS recognizes that Heat Related Illness (HRI) is a spectrum of disorders due to environmental exposure to **heat**. The three main types of HRI are heat cramps, heat exhaustion, and heatstroke. HRI may lead to death if not properly diagnosed and treated. Catastrophic heat related injuries are preventable.

According to the CDC, heat illness occurs when the body's temperature control system is overloaded. The body usually cools itself by sweating, which dissipates heat from the core of the body in order to keep internal organs cool. Certain conditions inhibit the ability to effectively cool through sweating, thereby compromising the body's ability to cool itself. Body temperature can rise rapidly, which can damage the brain or other vital organs. Factors that can compromise the effectiveness of cooling through sweat in conditions of high heat and humidity that can make an athlete susceptible to HRI include:

- Dehydration
- Sunburn
- Fever
- Respiratory or g.i. illness
- Recovering from illness
- Obesity
- Certain medications
- Recent alcohol use
- Lack of acclimatization
- Lack of adequate sleep
- Caffeine and some supplements
- Previous history of HRI

Heat Cramps

- Heat cramps are muscle pains or spasms, usually in the abdomen, arms, or legs that might occur in association with strenuous activity.
- Athletes who sweat profusely during strenuous activity are prone to heat cramps.
- Athletes with high salt concentration in their sweat are also prone to heat cramps.
- Sweating depletes the body's salt and fluids. Low salt level in the muscles can cause painful cramps.
- Heat cramps may also be a symptom of heat exhaustion.

Heat Exhaustion

Heat exhaustion is a form of HRI and can occur during exertion in heat or can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. The warning signs of heat exhaustion include:

- Heavy sweating
- Paleness
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea or vomiting
- Rapid pulse
- Fainting

If heat exhaustion is not treated, it may progress to heat stroke.

Heat Stroke

Heat stroke is the most serious HRI and is life threatening. It occurs when the body becomes unable to control its temperature.

- Body temperature rises rapidly
- Sweat process fails
- Body is unable to cool down

Body temperature may rise to 106°F or higher within 10-15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided. Warning signs of heat stroke vary but may include:

- High body temperature
- Red, hot, and dry or moist skin
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

Management of Heat Illness

Treatment of heat cramps if medical attention is not necessary:

- Stop all activity and sit quietly in a cool place.
- Drink water, clear juice, or a sports beverage.
- Do not perform strenuous activity for a little while after the cramps subside.
- The athlete should be assessed by the trainer to determine if he/she can perform at the level needed for successful participation.
- If the episode was acute or severe, the athlete's diet, rehydration practices, electrolyte consumption, fitness status, level of acclimatization, and use of dietary supplements should be reviewed and modified to reduce the risk of recurrence.

Treatment of heat exhaustion

- Remove from heat by moving into shade or air conditioning. Drink water, clear juice, or a sports beverage.
- Remove restrictive clothing, equipment, and helmets.
- Take a cool shower, bath, or sponge bath.
- Seek an air-conditioned environment.
- Avoid intense practice in heat for one day to ensure recovery from fatigue and dehydration.
- Athlete should be symptom-free and fully hydrated before returning to play.
- Recommend clearance from on-site athletic trainer before return to play.
- To avoid recurrence, be sure to rule out any underlying condition or illness that predisposed the athlete to an HRI.
- Correct any acclimatization and fitness level problems before player returns to full intensity training in heat.

Treatment of heat stroke: HEAT STROKE IS A LIFE-THREATENING EMERGENCY

- Have someone call for immediate medical assistance while you begin cooling the ill athlete. Response time will be critical.
- Get the sick athlete to a shady area.
- Remove restrictive clothing, equipment, and helmet.
- Rapidly cool the sick person by:
- Immersing him or her in a tub of cool water or ice water or placing in a cool shower.
- Spraying him or her with cool water from a garden hose.
- Sponging the person with cool water.
- Applying ice bags at the neck, armpit, and groin area.
- Wrapping the person in a cool, wet sheet and fan him or her vigorously if the humidity is low.
- Monitor body temperature and continue cooling efforts until the body temperature drops to 101°F–102°F. Remove the athlete from the water to prevent over-cooling once this is achieved.
- Give the sick athlete sips of cool water if alert.
- If emergency medical personnel are delayed, call the hospital emergency room for further instructions.
- The sick person should be transported to the hospital for observation even if all treatment on the field is successful.
- Student athletes must be cleared by a physician before returning to practice or games.

Prevention of Heat Related Illnesses

1. Fluid replacement

Cold water will be made available to all athletes for all practices and games. Per the National Athletic Trainers' Association Recommendations for Fluid Replacement ACPS will:

- Educate athletes about the effects of adequate hydration on athletic performance, before during and after exertion.
- Teach athletes how to monitor hydration status.
- Educate and encourage athletes to participate in their own hydration protocols based on sweat rate, drinking preferences and person response to fluid quantities.
- Implement hydration protocol (see table 2).
- Educate coaching staff, who must mandate rehydration breaks during practices and competitions (see chart)

2. Acclimatization to Heat

With fall sports that start in the summer, practices will be designed in a progressive manner to result in a gradual acclimatization to heat over the course of 7 to 12 days, depending on the heat index. We will utilize the **VHSL Fall Pre-Season Practice Guidelines.** (A copy of this document has been provided in Appendix I for your convenience.)

3. Modification of activity during high heat index heat and humidity measured by wet bulb thermometer or any other accepted heat index measuring instrument

Athletic trainers will assess the heat and humiture conditions whenever a heat index has been issued or when the ambient temperature is 80 degrees or higher. WBGT device will be used on each field (turf or grass) to determine heat conditions and appropriate practice adjustments if necessary. Below are 2 sets of guidelines for high heat and humidity.

Table 1: WBGT Activity and Rest Break Guidelines (adapted from Georgia High School Association)

WBGT	Activity Guidelines	Rest Break Guidelines	Fluid Consumption
Under 82.0 GREEN	Normal activities	Provide at least 3 separate rest breaks each our with a minimum duration of 3 minutes each	Insist that adequate fluid be consumed, never restrict fluids
82.0 - 86.9 YELLOW	Use discretion for instense or prolonged exercise; watch at-risk players carefully	Provide at least 3 separate rest breaks each hour with a minimum duration of 4 minutes each	Insist at least 8 to 10 fluid ounces be consumed at every break
87.0 - 89.9 ORANGE	Maximum outdoor practice time is 2 hours For football: Players restricted to helmet, shoulder pads, and shorts during practice and all protective equipment must be removed during conditioning activities; if WBGT rises to this level during practice, players may continue to work out wearing football pants without changing into shorts	For all sports: Provide at least 4 separate rest breaks each with a minimum duration of 4 minutes each	Insist at least 8 to 10 fluid ounces be consumed at every break and rehydrate 24 ounces for every pound lost
90.0-92.0 RED	Maximum outdoor practice time is 1 hour For football: No protective equipment may be worn during practice and there may be no outdoor conditioning activities	For all sports: There must be 20 minutes of rest breaks distributed throughout the hour of practice	Insist that 8 to 10 fluid ounces be consumed at every break
Over 92.0 BLACK	No outdoor workouts; delay practice until a cooler WBGT level is reached		

Table 2: Activity During Extreme Heat and Humidity Using Wet Bulb Thermometer (from Fairfax County)

Level	FWBT	Duration	Attire	Fluid Consumption	Comments
1	Lower than 60°	3 hour max	Full gear	Insist that adequate fluid be ingested	Never restrict water consumption
2	60.1° - 65.9°	3 hour max	Full gear	Insist that adequate fluid be ingested	Provide minimum of 2 water breaks per hour
3	66° - 74.9°	3 hour max	Full gear	Insist that 4 - 6 fluid ounces minimum be ingested every 20 minutes	Provide minimum 3 water breaks per hour
4	75° - 76.9°	3 hour max	Remove helmets unless active in drill	Insist that 6 - 8 fluid ounces minimum be ingested every 20 minutes	Monitor athletes, rest as needed
5	77° - 78.9°	3 hour max Every 45 minutes of work > 15 minutes of rest per hour	Protective equipment removed for non-contact drills	Insist that 8-10 fluid ounces minimum be ingested every 15 minutes	Removal of helmet unless active in drill, removal of pads when teacher non-contact portions of practice exceeding 10 minutes in length
6	79° - 80.9°	3 hour max Every 45 minutes of work > 15 minutes of rest per hour	Shirts and shorts only, no helmets	Insist that 8-10 fluid ounces be ingested every 15 minutes	Reduce intensity of activity, no equipment or helmets
7	81° or higher	NO OUTDOOR PRACTICE		Rehydrate 24 fluid ounces for every pound of body weight loss per day	Practices conducted indoors must follow the heat policy

Education

ACPS will require that coaches, athletic trainers, students and their parents receive training annually on the following:
Recognizing the signs and symptoms of heat illness

- Strategies to reduce the risk of heat illness
- How to treat heat illness
- How and when to seek medical attention for severe heat illness

Roles and Responsibilities

Athletic Directors

- Ensure that coaches, students and parents receive educational materials on an annual basis
- Ensure that coaches undergo online training
- Ensure that trained individuals (see below) are present for every school-sponsored practice or game
- Ensure that guidelines are being followed
- Ensure that wet bulb measurements are taken whenever a heat index is issued or other conditions warrant it
- Ensure that supplies for the provision of water are available
- Ensure that functioning calibrated wet bulb thermometers are available

Coaches

Complete a Heat Illness Prevention online education course.

- Follow guidelines in tables for work/rest/hydration ratios
- Modify intensity of practices in conditions of heat
- Encourage athletes to manage their own hydration
- Ensure water is available at all practices and games
- Develop practice/training protocols for gradual heat acclimatization for seasons that start in the summer or during a periods of heat.
- Be able to recognize the signs of HRI and remove player from activity as warranted.
- An athlete who has continued symptoms of HRI should not be left alone and should not be allowed to drive him/herself home. Please note: the student doesn't necessarily have to be recovered enough to play, but should not be released if he/she has symptoms that might lead to disorientation

Athletic Trainers

- Ensure up-to-date training in current HRI prevention, recognition and treatment
- Make measurements of playing field surfaces when NOAA issues heat advisory and advise coaches about acceptable levels of practice intensity. Measurements are to be taken prior to practices and each subsequent hour for continued assessment of heat. All reading should be documented.
- Ensure that an adequate amount of cold water is available and a hygienic means for athletes to consume it
- Treat athletes showing signs of HRI
- Communicate with parents after treating an athlete for HRI
- Do not leave athlete with continued symptoms of HRI alone and do not allow the athlete to drive him or herself home.

Athletes

- Review HRI handout
- Take responsibility for own hydration and nutrition before, during and after practices
- Wear weather appropriate clothing
- Bring water bottles to practice and games
- Report symptoms of HRI to coaches/trainers (cramps, light-headedness, nausea, etc.)
- Report conditions that could increase susceptibility to HRI to trainer when under heat advisory (illness, medications, history of HRI)
- Don't hold captains' practices when under heat advisory

Parents

- Review HRI handout
- Recognize signs of HRI and monitor student athlete at home after exertion in conditions of heat
- Reinforce student athlete's hydration before, during and after practice
- Discourage pick-up games and work-outs in high heat/humidity
- Encourage adequate sleep, hydration and nutrition.

ACPS Practice Guidelines with Certified Athletic Trainers

Athletic Directors and contracted providers of Certified Athletic Trainers will work together to provide the maximum amount of coverage possible. All scheduled practices (In-season and Out-of Season) must have approval by the Athletic Director. In order to hold an approved practice, we will follow the direction of Level 1 or Level 2 as described below.

Level 1

Practice must only be held with a Certified Athletic Trainer on the school's campus.

- Outdoor out-of-season practices and/or conditioning during summer. (Summer is defined as the first day after ACPS' last day of school and the day before the first VHSL fall sports practice date.)
- Indoor and outdoor in-season practices during VHSL sport seasons during traditional practice hours (4-7pm)

Level 2

ACPS Coaches who in addition to having completed all Annual requirements, and having also completed the Child Abuse Prevention, CPR/AED & First Aid training, VHSL Component (Handbook) and Coaching Principles, may hold practice without a Certified Athletic Trainer present.

- Out-of-season practices and/or conditioning not covered by Level 1
- Practices during VHSL sport seasons during non-traditional practice hours (ex. Mornings, Weekends, Holidays)
- Practices at off-campus locations

See Appendix 3

All out-of-season practices are subject to ACPS Out-of-Season Practice Guidelines.

NOTE: The VHSL Out-of-Season rule 27-7-1 is below, however, the guideline for ACPS OSP is more restrictive than VHSL. In addition to following the VHSL designated "dead periods", ACPS teams follow a "15-15-10" rule. This limits OSP sport specific practices to two active windows of 15 days during the school year and one active window of 10 days during the summer. A **sample** of the 2017-18 ACPS OSP guidelines is available at the end of this document.

27-7-1 OUT-OF-SEASON PRACTICE RULE: All VHSL member school sponsored athletic teams are restricted from any organized activities during designated "dead periods." Out- of-season dead periods shall be 10-day periods beginning with the first permissible practice date of a sports season as published in the VHSL Calendar. A summer "dead period" for all athletic teams shall be from Sunday through Saturday of the week containing July 4th (Week 52 or Week 1 of the NFHS Standardized Calendar). During dead periods, no coaching, observing or contact between a coach(s) or player(s) may occur in the VHSL member school sponsored athletic team or activity involved. There may be no VHSL member school sponsored practice, open facilities, weight training/conditioning, out of season league(s) or member school sponsored clinics/camps. Outside of dead periods, all VHSL member school sponsored activities may occur on any day except Sundays. Team vs. team competition may occur only in camps or leagues. Schools, districts and/or regions may impose more restrictive guidelines. VHSL catastrophic insurance is not applicable to any out-of-season activities.

APPENDICES

Albemarle County Public Schools

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Resources

Appendix II
NOAA Heat Index Chart

Appendix III
Heat Illness Information

Appendix IV
5 Pillars of Exertional Heat Stroke Prevention

Appendix V
Parents' and Coaches' Guide to Dehydration and Other Heat Illnesses in Children

Appendix VI
Coaches Hiring & Training Flow Chart

Appendix VII
Fall Pre-Season and VHSL Out-Of-Season Practice Guidelines

Resources

VHSL Heat Guidelines
- https://drive.google.com/file/d/1ulZ0EuQj4F7rumEXZnQnplSj1qbopL8z/view

NOAA Heat Index Calculator
- http://www.wpc.ncep.noaa.gov/html/heatindex.shtml
- NOAA Heat Index Chart (Appendix II)

National Federation of State High School Association Training Materials
- Heat Illness Handout (Appendix III)
- 5 Pillars of Exertional Heat Stroke Prevention (Appendix IV)

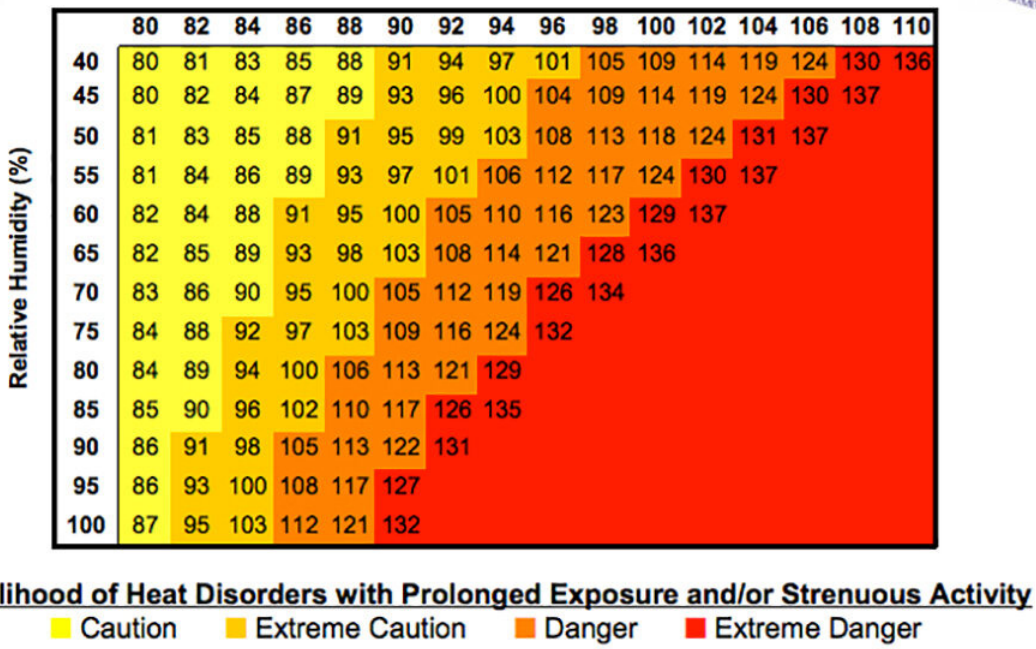
National Trainers Association Heat Resources
- https://www.nata.org/practice-patient-care/health-issues/heat-illness

Parent and Coach Training
- Parents' and Coaches' Guide to Dehydration and Other Heat Illnesses in Children (Appendix V)

U.S. Department of Labor - Occupational Safety and Health Administration
- https://www.osha.gov/heat-exposure/hazards

CDC Training
- Recognizing, Preventing and Treating Heat-Related Illnesses (link)

National Weather Service Heat Index Chart



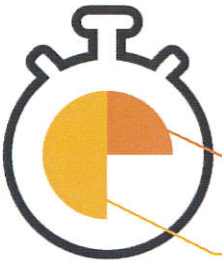
Likelihood of Heat Disorders with Prolonged Exposure and/or Strenuous Activity

Caution Extreme Caution Danger Extreme Danger

BEAT THE HEAT

Summer's high temperatures put student athletes at increased risk of heat illness. There are several types of heat illness. They range in severity, from heat cramps and heat exhaustion, which are common but not severe, to heat stroke, which can be deadly. Although heat illnesses can be fatal, death is preventable if they're quickly recognized and properly treated.

DEHYDRATION AND HEAT ILLNESSES



As a rule-of-thumb, most athletes should consume 200 to 300 milliliters of fluid every **15 MINUTES OF EXERCISE.**

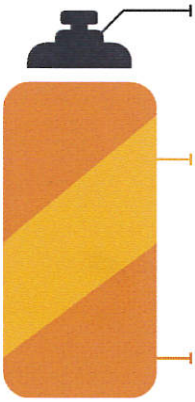
It takes only **30 MINUTES** for cell damage to occur with a core body temperature of 105 degrees.

Currently, 13 states have heat-acclimatization policies, for secondary school athletics with New Jersey being the first.

Exertional heat stroke is one of the top three killers of athletes and soldiers in training.

- From 2010-15, 20 athletic heat stroke fatalities were reported.
- It takes seven to 14 days for a body to adapt to exercising in the heat.
- Dehydration at levels of 3 to 4 percent body mass loss can reduce muscle strength by an estimated 2 percent.

SAFETY TIPS

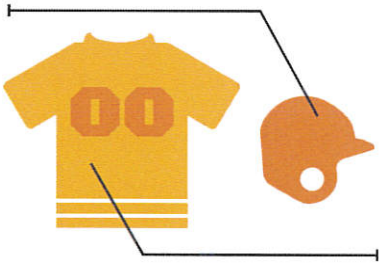


Have sports drinks on hand for workout sessions lasting longer than an hour.

Keep beverages cold – cold beverages are consumed 50 percent more than warm beverages.

Hydrate before, during and after activity.

Remove unnecessary equipment, such as helmets and padding, when environmental conditions become extreme.

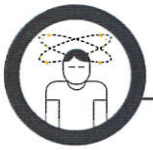


Clothing worn by athletes should be light colored, lightweight and protect against the sun.

- For the first week or so, hold shorter practices with lighter equipment so players can acclimate to the heat.
- Follow a work-to-rest ratio, such as 10-minute breaks after 40 minutes of exercise.
- Get an accurate measurement of heat stress using a wet-bulb globe temperature, which accounts for ambient temperature, relative humidity and radiation from the sun.
- If someone is suffering from exertional heat stroke, remember to cool first and transport second.
- Have large cold tubs ready before all practices and games in case cold water immersion is needed to treat exertional heat stroke.

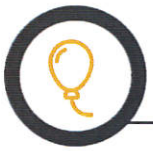
Infographic courtesy of the National Athletic Trainers' Association, www.nata.org

SIGNS OF MINOR HEAT ILLNESS



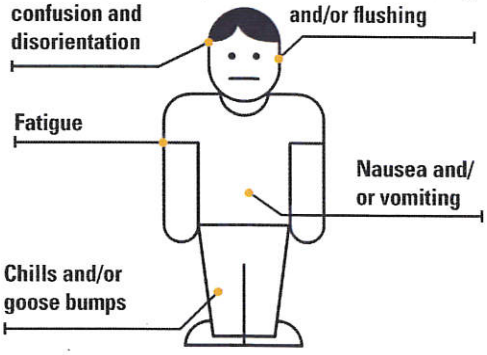
Dizziness

Cramps, muscular tightening and spasms

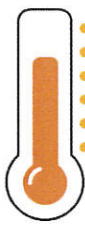


Lightheadedness, when not associated with other symptoms

EARLY WARNING SIGNS OF EXERTIONAL HEAT STROKE

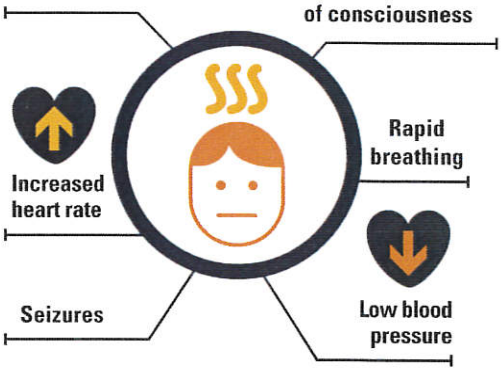


SIGNS OF EXERTIONAL HEAT STROKE



Core body temperature of more than 105 degrees

Signs of nervous system dysfunction, such as confusion, aggression and loss of consciousness



Sources: Korey Stringer Institute, American Medical Society for Sports Medicine, NATA

APPENDIX IV

5 Pillars of Exertional Heat Stroke Prevention

- **Hydration**
  - Maintaining appropriate levels of hydration prior to, during, and post exercise will assist in attenuating large increases in core body temperature during intense exercise in the heat.
  - To decrease the risk of exertional heat stroke, athletes are encouraged to minimize fluid losses during exercise. Fluid needs are individualistic depending on an athlete's sweat rate and a specific rehydration plan should be in place for every athlete
- **Body Cooling**
  - Body cooling can be an effective means of attenuating the rise in core temperature and can be done pre-exercise, during exercise, and post-exercise.
  - There are a number of cooling modalities that can be effective in assisting to keep the body cool during exercise in the heat and are applicable to most sports settings (equipment laden sports, sports with minimal or no rest time during activity, etc.).
  - For the equipment-laden athlete/laborer/soldier that may be at great risk of exertional heat stroke when exercising in the heat, a specific plan for utilizing cooling during rest breaks is imperative.
- **Work to Rest Ratios**
  - Having appropriate work-to-rest ratios (the amount of time spent involved in exercise versus the amount of time spent in recovery) should be modified as environmental conditions become extreme.
  - Environmental extremes should be measured using wet bulb globe temperature (WBGT). WBGT takes into account ambient temperature, relative humidity and the radiation from the sun to give an accurate measure of the heat stress that the athlete will be experiencing during exercise in the heat.
  - Modifications of work-to-rest ratios in extreme environmental conditions include increasing the number of rest breaks, the duration of rest breaks, and having unlimited access to hydration.
- **Acclimatization**
  - Having athletes go through a heat acclimatization protocol at the start of exercise in the heat is one of the best ways to help in preventing exertional heat stroke.
  - Heat Acclimatization is a series of physiological adaptations the body uses to tolerate exercise in the heat and occurs over a period of 10-14 days.
  - To have the full effects of the adaptations that heat acclimatization allows, it is imperative that athletes maintain an appropriate level of hydration.
- **Education**
  - Athletes, coaches, parents, athletic trainers, and other medical professionals should all be educated on the proper preventative strategies to prevent exertional heat stroke. Proper education will minimize the risk and incidence of exertional heat stroke.
  - Having proper education and knowledge of the signs and symptoms are also imperative to ensure appropriate treatment in the event of an athlete suffering from exertional heat stroke.
  - If medical care is present and exertional heat stroke is suspected - cool first, and then transport second to ensure appropriate treatment.
  - If no medical care is available and exertional heat stroke is suspected, immediately active EMS

(911) and begin cooling the athlete. For cooling, immerse the athlete in whole body cold-water immersion, which is the gold standard for cooling the exercising athlete.

3 Pillars of Exertional Heat Stroke Survival

- **Recognition**
  - Early warning signs of exertional heat stroke include headaches, dizziness and nausea. If these signs are detected early and the individual is allowed to bring their body temperature down, future problems may be avoided.
  - Any athlete demonstrating signs of CNS dysfunction (loss of consciousness, confusion, mood changes etc.) during exercise in the heat should be considered to be suffering from exertional heat stroke.
  - A body temperature greater than 104 °F indicates the individual is suffering an exertional heat stroke and needs to be treated rapidly.
  - A rectal temperature is the only viable field option to assess body temperature in an exercising individual. Aural, oral, tympanic, axillary and forehead measurements have all been shown to not be effective for measuring body temperature in exercising individuals.
- **Treatment**
  - Cold-water immersion should be used to cool any exertional heat stroke patient due to its superior cooling ability.
  - To ensure survival, cooling tubs should be setup prior to any event involving exercise in the heat. This works best if tubs are filled with water and with ice available nearby. Tubs should be large enough to accommodate the full-immersion of a large individual.
  - An individual with exertional heat stroke should be cooled to 102°F within 30 minutes. For many individuals they will start at 106-110°F and cool 1°F every 3 minutes, if cold-water immersion is utilized. Cooling can take up to 20 minutes, making rapid treatment decisions critical.
  - If cooling is available on-site the individual with exertional heat stroke should be cooled prior to transportation to a hospital.
- **Return-to-play**
  - An athlete who survives exertional heat stroke should be fully evaluated by a physician prior to return-to-play.
  - Prior to return-to-play the individual who suffered an exertional heat stroke should demonstrate the ability to tolerate exercise in the heat.
  - Athletes who have sustained an exertional heat stroke likely had a predisposing factor at the time of their injury. Predisposing factors should be identified and remediated before returning an athlete to activity.
  - Return-to-play should be gradual and medically monitored throughout. When medically cleared, exercise should begin at a low intensity in a temperate environment. The athlete then can progress intensity in a temperate environment if no complications persist. The athlete should then perform the same progression of intensity in a hot environment before they are allowed to return-to-play.

Parents' and Coaches' Guide to Dehydration and Other Heat Illnesses in Children

These guidelines were developed to help parents and coaches increase the safety and performance of children who play sports in hot weather. Children who play sports or are physically active in hot weather can be at risk for heat illnesses. The good news is heat illnesses can be prevented and successfully treated.

Children sweat less than adults. This makes it harder for children to cool off. Parents and coaches must make sure that children take it slow to be sure they can get used to the heat and humidity gradually.

There are other reasons why a child may become ill from a heat illness. Those who have a low level of fitness, who are sick, or who have suffered from dehydration or heat illness in the past should be closely watched. A medical professional such as a certified athletic trainer (ATC) should be on site to monitor the health and safety of all participants during games and practice, especially when it is very hot and humid.

Dehydration

Children get dehydrated if they do not replace body fluids lost by sweating. Being even a little dehydrated can make a child feel bad and play less effectively. Dehydration also puts children at risk for more dangerous heat illnesses.

Signs and Symptoms

- Dry mouth
- Thirst
- Being irritable or cranky
- Headache
- Seeming bored or disinterested
- Dizziness
- Cramps
- Excessive fatigue
- Child not able to run as fast or play as well as usual

Treatment

- Move child to a shaded or air-conditioned area.
- Give him or her fluids to drink.

"When can I play again?"
A child may be active again as soon as he or she is symptom-free. However, it's important to continue to watch the child.

National SAFE KIDS Campaign®

NATA
NATIONAL ATHLETIC TRAINERS' ASSOCIATION
HEALTH CARE FOR LIFE & SPORT

Heat Cramps

Heat cramps are a mild heat illness that can be easily treated. These intense muscle spasms usually develop after a child has been exercising for a while and has lost large amounts of fluid and salt from sweating. While heat cramps are more common in children who perform in the heat, they can also occur when it's not hot (for example, during ice hockey or swimming).

Children who sweat a lot or have a high concentration of salt in their sweat may be more likely to get heat cramps. Heat cramps can largely be avoided by being adequately conditioned, getting used to the heat and humidity slowly, and being sure a child eats and drinks properly.

Signs and Symptoms

- Intense pain (not associated with pulling or straining a muscle)
- Persistent muscle contractions that continue during and after exercise

Treatment

- The child should be given a sports drink to help replace fluid and sodium losses.
- Light stretching, relaxation and massage of the cramped muscles may help.

"When can I play again?"

A child may be active again when the cramp has gone away and he or she feels and acts ready to participate. You can help decrease the risk of recurring heat cramps by checking whether the child needs to change eating and drinking habits, become more fit, or get better adjusted to the heat.

Heat Exhaustion

Heat exhaustion is a moderate heat illness that occurs when a child continues to be physically active even after he or she starts suffering from ill effects of the heat, like dehydration. The child's body struggles to keep up with the demands, leading to heat exhaustion.

Signs and Symptoms

- Child finds it hard or impossible to keep playing
- Loss of coordination, dizziness or fainting
- Dehydration
- Profuse sweating or pale skin
- Headache, nausea, vomiting or diarrhea
- Stomach/intestinal cramps or persistent muscle cramps

Treatment

- Move child to a shaded or air-conditioned area.
- Remove any extra clothing and equipment.
- Cool the child with cold water, fans or cold towels (replace towels frequently).
- Have child lie comfortably with legs raised above heart level.
- If the child is not nauseated or vomiting, have him or her drink chilled water or sports drink.
- The child's condition should improve rapidly, but if there is little or no improvement, take the child for emergency medical treatment.

"When can I play again?"

A child should not be allowed to return to play until all symptoms of heat exhaustion and dehydration are gone. Avoid intense practice in heat until at least the next day, and if heat exhaustion was severe, wait longer. If the child received emergency medical treatment, he or she should not be allowed to return until his or her doctor approves and gives specific return-to-play instructions.

Parents and coaches should rule out any other conditions or illnesses that may predispose the child for continued problems with heat exhaustion. Correct these problems before the child returns to full participation in the heat, especially for sports with equipment.

Exertional Heat Stroke

Heat stroke is a severe heat illness that occurs when a child's body creates more heat than it can release, due to the strain of exercising in the heat. This results in a rapid increase in core body temperature, which can lead to permanent disability or even death if left untreated.

Signs and Symptoms

- Increase in core body temperature, usually above 104°F/40°C (rectal temperature) when the child falls ill
- Central nervous system dysfunction, such as altered consciousness, seizures, confusion, emotional instability, irrational behavior or decreased mental acuity

Other possible indicators include:

- Nausea, vomiting or diarrhea
- Headache, dizziness or weakness
- Hot and wet or dry skin
- Increased heart rate, decreased blood pressure or fast breathing
- Dehydration
- Combativeness

Treatment

If there are no on-site medical personnel:

- Call emergency medical services for immediate transport to the nearest emergency medical facility. Begin cooling the child while waiting for and during transport to the emergency facility.

If there are on-site medical personnel:

- Locate medical personnel immediately. Remove extra clothing or equipment. Begin aggressive whole-body cooling by immersing the child in a tub of cold water. If a tub is not available, use alternative cooling methods such as cold water, fans, ice or cold towels (replaced frequently), placed over as much of the body as possible.
- Call emergency medical services for transport to the nearest emergency medical facility.

"When can I play again?"

No child who has suffered heat stroke should be allowed to return until his or her doctor approves and gives specific return-to-play instructions. Parents should work with the child's doctor to rule out or treat any other conditions or illnesses that may cause continued problems with heat stroke. The child should return to physical activity slowly, under the supervision of an ATC or other qualified health care professional, especially for sports with equipment.

Parents: How Much Should Your Child Drink When Active?

- Before activity in the heat, record your child's body weight. (Remember if your child has already been exercising in the heat, he or she may already be dehydrated.)
- Weigh your child again, after the activity is over.
- Compare your child's pre-activity body weight to his or her post-activity body weight.

If post-activity weight is less than pre-activity weight, your child is not drinking enough fluids while active. A loss of as little as 1 percent of body weight can cause a decrease in performance. Because scientists have proven that children replace less of their fluid losses when drinking water, you may want to offer a flavored sports drink to increase the amount of fluid your child consumes.

Tips for Parents

- Before your child starts playing a sport, he or she should have a physical examination that includes specific questions about any history of heat illness.
- Tell your child's coach about any history of heat illness.
- Make sure your child is properly hydrated before he or she heads out the door to practice or a game. Give your children their own water bottles.
- Make sure your child's coach has your emergency contact numbers.
- Check that your child's league/team has an emergency action plan.

Tips for Coaches

- Be aware of temperature and humidity levels. Change practice length, intensity and equipment use as the levels rise.
- It should be easy for children to drink fluids during practice, and you should remind them to drink regularly. Fluid breaks should be scheduled for all practices and become more frequent as the heat and humidity levels rise.
- Every athletic organization should have an emergency action plan for obtaining emergency medical services if needed.
- Always have contact information for parents available.

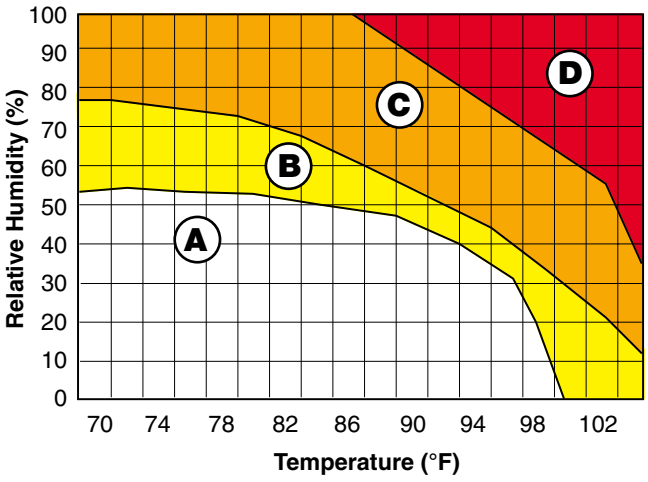
Activity Guidelines

Fluid breaks should be scheduled for all practices and become more frequent as the heat and humidity levels rise.

Add 5°F to the temperature between 10:00 a.m. and 4:00 p.m. from mid-May to mid-September on bright, sunny days.

A. Children should receive a 5-10 minute rest and fluid break after every 25 to 30 minutes of activity.

B. Children should receive a 5-10 minute rest and fluid break after every 20 to 25 minutes of activity. Children should be in shorts and t-shirts (with helmet and shoulder pads only, not full equipment, if worn for activity).



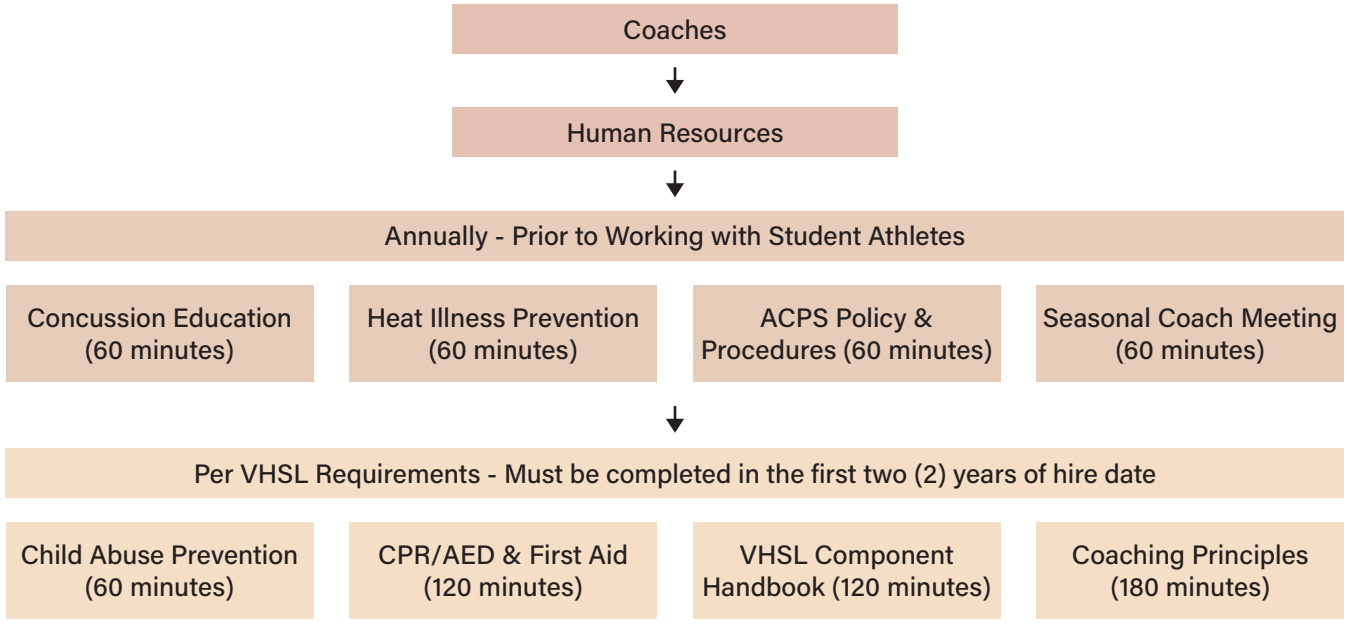
C. Children should receive a 5-10 minute rest and fluid break after every 15 to 20 minutes of activity. Children should be in shorts and t-shirts only (with all protective equipment removed, if worn for activity).

D. Cancel or postpone all outdoor practices/games. Practice may be held in an air-conditioned space.

This document was adapted from: *Inter-Association task force on exertional heat illnesses consensus statement.* June 2003. National Athletic Trainers' Association. The full document can be obtained at www.nata.org/industryresources/heatillnessconsensusstatement.pdf.

Appendix VI

Coaches Hiring & Training Flow Chart



Level 1

Practice must only be held with a Certified Athletic Trainer on the school's campus.

- Outdoor out-of-season practices and/or conditioning during summer. *(Summer is defined as the first day after ACPS' last day of school and the day before the first VHSL fall sports practice date.)*
- Indoor and outdoor in-season practices during VHSL sport seasons during traditional practice hours (4-7pm)

Level 2

ACPS Coaches who in addition to having completed all Annual requirements, and having also completed the Child Abuse Prevention, CPR/AED & First Aid training, VHSL Component (Handbook) and Coaching Principles, may hold practice without a Certified Athletic Trainer present.

- Out-of-season practices and/or conditioning not covered by Level 1
- Practices during VHSL sport seasons during non-traditional practice hours *(ex. Mornings, Weekends, Holidays)*
- Practices at off-campus locations

Fall pre-season practice guidelines

Schools are required to follow these practice guidelines or produce for the League office a local substitute policy which would apply to all students in the sports of Competitive Cheer, Cross Country, Field Hockey, Football and Volleyball.

(1) During their first six days of tryouts:

(a) No practice session, full or walk-thru, should exceed three hours.
(b) Total practice time per day should be limited to five hours.
(c) Only one full practice session should be permitted per day; it may be broken into two sessions.
(d) One walk-thru session is permitted on the day of a full practice.
(e) Two walk-thru practices may be substituted for a full and a walk thru session(s).
(f) A one-hour minimum recovery period should be included between sessions.

(2) For weeks two and three the following regulations should apply in addition to:

(a) through (f) above:
(a) Two full practices are permissible per day provided they do not exceed five total hours, or three hours in a single session.
(b) No more than three full practices should be conducted in two consecutive calendar days.

(3) For the purpose of the regulations above, a full practice is defined as a session allowing the use of any available equipment, involving all levels of activity permitted in the specific sport and includes necessary conditioning and weight training. A walk-thru session is a limited exertion session that includes skill-based, educational technique and oriented activities using sports appropriate equipment. Conditioning and weight training should not be included as part of a walk-thru session. Recovery period is defined as a session in which the athlete is not involved in physical activity.

Note: The following restrictions are in place for football only: Day 1-3 helmets only; Day 4-5 helmets and shoulder pads; Day 6 + full pads.

Appendix VII

2024-25 ACPS Out-of-Season Practice Calendar & Guidelines *(Revised 08/2024)*

During Fall Sports season - max. 15 days

Spring Sports - September 3 - October 5
Winter Sports - October 7 - November 9
VHSL Fall Dead Period: July 28 - August 11

During Winter Sports season - max. 15 days

Fall Sports - December 2 - December 21; January 6 - January 11
Spring Sports - January 13 - February 22
VHSL Winter Dead Period: November 10 - November 25

During Spring Sports season - max. 15 days

Winter Sports - March 17 - March 27; April 7 - April 26
Fall Sports - April 28 - May 31
VHSL Spring Dead Period: February 23 - March 10

June/July 2025 Summer Workouts - max. 15 days

June 9 - June 21; July 7 - July 26
VHSL Summer Dead Period: June 22 - July 5

Fall 2025 Sports Practice Start Dates

Golf: July 28
Football/Cheer: July 31
Volleyball/Field Hockey/Cross Country: August 4

General Information for Out-of-Season Practices - 2024-25

Eligibility to Participate

Any interested ACPS student currently enrolled in Grades 8-12 who has a current VHSL Physical Form (dated since 5/1/22) on file in their school's Athletics office is eligible to participate. Attendance is voluntary and optional, can NOT be mandatory, and can NOT be considered tryouts.

Scheduling

All dates/times must be scheduled, in advance, through the Athletics office. All dates/times/facilities must be approved by the Athletic Director or designee - no exceptions. No Sundays are permitted. Exceptions with Athletic Director approval only.

Strength & Conditioning

Non sport-specific training is permitted outside of the above listed dates. Coaches are welcome to include Strength & Conditioning as part of their workouts/practice plans. Confirm any weight room use with your Athletic Director/designee.

Equipment & Contact Restrictions

All current and applicable VHSL and/or ACPS safety guidelines must be followed. School issued helmets should only be used as necessary. There should be no full contact workouts. Please contact your Athletic Director if you have any questions.

Scrimmages

There are no scrimmages allowed with other schools. Teams may conduct intrasquad scrimmages, controlled by the coaching staff, provided they are in compliance with all current and applicable VHSL and/or ACPS guidelines.