



**2024-25**

## **POLICY AND PROCEDURES FOR**

**BOYS AND GIRLS  
CROSS COUNTRY**



### **NHIAA CROSS COUNTRY COMMITTEE**

**Nathan Burns, Chair, Nashua North; Stephanie Burnham; Tim Cox, Coe-Brown;  
Arthur Demers, Nashua South; Phil Demers, Hudson;**

**Nancy Eastman, Supervisor Officials, Rochester; Lee Hess, Manchester West;  
Larry Martin, Londonderry; Christine Pariseau-Telge, Manchester; Joseph Sascitelli, Exeter**

## **Special Notice**

Enclosed you will find information regarding the 76th Annual NHIAA Cross Country Championship Divisional Meets to be held at Derryfield Park in Manchester, New Hampshire; and 47<sup>th</sup> Annual Meet of Champions to be held at Alvirne High School in Hudson, New Hampshire as well as items identified by the Cross Country Committee as “Points of Special Emphasis.”

The 2024-25 edition of the Cross Country Policy and Procedures Manual provides all of the information that you will need for the Divisional Meets and Meet of Champions including a map of the course. **THERE WILL BE NO COACH’S INFORMATION GIVEN ON THE DAY OF THE DIVISIONAL MEETS. ONLY** the starting line up and competitor’s numbers will be distributed at the Divisional Meets.

### **INTRODUCTION**

This Manual is published by the New Hampshire Interscholastic Athletic Association, 251 Clinton Street, Concord, NH 03301. Neither the whole nor part of this publication may be copied or reproduced and/or translated without first obtaining written permission from the publisher.

All schools must be aware of the NHIAA By-Laws and policies relative to Cross Country which are published annually in the “NHIAA Handbook” as well as the rules of competition published by the National Federation of State High School Associations.

### **TABLE OF CONTENTS**

<b>TOPIC</b>	<b>Page #</b>
Blood Spillage and Body Fluids	9-10
Concussion Statement	14
Disqualification	7
Divisional Meets	5
Entries	5
Guidelines on Ozone Pollution & Physical Activity	12-14
Heat Stress and Athletic Participation	11-13
Medical Notes	2, 5
Meet of Champions	6
New England Championships	7
Outdoor Environmental Safety: Lightning	10-11
Parking	8
Points of Special Emphasis	2
Postponement	8
Records	3
Rules	8
School Designated Adults	8
Special Meet Information	7
Uniforms	7

## POINTS OF SPECIAL EMPHASIS:

The NHIAA Cross Country Committee is concerned about several matters regarding the NHIAA Cross Country Championship Meets and requests the assistance of coaches and athletic directors in addressing them. Although they are addressed elsewhere in the “Policy and Procedures” they are often ignored on days of the meets. Familiarity and follow through will ensure that your school or one of your competitors is not disqualified or not allowed to participate in the meets and will enhance the operation of these meets for the benefit of all participants. (Policies and Procedures number is indicated in the parentheses).

1. Time Schedule: this includes checking in at the stage and reporting to the starting line when scheduled. (II)
2. Uniforms: this includes the wearing of proper outer school uniform
3. It is recommended that metal spikes or hard plastic cleats **NOT** be worn on footwear due to safety concerns on the paved surfaces.
4. Competitor’s tags must be worn over the navel. (I)
5. Disqualification: this includes interference with another competitor by using the body, arms or hands to show exuberance at the finish line and affecting the finish or placement of another competitor. (VI)
6. Code of Conduct: this includes graffiti, spray painting, banners, signs, etc. (IX)
7. The NHIAA will charge a parking fee of \$10.00 per car at the Meet of Champions.
8. ATHLETIC TRAINERS – Schools requesting medical services are to provide the necessary supplies for the athletic trainer at all regular season and tournament events.
9. **By-Law Article XVIII Cross Country, Sect. 2: State Divisional Championships. For an athlete to compete in the State Championships, he/she must have participated in at least one Cross Country meet during the regular season.**
10. **By-Law Article I - Policy, Sect. 24: Practice at Tournament Sites (Modification):** “In the sport of Cross Country, the Divisional and Meet of Champions venues are available to teams any time prior to the championship meets with the following exception. EXCEPTION: Teams and Individuals may practice on the Meet of Champions course on the campus of Alvirne High School only once the week between divisional meets and the Meet of Champions. No team or individual may practice without permission of the Alvirne Athletic Department and without supplying a Certificate of Insurance from their own school district. Shirts must be worn at all times.”
11. Considering the negative outcome associated with dehydration, it is important that all coaches educate parents and student-athletes about developing a season long hydration plan. Coaches should ensure that student-athletes have access to water prior to, during, and after practices and meets and encourage all to hydrate whenever they feel it is necessary.
12. National Federation Rules are in effect.
13. No tents, canopies, flags, banners, or signs within 20 feet of any painted cross country course lines.

**New Hampshire Cross Country Committee  
Cross Country Finish Line Protocols**

The following guidelines should serve to mitigate congestion and confusion at the XC finish line.

- Run through the finish line and continue moving toward the finish line corral.
- Continue through after crossing timing mats. You will impede athletes behind you if stopped.
- Don't talk to family, friends, or coaches until you depart the corral area.
- Finish order does not have to be maintained after crossing timing mats.
- Do not intentionally cross the finish line simultaneously with teammate(s).
- Listen to the officials!

**RECORDS**

<b>State Records</b>	<b>At Derryfield Park</b>		
Girls	Jacqueline Gaughan	Exeter	17:35.6, 2016
Boys	Cory Thorne	Portsmouth	15:21, 2004
<b>Divisions</b>			
Division I Boys	Cory Thorne	Portsmouth	15:21, 2004
Division I Girls	Jacqueline Gaughan	Exeter	17:35.6, 2016
Division II Boys	Aidan Cox	Coe-Brown	15:15.4, 2020
Division II Girls	Julia Robitaille	Manchester West	17:52.5, 2017
Division III & IV Boys	Eric Malnati	Fall Mountain	15:34, 2008
Division III & IV Girls	Kylie McCoy	Portsmouth Christian	18:16, 2010
<b>Meet of Champions</b>	<b>At Derryfield Park</b>		
Girls	Danyelle Wood	(Spaulding) Rochester	17:57, 1992
Boys	Matt Downing	(Pinkerton) Derry	15:30, 1994
<b>Meet of Champions</b>	<b>At Mine Falls</b>		
Girls	Jacqueline Gaughan	Exeter	16:51.2, 2017
Boys	Aidan Cox	Coe-Brown	14:58.8, 2020

## 2024-25 Boys and Girls Cross Country Divisional Alignment

DIV. I (1010 +)		DIV. II (575-1009)		DIV. III (1-574)			
20 Schools		18 Schools		37 Schools			
Pinkerton	3079	Timberlane	986	Pelham	556	Hopkinton	300
Nashua South	1704	Oyster River	844	Sanborn	524	Newport	292
Nashua North	1626	Man. West	781	Monadnock	499	Derryfield	291
Concord	1464	Merrimack Valley	763	Gilford	492	Inter-Lakes	285
Dover	1417	Pembroke	756	Fall Mountain	490	Newmarket	280
Bedford	1404	Hollis/Brookline	750	Kearsarge	485	Bishop Brady	261
Spaulding	1390	Kingswood	746	Prospect Mountain	410	Mascenic	260
Exeter	1384	Kennett	707	Winnisquam	403	Epping	221
Man. Memorial	1365	Milford	698	Newfound	394	Profile	221
Keene	1341	Souhegan	693	Hillsboro-Deering	382	Woodsville	212
Londonderry	1291	Hanover	689	White Mountains	375	Portsmouth Christian	178
Man. Central	1161	Coe-Brown	662	Conant	373	Hinsdale	164
Merrimack	1102	Con-Val	658	Belmont	360	Moultonborough	141
Salem	1096	Plymouth	651	Campbell	356	Wilton-Lyndeborough	131
Winnacunnet	1073	John Stark	648	St. Thomas Aquinas	354	Lin-Wood	77
Goffstown	1043	Lebanon	618	Berlin	348	Pittsburg	77
Alvirne	1025	Bow	611	Raymond	343	Holy Family	66
Portsmouth	1024	Laconia	590	Mascoma	342	Canaan, VT	52
*Windham	995			Trinity	327		
*Bishop Guertin	771						
*Petition							

### I: SPECIAL INFORMATION:

- A. **Any variation/exception to any of the regulations outlined in the Policy and Procedures Manual must be for medical reasons and have the prior approval of the Committee/Meet Director. Written documentation from a physician must be provided to the Committee/Meet Director prior to competition.**
- B. **Competitor Numbers:** Each packet has a team roster along with the assigned competitor numbers for each athlete. Each competitor number has a timing chip attached to back. The competitor number **MUST** be attached to the front of each athlete's jersey so that it is in plain view of the cameras at the finish line (do not attached to the shorts or leggings). **DO NOT BEND, FOLD, STAPLE, or CRUMPLE** the competitor number as that could negate the timing system's ability to read the chip. Numbers must be worn at all times; competitors not wearing their assigned numbers will be disqualified.
- C. **Delays:** The NHIAA Cross Country Committee, meet directors, or referee may delay the start of the race if such a delay is in the best interests of the competitors or management of the meet.

- D. **Jury of Appeals:** Protests must be submitted to the referee. All decisions and protests will be acted upon on the day of the meet, and at the site, by the referee. Further appeal must be made to the Jury of Appeals whose decisions shall be final. The Jury of Appeals shall consist of the members of the NHIAA Cross Country Committee present at the site excluding the referee.
- E. **Medical Services:** Athletic trainers will be on duty at all meets. Schools requesting medical services are to provide the necessary supplies for the athletic trainer. If an athlete needs medical attention, the coach or the school's adult supervisor should inform the public address announcer located on the stage area.
- F. **Check-in:** Coaches must check in at the stage, sign-in and pick up packets with competitors' numbers. Coaches must verify in writing that their competitors are in proper uniforms.
- G. **Reporting for the Race: Competitors are expected to be at the starting line at least 15 minutes BEFORE the start of their race.** Announcements will be made but the responsibility to be at the starting line rests with the coaches and competitor. Races will NOT be delayed for teams reporting late. Teams not checked in by the clerk may not compete.
- H. **Scoring:** Scoring for teams will be by finish positions based upon displacement of non-team competitors. The Official Scorer will determine the team Results. Rule 8 of National Federation shall govern these meets.
- I. **Starting Line Positions:** Positions for the start have been randomly selected by the meet committee for each race. For teams: FOUR (4) competitors may be on the line. For individuals: all may be on the line.
- J. **Team:** Seven (7) runners may be entered per team. The positions of the first five (5) finishers will be used for team Scorers. To qualify for team scores there must be a minimum of five (5) runners. Team members shall wear the same school uniform.
- K. No tents, canopies, flags, banners, or signs within 20 feet of any painted Cross Country course lines.

## II: DIVISIONAL MEETS - SATURDAY, October 26, 2024:

**TIME SCHEDULE:** Each coach, or school designated adult, should check in upon arrival and pick up a packet containing competitors' numbers and positions on the starting line. **TEAMS MUST REPORT TO THE THEIR STARTING LINE AT LEAST 15 MINUTES BEFORE THE START OF THEIR RACE. This race will be held at Derryfield Park, Manchester.**

**The time schedule is as follows:**

- 10:00 a.m. Division II Girls
- 10:40 a.m. Division II Boys Race
- 11:20 a.m. Awards Division II
- 11:30 a.m. Division I Girls Race
- 12:10 p.m. Division I Boys Race
- 12:50 p.m. Awards Division I
- 1:00 p.m. Division III Girls Race
- 1:40 p.m. Division III Boys Race
- 2:20 p.m. Awards Division III

A. **ENTRIES:** The Coach, Athletic Director or Principal is to complete the entry procedure using [www.DirectAthletics.com](http://www.DirectAthletics.com) for the NHIAA Championship Cross Country Meets. **Entries will close at 11:59AM on Sunday, October 20, 2024.** Each school may enter up to a MAXIMUM of 7 athletes. Coaches will not be able to add entries after the deadline; they will only be able to replace someone already entered.

**(If your school offers the sport and is not entering any athletes, the NHIAA must be notified in writing before or on the deadline date. There is no section on the website to indicate this information.)**

**Note:** Athletes participating in NHIAA sponsored post-season activities must have a school designated adult supervisor in attendance at the event throughout the athlete's participation in such event. The school designated adult supervisor must be authorized by the high school principal and such authorization must be presented to the event director prior to participation by the athletes

B. **ENTRY FEES:** There are no entry fees for Divisional Meets or the Meet of Champions.

C. **COURSE:** The course will be the same as last year and maps will be provided. The course is open for walks and for inspection as indicated on the time schedule. The Meet Directors are members of the NHIAA Cross Country Committee and they reserve the right to make any alterations to the course that they deem necessary. If any changes are made, information will be given at check-in.  
Course length: BOYS – (approx.) 5000m; GIRLS – (approx.) 5000m.

D. **AWARDS:** Official NHIAA championship and runner-up plaques, as well as ten (10) team medals, will be awarded in each of the divisional meets. In addition, 25 individual medals will also be awarded in each division for boys and girls.

### **III: MEET OF CHAMPIONS - SATURDAY, NOVEMBER 2, 2024:**

The Meet of Champions will be held at **ALVIRNE HIGH SCHOOL** and will bring together the outstanding runners from each division for **HEAD TO HEAD COMPETITION**. The Meet of Champions also serves as a qualifying race for the New England Championships.

A. **QUALIFICATIONS:** Competitors for the Meet of Champions will be selected based on the following criteria:

1. From Division III - top 5 teams and first 25 finishers.
2. From Division II - top 5 teams and first 25 finishers.
3. From Division I - top 5 teams and first 25 finishers.

The next three (3) teams from any division with the lowest average time will fill the remaining spots.

B. **ENTRY PROCEDURE:** No further entry procedure is required for the Meet of Champions. Packets will be prepared for each team or individual. Procedures will be similar to those of the Divisional Meets. Check-in is one hour before each race.

C. **RACE TIMES:** GIRLS - 2:30 p.m. BOYS - 3:20 p.m.

D. **AWARDS:** Official NHIAA medals will be awarded to the top twenty-five (25) individuals for boys and girls. **THERE WILL BE NO TEAM AWARDS.**

- E. Teams and Individuals may practice on the Meet of Champions course on the campus of Alvirne High School once only the week between divisional meets and the Meet of Champions. No team or individual may practice without permission of the Alvirne Athletic Department or without supplying a Certificate of Insurance from their own school district and shirts need to be worn at all times.

#### **IV: NEW ENGLAND MEETS – Wickham Park, Manchester, CT**

Races for boys and girls will be held at Wickham Park, Manchester, CT. The starting times will be 11:30 a.m. for girls and 12:30 p.m. for boys. The course length will be 5000m for BOTH boys and girls. For both boys and girls, the first twenty-five (25) individuals and the first six (6) teams in the Meet of Champions will qualify to run in the New England Championships. Team qualifiers will be determined by adding the finishing positions of the first five (5) runners of each team. Before leaving the Meet of Champions, coaches who have qualified runners **must** check with the Meet Director. An entry fee of **\$140.00 per TEAM or \$20.00 per INDIVIDUAL** will be charged payable on the day of the New England Meet. Make checks payable to: “CNESSPA”.

#### **V: UNIFORMS (Divisional Meets and Meet of Champions)**

It is the coach’s responsibility to verify that the competitors are wearing the proper uniform and comply with the uniform rule:

For complete rules please see - NFHS Rule 4-3-1 and 4-3-2

**SPECIAL NOTES:** The Cross Country Committee has elected to impose a modification to the NFHS Uniform Language for New Hampshire. **No warning for uniform penalties** will be issued during the cross country championships. All athletes found to be in violation **will be disqualified**.

#### **VI: DISQUALIFICATION:**

A competitor shall be disqualified who:

- a. Fails to complete the prescribed course.
- b. Uses an illegal aid such as, but not limited to, electronic impulse devices of any type.
- c. Wears an illegal uniform.
- d. False starts.
- e. Interferes with another runner.
- f. Uses unsportsmanlike or unacceptable conduct.
- g. Joins hands with another competitor at any time during the race.

**NOTE:** If a competitor is pushed, tripped or otherwise interfered with on the course, the competitor must not retaliate. Retaliation will be an automatic disqualification no matter what the provocation.

Considering the negative outcome associated with dehydration, it is important that all coaches educate parents and student-athletes about developing a season long hydration plan. Coaches should ensure that student-athletes have access to water prior to, during, and after practices and meets and encourage all to hydrate whenever they feel it is necessary.

#### **VII: CONTINGENCIES (Divisional Meets and Meet of Champions):**

- A. If a Championship meet scheduled for Saturday is postponed due to weather or other circumstances, it will be rescheduled for Sunday using the same time schedule.
- B. If the Divisional Meets are postponed on Saturday and Sunday due to weather or other circumstances, they will be rescheduled the following Saturday using the same time schedule and the Meet of



Champions will be canceled that year. Team qualifications for the New England Championships will be based on the lowest aggregate time of the five (5) scoring runners in the Divisional Meets and individual qualifiers for the New England Championships will be based on their individual time in the Divisional Meets.

- C. If the Meet of Champions is postponed on Saturday and Sunday, they will be canceled that year, with team qualifications for the New England Championships based on the lowest aggregate time of the five (5) scoring runners in the Divisional Meets and individual qualifiers for the New England Championships based on their individual time in the Divisional Meets.

#### **VIII: SPECIAL NOTES (Divisional Meets, Meet of Champions and New England's):**

- A. **RULES:** The rules of the National Federation Cross Country, Rule 8 shall govern these meets. The finish position of non-team competitors will be eliminated and team positions re-ranked in order to determine team scores. In the event that two or more teams tie for the awards in the Divisional Meets or the Meet of Champions, the position of the 6th runner will be used as the tiebreaker. If a team does not have a 6th runner, the team with the 6th runner shall prevail. The NHIAA Cross Country Committee shall act as Jury of Appeals for the Divisional Meets and the Meet of Champions
- B. **PARKING AND OTHER FACILITIES:** Showers, toilets and locker room facilities are **NOT** available at Hillside Junior High School. Parking facilities are available at Hillside Junior High School on Reservoir Avenue for buses and at McDonough School at 550 Lowell Street for general public. Buses and other vehicles ARE NOT ALLOWED in Derryfield Park. Portable toilets will be available. There is a \$10.00 parking fee for the Meet of Champions.
- C. **SCHOOL DESIGNATED ADULT:** Athletes participating in NHIAA sponsored post season activities must have a school designated adult supervisor in attendance at the event throughout the athlete's participation in such event (they must sign in at the stage). The high school principal must authorize the school designated adult supervisor and the athlete must present such authorization to the event director prior to participation. Only that person may check in entries and receive competitors' numbers.
- D. Any variation/exception to any of the regulations outlined in the Policies and Procedures Manual must be for medical reasons and have the prior approval of the Committee/Meet Director. Written documentation from a physician must be provided to the Committee/Meet Director prior to competition.

#### **IX: CODE OF CONDUCT:**

The NHIAA Cross Country Committee has chosen Derryfield Park in Manchester, NH, as the site for their sanctioned events. We as a Committee believe that this course offers the best challenge for the athletes who participate in this event. This course is prepared by a group of dedicated individuals who take pride in the work they do.

We as a Committee have had to come to grips with the vandalism that takes place at events that we sponsor. In the past, the course has had damage due to spray painting by different schools. Fences have also been destroyed by over-zealous spectators and competitors who should understand this can no longer be tolerated by the Committee.

First of all, the members of the Committee expect the women and men who coach the athletes at our events to be directly responsible for not only the competing athletes, but also for non-competing athletes, supporters, spectators, and parents from the coach's school. We do not accept the argument that a coach is

not responsible for anyone other than competing athletes. If a coach is not able to control non-competitors from the coach's school; please inform the meet director to handle the situation.

After the event, we ask that all schools be responsible for their staging area. The trash you make you must pick up. Banners and signs are to be removed after the event.

Some specific rules, then:

1. No marking, painting, defacing of anything.
2. No taking of anything.
3. All signs and banners must be visible from the bandstand, no signs or banners in the woods or on the trails.
4. No nailing or stapling of anything to trees.
5. All signs or banners must be approved by a Committee member prior to being posted. Signs not approved will be removed.

We know that these rules will not diminish the good time that you and your athletes will have at the event. The Committee asks that you review these rules with your team. Violators will be subject to Committee action including non-participation in the current or following year.

## **X: BLOOD SPILLAGE AND BODY FLUIDS:**

The NHIAA Sports Medicine Committee suggests that each school develop a local policy in cooperation with their local medical personnel, on how to handle blood spillage.

### **Housekeeping Procedures for Blood and Body Fluids:**

Disposable latex gloves should be worn to avoid contamination of the hands of the person cleaning spillages involving blood or other body fluids and secretions. Persons involved in cleaning contaminated surfaces should avoid exposure of open skin lesions or mucous membranes to blood or body fluids. A freshly prepared solution of dilute household bleach (one quarter cup of bleach diluted in one gallon of water) or other disinfectant labeled as *virucidal*, *Tuberculocidal*, *staphylocidal* is useful. Allow the disinfectant to stand wet for a minimum of one minute to start killing pathogens and disinfecting the area (10 minutes of disinfection time guarantees surface sterility). Whenever possible, disposable towels, tissues, and gloves should be used and properly discarded and mops should be rinsed in disinfectant.

### **Interpretation of Excessive Bleeding:**

National Federation Rules call for a player, who is bleeding, has an open wound or excessive blood on the uniform, to leave the court/field.

The NHIAA interprets "excessive blood on the uniform" to mean that part of the uniform is saturated with blood. Saturated does not mean a wet spot. Saturated means a major portion of the garment is covered and soaked with blood. For this to occur, significant bleeding would have had to take place.

For any blood on uniform less than "saturated", the uniform does not have to be changed. School personnel have the responsibility of treating the blood area with the appropriate disinfecting solution before the athlete may participate. If the uniform is "saturated" with blood, the uniform must be changed before the athlete may participate. This interpretation is to be followed in the conduct of all NHIAA athletic events.

## **XI: OUTDOOR ENVIRONMENTAL SAFETY: LIGHTNING**

Lightning is the most consistent and significant weather hazard that may affect outdoor athletics. Within the United States, the National Severe Storm Laboratory (NSSL) estimates that 100 fatalities and 400-500 injuries

requiring medical treatment occur from lightning strikes every year. The existence of blue sky and the absence of rain are not protection from lightning. Lightning can, and does, strike as far as 10 miles away from the rain shaft. It does not have to be raining for lightning to strike. Additionally, thunder always accompanies lightning, even though its audible range can be diminished due to background noise in the immediate environment, and its distance from the observer.

The following guidelines are recommended:

1. All athletic staff and game personnel are to monitor threatening weather. Establish a chain of command as to who makes the decision to remove a team or individual from athletic sites or events (athletic/site/event director, game officials/umpires, sports medicine staff?). An emergency plan should include planned instructions for participants as well as spectators.
2. Be aware of potential thunderstorms that may form during scheduled athletic events or practices. Included here should include National Weather Service – issued (NWS) thunderstorm “watches” and “warnings” as well as signs of thunderstorms developing nearby. A “watch” means conditions are favorable for severe weather to develop in an area; a “warning” means that severe weather has been reported in an area and for everyone to take proper precautions.
3. Know where the closest “safe structure or location” is to the field or playing area, and know how long it takes to get to that safe structure or location. Safe structure or location is defined as:
  - a Any building normally occupied or frequently used by people, i.e., a building with plumbing and /or electrical wiring that acts to electrically ground the structure. Avoid using shower facilities for safe shelter and **do not use** the showers or plumbing facilities during a thunderstorm.
  - b In the absence of a sturdy, frequently inhabited building, any vehicle with a hard metal roof (not a convertible or golf cart) and rolled up windows can provide a measure of safety. A vehicle is certainly better than remaining outdoors. It is not the rubber tires that make a vehicle safe shelter, but the hard metal roof, which dissipates the lightning strike around the vehicle. **DO NOT TOUCH THE SIDES OF THE VEHICLE!**
4. WHEN YOU FIRST HEAR THUNDER OR SEE LIGHTNING, SUSPEND ACTIVITIES AND GO TO A SAFE SHELTER OR LOCATION. **“IF YOU CAN SEE IT (LIGHTNING), FLEE IT (TAKE SHELTER). IF YOU CAN HEAR IT (THUNDER) CLEAR IT (SUSPEND ACTIVITIES).”** WAIT UNTIL 30 MINUTES AFTER THE LAST OBSERVED LIGHTNING OR THUNDER BEFORE RESUMING ACTIVITIES.
5. If no safe structure or location is within a reasonable distance, find a thick grove of small trees surrounded by taller trees or a dry ditch. Assume a crouched position on the ground with only the balls of the feet touching the ground, wrap your arms around your knees and lower your head. Minimize contact with the ground, because lightning current often enters a victim through the ground rather than by a direct overhead strike. **MINIMIZE YOUR BODY’S SURFACE AREA, AND MINIMIZE CONTACT WITH THE GROUND! DO NOT LIE FLAT!** Stay away from the tallest trees or objects (such as light poles or flag poles), metal objects (such as bleachers or fences), individual trees, standing pools of water, and open fields. Avoid being the highest object in a field. Do not take shelter under a single, tall tree.

## **XII: HEAT STRESS AND ATHLETIC PARTICIPATION**

Early fall football, cross country, soccer and field hockey practices are conducted in very hot and humid weather in many parts of the United States. Due to the equipment and uniform needed in football, most of the heat problems have been associated with football. During the 1998 season, there were four heat stroke deaths in football. There are no excuses for deaths if the proper precautions are taken. During hot weather, the athlete is subject to the following:

**HEAT CRAMPS** - Painful cramps involving abdominal muscles and extremities caused by intense, prolonged exercise in the heat and depletion of salt and water due to profuse sweating.

**HEAT SYNCOPE** - Weakness, fatigue, and fainting due to loss of salt and water in sweat and exercise in the heat. Predisposes to heat stroke.

**HEAT EXHAUSTION (WATER DEPLETION)** - Excessive weight loss, reduced sweating, elevated skin and core body temperature, excessive thirst, weakness, headaches and sometimes unconsciousness.

**HEAT STROKE** - An acute medical emergency related to thermoregulatory failure. Associated with nausea, seizures, disorientation, and possible unconsciousness or coma. It may occur suddenly without being preceded by any other clinical signs. The individual is usually unconscious with a high body temperature and a hot dry skin (heat stroke victims, contrary to popular belief, may sweat profusely).

### **HEAT ACCLIMITIZATION**

- A minimum of three (3) days before interscholastic scrimmaging
- A minimum length of time between practices (3 hours)

It is believed that the above-mentioned heat stress problems can be controlled provided certain precautions are taken. According to the American Academy of Pediatrics Committee on Sports Medicine, heat related illnesses are all preventable. (Sports Medicine: Health Care for Young Athletes, American Academy of Pediatrics, 1991). The following practices and precautions are recommended:

1. Each athlete should have a physical exam with a medical history when first entering a program and an annual health history update. History of previous heat illness and type of training activities before organized practice begins should be included. State high school association's recommendations should be followed.
2. It is clear that top physical performance can only be achieved by an athlete who is in top physical condition. Lack of physical fitness impairs the performance of an athlete who participates in high temperatures. Coaches should know the PHYSICAL CONDITION of their athletes and set practice schedules accordingly
3. Along with physical conditioning, the factor of acclimatizing to heat is important. Acclimatization is the process of becoming adjusted to the heat and it is essential to provide for GRADUAL ACCLIMITIZATION TO HOT WEATHER. It is necessary for an athlete to exercise in the heat if he/she is to become acclimatized to it. It is suggested that a graduated physical conditioning program be used and that 80 percent acclimatization can be expected to occur after the first seven to 10 days. Final states of acclimatization can be expected to occur after the first seven to 10 days. Final stages of acclimatization to heat are marked by increased sweating and reduced salt concentration in the sweat.
4. The old idea that water should be withheld from athletes during workouts has NO SCIENTIFIC FOUNDATION. The most important safeguard to the health of an athlete is the replacement of water. Water must be on the field and readily available to athletes at all times. It is recommended that a minimum of 10 minutes be scheduled for a water break every half hour of heavy exercise in the heat. WATER SHOULD BE AVAILABLE IN UNLIMITED QUANTITIES. Check and be sure athletes are drinking the water. Cold water is preferable. Drinking ample water before practices and games has also been found to aid performance in the heat.
5. Salt should be replaced daily. Modest salting of foods after practice or games will accomplish this purpose. Salt sables are not recommended. ATTENTION MUST BE DIRECTED TO REPLACING WATER— FLUID REPLACEMENT IS ESSENTIAL.
6. Know both the TEMPERATURE and the HUMIDITY. The greater the humidity, the more difficult it is for the body to cool itself. Test the air prior to practice or game using a wet bulb, globe, relative humidity index (WBGT Index) which is based on the combined effects of air temperature, relative humidity, radiant heat and air movement. The following precautions are recommended when using the WBGT Index (ACSM's Guidelines for the Team Physician, 1991):
  - Below 64.....unlimited activity
  - 65-72....moderate risk

74-82....high risk  
82+.....very high risk

There is also a weather guide for activities that last for 30 minutes or more (Fox Matthews, 1981) which involves knowing the relative humidity and air temperature.

AIR TEMP	DANGER ZONE	CRITICAL ZONE
70 F	80% RH	100% RH
75 F	70% RH	100% RH
80 F	50% RH	80% RH
85 F	40% RH	68% RH
90 F	30% RH	55% RH
95 F	20% RH	40% RH
100 F	10% RH	30% RH

RH = Relative Humidity

One other method of measuring the relative humidity is the use of a sling psychrometer which measures the bulb temperature. The wet bulb temperature should be measured prior to practice and the intensity and duration of practice adjusted accordingly. Recommendations are as follows:

Under 60 F.....safe but always observe athletes

61-65 F.....observe players carefully

66-70 F.....caution

71-74 F.....shorter practice sessions and more frequent water and rest breaks

75 + F.....danger level and extreme caution

7. Cooling by evaporation is proportional to the area of the skin exposed. In extremely hot and humid weather, reduce the amount of clothing covering the body as much as possible. NEVER USE RUBBERIZED CLOTHING.
8. Athletes should weigh in each day before and after practice and WEIGHT CHARTS CHECKED. Generally, a 3% weight loss through sweating is safe and over a 3% weight loss is in the danger zone. Over a 3% weight loss that athlete should not be allowed to practice in hot and humid conditions. Observe the athletes closely under all conditions. Do not allow athletes to practice until they have adequately replaced their weight.
9. Observe athletes carefully for signs of trouble, particularly athletes who lose significant weight and the eager athlete who constantly competes at his/her capacity. Some trouble signs are nausea, incoherence, fatigue, vomiting, cramps, weak rapid pulse, visual disturbance and unsteadiness.
10. Teams that encounter hot weather during the season through travel or following and unseasonably cool period should be physically fit but will not be environmentally fit. Coaches in this situation should follow the above recommendations and substitute more frequently during games.
11. Know what to do in case of an emergency and have your emergency plans written with copies to all of your staff. Be familiar with immediate first aid practice and prearranged procedures for obtaining medical care, including ambulance service.

**HEAT STROKE** - This is a medical emergency- DELAY COULD BE FATAL.

Immediately cool the body while waiting for transfer to the hospital. Remove clothing and place ice bags on next in the axilla (armpit) and on the groin area. An increasing number of medical personnel are now using a treatment for heat illness that involves applying either alcohol or cool water to the victim's skin and vigorously fanning the body. The fanning causes evaporation and cooling. (Source, The First Aider – September 1987).

**HEAT EXHAUSTION** - OBTAIN MEDICAL CARE AT ONCE. Cool the body as you would for heat stroke while waiting for transfer to the hospital. Give fluids if athlete is able to swallow and is conscious.

**SUMMARY** - The main problem associated with exercising in the hot weather is water loss through sweating. Water loss is best replaced by allowing the athlete unrestricted access to water. Water breaks two or three times per hour is better than one break an hour. Probably the best method is to have water available at all times and allow athletes to drink water whenever he/she needs it. Never restrict the amount of water an athlete drinks, and be sure the athletes are drinking the water. The small amount of salt lost in sweat is adequately replaced by salting foods at meals. Talk to your medical personnel concerning emergency treatment plans. (Reprinted by Permission from NFHS)

### **XIII: NHIAA Guidelines on Ozone Pollution and Physical Activity**

School Administrators and coaches as well as other appropriate staff are to use this document in making decisions regarding indoor and outdoor activities during periods of high ozone pollution.

#### **CHARTING AIR QUALITY**

Local officials use a simple scale to forecast and report on smog levels and other air pollution. Depending on where you live, it might be called Air Quality Index (AQI) or Pollutant Standards Index (PSI).

Current air quality is reported as a percentage of the federal health standard for a pollutant. If the current index is above 100, air pollution exceeds the level considered safe.

At Ozone smog levels above 100, children, asthmatics and other sensitive groups should limit strenuous exercise. Even otherwise healthy people should consider limiting vigorous exercise when ozone levels are at or above the health standard.

If the index is above 200, corresponding to an ozone pollution level of .20 parts per million (ppm), the pollution level is judged unhealthy for everyone. At this level, air pollution is a serious health concern. Everyone should avoid strenuous outdoor activity, as respiratory tract irritation can occur.

Index Value	Descriptor	Color	1 hr. Ozone ppb
0 – 50	Good	Green	---
51 – 100	Moderate	Yellow	---
101 – 150	Unhealthy for Sensitive Groups	Orange	125 – 164
151 – 200	Unhealthy	Red	165 – 204
201 – 300	Very Unhealthy	Purple	205 – 404
301 – 500	Hazardous	Maroon	405 – 604

#### **OBSERVING AIR QUALITY**

1. Watch the Calendar

Ozone smog tends to be worst during the May - to - September “smog season.” Be especially conscious of smog levels during warm weather. In warm areas, smog can be a problem at any time of the year. Carbon monoxide pollution levels also are related to the weather, as well as to altitude. In the western U.S., the highest carbon monoxide levels are found in the winter months.

2. Watch the Clock

Since sunlight and time are necessary for ozone smog formation, the highest levels of ozone typically occur during the afternoon. Since carbon monoxide is produced primarily by motor vehicles, the highest carbon monoxide levels usually occur during rush hour or during other traffic congestion situations.

3. Watch the News

#### **GUIDELINES FOR PARTICIPATION**

1. Observe appropriate physical activity restrictions represented above.

2. If an ozone exceedance is expected, but has not yet occurred at the time an interscholastic practice or contest is scheduled to begin, that event may begin as scheduled.
3. If an interscholastic practice or contest is scheduled to begin and an E.P.A. warning is in effect (PSI 201 or higher), the event shall be cancelled, delayed or rescheduled.

When ozone levels reach a national PSI level of 201 (.201 parts per million), exercising indoors or outdoors may cause significant respiratory tract irritation and a decline in lung function. Therefore, strenuous exercise indoors and outdoors is to cease.

#### RECOMMENDED RESTRICTION OF PHYSICAL ACTIVITY

The following limits on activity for each type of episode are as follows:

- A. Level Orange, PSI 101-150 (Unhealthy for Sensitive Groups)
  1. Active children and adults and people with heart or respiratory disease, such as asthma or allergies, should limit prolonged outdoor exertion.
  2. Healthy individuals with noticeable health effects associated with existing conditions should minimize outdoor activity.
- B. Level Red, PSI 151-200 (Unhealthy)
  1. All athletes should discontinue prolonged, vigorous exercise indoors and outdoors.
  2. Sensitive individuals, primarily children who are active outdoors and people with heart or respiratory disease such as asthma or allergies, should avoid indoor and outdoor activity.
  3. Indoor and outdoor activities that should be avoided include, but are not limited to, calisthenics, basketball, baseball, running, field hockey, soccer, football, tennis, swimming and diving.
- C. Level Purple, PSI 201-300 (Very Unhealthy)
  1. All athletes shall discontinue vigorous indoor and outdoor activities, regardless of duration.
  2. All indoor and outdoor physical education classes, sports practices and athletic competitions shall be rescheduled.

Note: Indoor practices may be held if an air-conditioned facility is available.

#### **XIV: Concussion Statement:**

##### **NFHS Guidelines for Management of Concussions:**

The NHIAA mandates the following of the NFHS guidelines for management of Concussions.

Concussions: Any athlete who exhibits signs, symptoms, or behaviors consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the contest and shall not return to play until cleared by an appropriate health care professional. Please visit [www.nhcaa.org](http://www.nhcaa.org); "What's New" to view the NFHS Guidelines for Management of Concussions and the New Hampshire SB402 and its language as written.