



Equipment Guidelines

The NFHS sport rules committee is responsible for recommending equipment rules to the NFHS Board of Directors for adoption. The committee is not responsible for testing or approving playing equipment used in interscholastic sports. Equipment manufacturers bear the responsibility for the development of playing equipment that meets the specifications established by the committee. The committee asks equipment manufacturers to work with the various independent organizations to ensure the production of safe products. Neither the NFHS sport rules committee certifies the safety of equipment. Only equipment that meets the dimensions and specifications in the NFHS sport rules may be used in interscholastic competition. While the committee does not regulate the design of equipment and does not set technical or scientific standards for testing equipment, the committee may, from time to time, advise manufacturers with guidance as to the equipment-performance standards that are consistent with the integrity of the game. The committee reserves the right to intercede to protect and maintain the integrity of the game.

The NFHS sport rules committee suggests that manufacturers plan to submit changes in sports equipment to the NFHS sport rules committee for review before production.



Guidelines on Handling Contests During Lightning Disturbances

The purpose of these guidelines is to provide a default policy to those responsible for making decisions concerning the suspension and restarting of contests based on the presence of lightning. The preferred sources from which to request such a policy for your facility would include your state high school association and the nearest office of the National Weather Service.

Proactive Planning

1. Assign staff to monitor local weather conditions before and during events.
2. Develop an evacuation plan, including identification of appropriate nearby shelters.
3. Develop criteria for suspension and resumption of play:
 - a. When thunder is heard, or a cloud-to-ground lightning bolt is seen, the thunderstorm is close enough to strike your location with lightning. Suspend play and take shelter immediately.
 - b. Thirty-minute rule. Once play has been suspended, wait at least 30 minutes after the last thunder is heard or flash of lightning is witnessed prior to resuming play.
 - c. Any subsequent thunder or lightning after the beginning of the 30-minute count, reset the clock and another 30-minute count should begin.
4. Hold periodic reviews for appropriate personnel.

For more detailed information, refer to the "Guidelines for Lightning Safety" contained in the NFHS Sports Medicine Handbook.

Revised October 2007

Guidelines for Lightning Safety

2001 • Revised 2008

As noted previously, a chain of command and designated decision-maker should be established for each organized practice and competition.

SIGNIFICANCE:

Lightning is one of the most consistent and underrated causes of weather-related deaths or injury in the United States. According to the National Severe Storms Laboratory, approximately 100 fatalities and hundreds more injuries requiring medical attention occur in the United States each year. Lightning-related injuries are of particular concern during the late spring and summer months, and during daytime hours. Nearly all lightning-related injuries occur between the months of May and September, and the greatest number of lightning casualties occurs between the hours of 10 a.m. and 7 p.m., with the greatest risk concentrated between 2 p.m. and 6 p.m. Therefore, the risk of lightning-related injuries appear to be of greatest concern during some of the most active periods for outdoor scholastic activities.

RECOGNITION:

Coaches, athletic trainers, athletes and administrators should be educated regarding the signs indicating thunder-storm development. Since the average distance between successive lightning flashes is approximately two to three miles, anytime that lightning can be seen or thunder heard, the risk is already present. Weather can be monitored using the following methods:

- ⊙ **Monitor Weather Patterns** – Be aware of potential thunderstorms by monitoring local weather forecasts the day before and day of the practice or competition, and by scanning the sky for signs of potential thunderstorm activity during events.
- ⊙ **National Weather Service (NWS)** – Weather can also be monitored using small, portable weather radios from the NWS. The NWS uses a system of severe storm watches and warnings. A watch indicates conditions are favorable for severe weather to develop in an area; a warning indicates severe weather has been reported in an area and for everyone to take proper precautions. Any thunderstorm poses a risk of injury or death even if it does not meet the criteria for severe weather. Therefore, anytime thunderstorms are in the forecast (even if it's only a 20 percent chance), event organizers should be at a heightened level of awareness to the potential danger of lightning.

MANAGEMENT:

- ⊙ **Evacuation** – If lightning is imminent or a thunderstorm is approaching, all personnel, athletes and spectators should evacuate to available safe structures or shelters. A list of the closest safe structures should be announced and displayed on placards at all athletic venues.
- ⊙ **Thirty-minute rule** – Competition or practice should be suspended once lightning has been recognized or thunder is heard. It is recommended to wait at least 30 minutes after the last flash of lightning is witnessed or thunder is heard prior to resuming practice or competition. Given the average rates of thunderstorm travel, the storm should move 10-12 miles away from the area. This significantly reduces the risk of local lightning flashes. **Any subsequent lightning or thunder after the beginning of the 30-minute count should reset the clock and another count should begin.**

PREVENTION:

In order to prevent lightning-related injuries, it is important to formulate and implement a proactive, comprehensive lightning emergency plan. The plan should include:

- ⊙ Advance planning;
- ⊙ A systematic approach for monitoring local weather conditions;
- ⊙ Education of staff to recognize signs of nearby lightning activity;
- ⊙ Criteria for suspension and resumption of practice or competition;
- ⊙ Evacuation plan, including nearby safe shelters; and
- ⊙ Periodic review and practice of the plan by appropriate high school personnel.

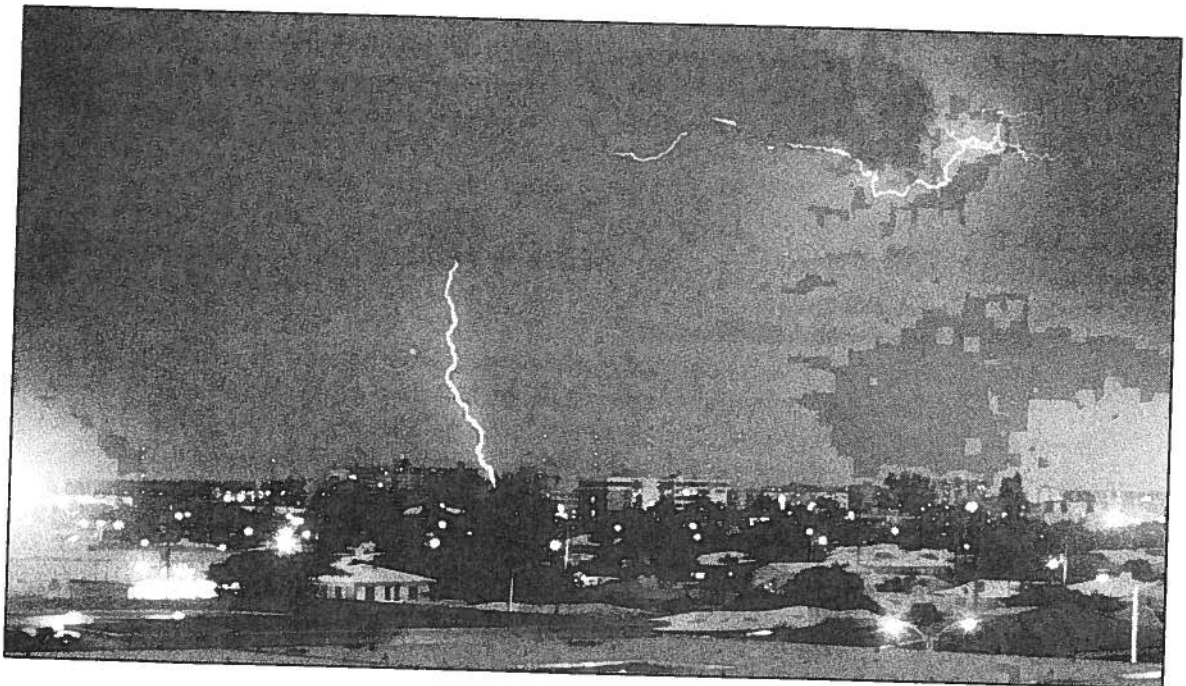
More on Lightning Safety

ESTABLISHING A LIGHTNING SAFETY PLAN

A thorough, documented lightning safety plan is the most effective way for high schools to prevent lightning-related casualties in their athletic programs. The plan should include advanced planning, a systematic plan for monitoring weather, education on lightning awareness, criteria for suspension and resumption of practice or competition, and an evacuation plan. Moreover, the information included in the plan must be disseminated to the correct, qualified personnel and practiced on a routine basis.

ADVANCE PLANNING

In advance of the activity, a documented plan should be in place and the persons in position of responsibility for monitoring weather activity and deciding when to suspend practice or competition should be identified. Responsible persons must be intimately familiar with all aspects of the lightning policy. In the days prior to an event, it is also important to be aware of the potential for thunderstorm activity through early monitoring of local weather forecasts. In some areas and seasons, characteristic patterns of thunderstorm activity may be noted and should be considered.



SYSTEMATIC PLAN FOR MONITORING WEATHER

A person should be designated prior to the practice or competition to monitor the weather and notify the person in authority to initiate the evacuation process when appropriate. This person is responsible for monitoring local weather forecasts and scanning the sky for signs of potentially dangerous local thunderstorms. Ideally, this should not be a coach or an official, as he or she may get so caught up in the game, event or practice, that he or she fails to adequately monitor weather activity. To assist with weather monitoring, small, portable weather radios from the National Oceanic and Atmospheric Administration (NOAA) and the NWS, and the Weather Channel provide good information on general storm movement and strength. This general information should be combined with specific local weather patterns witnessed while scanning the sky to provide the person in authority with adequate information to determine the safety for its athletic participants.

EDUCATION ON LIGHTNING DANGER

Education and prevention are the keys to lightning safety. Coaches, athletic trainers, officials, administrators, as well as athletes, should be educated regarding the signs indicating nearby thunderstorm development. Generally speaking, it is felt that anytime that lightning can be seen, or thunder heard, risk is already present. Prevention should begin long before any game, event or practice by being proactive and having a lightning safety plan in place.

CRITERIA FOR SUSPENSION AND RESUMPTION OF ACTIVITY

After the suspension, the plan should include strict, documented criteria for the resumption of activities. It is recommended to wait at least 30 minutes after the last flash of lightning is witnessed or thunder is heard. **Any subsequent lightning or thunder after the beginning of the 30-minute count should reset the clock and another count should begin.**

EVACUATION PLAN

All personnel, athletes and spectators should be clearly informed of available safe structures or shelters in the event a thunderstorm approaches. A list of the closest safe structures should be announced and displayed on placards at all athletic venues. The person in authority must be aware of the amount of time it takes to get to each structure and the number of persons each structure can safely hold. For large events, time needed for evacuation is increased and there must be a method, (i.e., announcement over loud speaker) for communicating the need for evacuation and directing both athletes and spectators to the appropriate safe shelters.

Safe Structures: The most ideal safe structure is a fully enclosed, substantial building with plumbing, electrical wiring and telephone service, which aids in grounding the structure. A fully enclosed automobile with a hard metal roof and rolled up windows is also a reasonable choice. School buses are an excellent lightning shelter that can be utilized for large groups of people. However, it is important to avoid contact with any metal while inside the vehicle.

Avoid using shower facilities for safe shelter and do not use showers or plumbing facilities during a thunderstorm as the current from a local lightning strike can enter the building via the plumbing pipelines or electrical connections. It is also considered unsafe to stand near utilities or use corded telephones or headsets during a thunderstorm, due to the danger of electrical current traveling through the telephone line. Cellular and cordless telephones are considered reasonably safe, and can be used to summon help during a thunderstorm.

When caught in a thunderstorm without availability or time to reach safe structures, you can minimize the risk of lightning-related injury by following a few basic guidelines:

- ⊙ If a suitable shelter is not nearby or cannot be reached, avoid tall trees, flagpoles, light poles and any other tall object that would allow lightning an easy path to the ground. Avoid being the tallest object.
- ⊙ In an open field: crouch down with legs together, the weight on the balls of the feet, arms wrapped around knees, and head down with ears covered. Minimize contact with the ground. Do not lie flat.

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