
LIGHTNING AND HEAT SAFETY INFORMATION

LIGHTNING SAFETY National Athletic Trainers' Association Guidelines



1. Formalize and implement a comprehensive, proactive lightning-safety policy or emergency action plan specific to lightning safety. The components of this policy should include the following:
 - An established chain of command that identifies who is to make the call to remove individuals from the field or an activity.
 - A designated weather watcher (i.e., a person who actively looks for the signs of threatening weather and notifies the chain of command if severe weather becomes dangerous).
 - A means of monitoring local weather forecasts and warnings.
 - A listing of specific safe locations (for each field or site) from the lightning hazard.
 - The use of specific criteria for suspension and resumption of activities (refer to recommendations 4, 5, and 6).
 - The use of the recommended lightning-safety strategies (refer to recommendations 7, 8, and 9).
2. The primary choice for a safe location from the lightning hazard is any substantial, frequently inhabited building. The electrical and telephone wiring and plumbing pathways aid in grounding a building. This is the reason it is safer to remain indoors during thunderstorms. It is important not to be connected to these pathways while inside the structure during ongoing thunderstorms.
3. The secondary choice for a safer location from the lightning hazard is a fully enclosed vehicle with a metal roof and the windows closed. Convertible cars and golf carts do not provide protection from lightning danger. It is important not to touch any part of the metal framework of the vehicle while inside it during ongoing thunderstorms.
4. Seeking a safe structure or location at the first sign of lightning or thunder activity is highly recommended. By the time the flash-to-bang count approaches 30 seconds (or is less than 30 seconds), all individuals should already be inside or should immediately seek a safe structure or location. To use the flash-to-bang method, the observer begins counting when a lightning flash is sighted. Counting is stopped when the associated bang (thunder) is heard. Divide this count by 5 to determine the distance to the lightning flash (in miles). For example, a flash-to-bang count of 30 seconds equates to a distance of 6 miles (9.66 km).
5. Postpone or suspend activity if a thunderstorm appears imminent before or during an activity or contest (regardless of whether lightning is seen or thunder heard) until the hazard has passed. Signs of imminent thunderstorm activity are darkening clouds, high winds, and thunder or lightning activity.
6. Once activities have been suspended, wait at least 30 minutes after the last sound of thunder or lightning flash before resuming an activity or returning outdoors. A message should be read over the public address system and lightning-safety tips should be placed in game programs alerting spectators and competitors about what to do and where to go to find a safer location during thunderstorm activity.

7. Extremely large athletic events are of particular concern with regard to lightning safety. Consider using a multidisciplinary approach to lessen lightning danger, such as integrating weather forecasts, real-time thunderstorm data, a weather watcher, and the flash-to-bang count to aid in decision making. **If available, other tools should be utilized (i.e., internet access via mobile device monitoring the environmental conditions) in making a well-informed decision on delaying events and/or practices.**
8. Avoid being in contact with, or in proximity to, the highest point of an open field or on the open water. Do not take shelter under or near trees, flag poles, or light poles.
9. Avoid taking showers and using plumbing facilities (including indoor and outdoor pools) and land-line telephones during thunderstorm activity. Cordless or cellular telephones are safer to use when emergency help is needed.
10. Individuals who feel their hair stand on end or skin tingle or hear crackling noises should assume the lightning-safe position (i.e., crouched on the ground, weight on the balls of the feet, feet together, head lowered, and ears covered). Do not lie flat on the ground.
11. Observe the following basic first-aid procedures, in order, to manage victims of lightning strike:
 - Survey the scene for safety. Ongoing thunderstorms may still pose a threat to emergency personnel responding to the situation.
 - Activate the local emergency management system.
 - Move the victim carefully to a safer location, if needed.
 - Evaluate and treat for apnea and a systole.
 - Evaluate and treat for hypothermia and shock.
 - Evaluate and treat for fractures.
 - Evaluate and treat for burns.
12. All persons should maintain current cardiopulmonary resuscitation (CPR) and first-aid certification.
13. All individuals should have the right to leave an athletic site or activity, without fear of repercussion or penalty, in order to seek a safe structure or location if they feel they are in danger from impending lightning activity.

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National Federation of High School Associations Guidelines
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These guidelines provide a default policy to those responsible or sharing duties for making decisions concerning the suspension and restarting of practices and contests based on the presence of lightning or thunder. The preferred sources from which to request such a policy for your facility would include your state high school activities association and the nearest office of the National Weather Service. Proactive Planning:

1. Assign staff to monitor local weather conditions before and during practices and contests.
2. Develop an evacuation plan, including identification of appropriate nearby safe areas.
3. Develop criteria for suspension and resumption of play:
 - 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 for 30 minutes and take shelter immediately.
 - 30-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.
 - Any subsequent thunder or lightning after the beginning of the 30-minute count will reset the clock, and another 30-minute count should begin.
4. Review annually with all administrators, coaches and game personnel.
5. Inform student athletes of the lightning policy at start of season.

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