

# Lightning Safety Procedures

The information below is taken from the National Lightning Safety Institute and Sadler Sports & Recreation Insurance.

## **The Threat:**

Lightning is the #2 storm killer in the U.S., killing more than hurricanes or tornadoes on average. Only floods kill more. But the real story of lightning isn't the deaths, it's the injuries. Only about 10% of those struck are killed; 90% survive. But of the survivors, many suffer life-long severe injury and disability. These injuries are primarily neurological, with a wide range of symptoms, and are sometimes difficult to diagnose.

## **The Solution:**

Use the 30-30 rule to determine the threat of lightning in the area. Clear the field if conditions are unsafe. Under no circumstances should you try to 'get the game in' unless the 30-30 guidelines are followed.

## **Lightning Safety:**

Adults are ALWAYS responsible for the safety of children under their care; this includes lightning safety. All decisions about postponing an activity or returning to an activity should be made by the coach and/or game officials who are responsible for removing teams and individuals from an outdoor athletic site.

## **No Place Outside is Safe During Thunderstorms!**

Even though no lightning safety guidelines will give 100% guaranteed total safety, the following steps will help you avoid the vast majority of lightning casualties.

### **30/30 Lightning Rule For Postponing Activity And Returning To Activity:**

Most experts recommend that outdoor athletic events should be postponed when the thunderstorm approaches from a distance of six miles.

- **The best way to gauge the distance of a thunderstorm is to measure the elapsed time from the flash to bang.**
- **Since a count of five seconds equals a distance of one mile, a count of thirty seconds equals a distance of six miles.**

In most cases, when you can hear thunder, you are no longer safe.

All individuals should have left the outdoor athletic site and reached a safe shelter or location by the time the elapsed flash to bang reaches a count of 30 seconds. If you can't see lightning, just hearing the thunder is a good back-up rule.

Individuals can return to the outdoor athletic site once thirty minutes has elapsed since the last flash or thunder. One of the most dangerous forms of lightning is a "bolt from the blue" which typically originates out of the back side of a thunderstorm and has been known to strike as far as ten miles away.

**Make an announcement to address the following topics:**

- Instruct all spectators, players, and volunteers to move immediately to the nearest sturdy building.
- Instruction that a vehicle is the next best alternative.
- Warning not to take refuge under or near trees, tall objects, lone objects, bleachers, or fences.

**Best Places To Take Cover (In Order Of Most Safe To Least Safe):**

1. **Sturdy Building:** A sturdy building is an enclosed building with metal plumbing or wiring to ground the structure. Buildings or sheds that are not enclosed (e.g.: baseball dugouts, tents, open sided rain shelters) should be avoided, as they don't constitute a sturdy building. While inside a sturdy building, the following areas should be avoided: open doors and windows, close proximity to electrical appliances, contact with plumbing fixtures, and landline phones. It is safe to use a cordless or cell phone. Do not lie on concrete floors or lean against concrete walls.

2. **Vehicle:** An enclosed vehicle such as a car, truck, van, or bus with a metal roof (not a convertible) and windows completely shut. Avoid touching anything metal or any conducting path to the outside such as a steering wheel, ignition, radio, gear shifter, etc. while inside the car.

3. **In the Open:** If a suitable sturdy building or vehicle is not available, you may have to stay in the open. Avoid all water, metal objects (such as electrical wires, machinery, motors, bleachers, and fences), small boats, high ground, isolated trees, and telephone poles. If lightning is striking nearby, avoid all direct contact with other people, remove all metal objects from your person, and crouch down with feet together and hands on knees making sure that only your feet are touching the ground.

**MYTH:**

Cars are safe because the rubber tires insulate them from the ground.

**TRUTH:**

Cars are safe because of their metal shell.

If you can't get to proper lightning shelter, at least avoid the most dangerous locations and activities.

- Avoid higher elevations.
- Avoid wide-open areas, including sports fields and beaches.
- Avoid tall isolated objects like trees, poles, and light posts.
- Avoid unprotected open buildings like picnic pavilions, rain shelters, and bus stops.

- Avoid metal fences and metal bleachers.
- DO NOT GO UNDER TREES TO KEEP DRY DURING THUNDERSTORMS!

**Goal Safety:** Coach & Assistants: Please make arrangements to return to the field (when it is safe) to put away and lock up the goals.

### **LIGHTNING FIRST AID:**

1. First call 911.
2. All deaths from lightning are from cardiac arrest and stopped breathing at the time of the strike. CPR and mouth-to-mouth-resuscitation are the recommended first aid, respectively.
3. If you are still in an active thunderstorm and at continuing risk to yourself, consider moving the victim and yourself to a safe location.

MYTH:

Lightning victims are electrified. If you touch them, you'll be electrocuted.

TRUTH:

It is perfectly safe to touch a lightning victim to give them first aid.

DISCLAIMER: NO PLACE OUTSIDE IS SAFE FROM LIGHTNING NEAR THUNDERSTORMS. THE GUIDELINES REFERENCED ABOVE ARE NOT 100% SAFE DUE TO THE RANDOM AND UNPREDICTABLE NATURE OF LIGHTNING.

Resources:

"[Lightning: The Underated Weather Hazard](#)" by William P. Roeder, 45 WS/SYR Patrick Air Force Base, Florida

"[Lightning Safety: 30 Second/30 Minute Rule](#)" by John M. Sadler, JD, CIC