

Lightning Occurrence

In the United States, there are an estimated 25 million cloud-to-ground lightning flashes each year. While lightning can be fascinating to watch, it is also extremely dangerous. During the past 30 years, lightning killed an average of 93 people per year in the United States based on documented cases. While documented lightning injuries in the United States average about 300 per year, undocumented injuries caused by lightning are likely much higher. Only about 10% of those struck are killed; 90% survive. But of the survivors, the large majority suffers life-long severe injury. These injuries are primarily neurological, with a wide range of symptoms, and are very difficult to diagnose. (Most people do not realize they are injured until a year or two later when they have funny nerve problems. The statistics reflect only the immediate injuries.)

Outdoor Activities - Minimizing the Risk of Being Struck

The greatest number of lightning deaths and injuries in the United States occurs during the summer months when the combination of lightning and outdoor summertime activities reaches a peak. Where organized sports activities are taking place, coaches, umpires, referees, or camp counselors must protect the safety of the participants by stopping the activities sooner, so that the participants and spectators can get to a safe place before the lightning threat becomes significant.

An Approaching Thunderstorm - When Should I Seek Safe Shelter?

Remember, lightning is always generated and connected to a thundercloud but may strike many miles from the edge of the thunderstorm cell. Lightning can strike as much as 25 miles away from the rain area in a thunderstorm; 10 miles is about the distance that you are able to hear the thunder from the storm. In some instances when a storm is ten miles away, it may even be difficult to tell that a storm is nearby. However, **IF YOU CAN HEAR THE THUNDER FROM A STORM, YOU ARE WITHIN STRIKING DISTANCE OF THAT STORM.** Also, remember that each thunderstorm has a first stroke of lightning, which is just as deadly as any other stroke.

No Place Outside is Safe Near Thunderstorms!

If you are planning to be outside, watch the weather forecast and know your local weather patterns. If you are going to be outside anyway, stay near proper shelter. ' If you see lightning use the '30-30 Rule' to know when to seek proper shelter. If you hear thunder and there are clouds seek proper shelter.

'30-30 Rule' When you see lightning, count the time until you hear thunder. If this time is 30 seconds or less, seek proper shelter. If you can't see the lightning, just hearing the thunder is a good back-up rule. Wait 30 minutes or more after hearing the last thunder before leaving shelter.

Proper Shelter

Seek proper shelter when required. Don't hesitate, seek shelter immediately. The best shelter commonly available against lightning is a large fully enclosed substantially constructed building. If you can't get to a building or house, a vehicle with a solid metal roof and metal sides is a reasonable second choice. MYTH: Cars are safe because the rubber tires insulate them from the ground. TRUTH: Cars are safe because of their metal shell.

No Proper Shelter

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. 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. Radial horizontal arcing has been measured at least 60 Ft.(20 m.) from the point where lightning enters the earth. Crouch down on the balls of your feet, with your head tucked into your chest and your hands over your ears. **DO NOT GO UNDER TREES TO KEEP DRY DURING THUNDERSTORMS!**

If Someone Is Hit

All deaths from lightning are cardiac arrest and stopped breathing. CPR and mouth-to-mouth-resuscitation are the recommended first aid, respectively.

NO LIGHTNING SAFETY GUIDELINES WILL GIVE 100% GUARANTEED TOTAL SAFETY, BUT THESE STEPS WILL HELP YOU AVOID THE VAST MAJORITY OF LIGHTNING CASUALTIES.

Sources

American Meteorological Society Lightning Protection Institute National Weather Service, NOAA National Lightning Safety Institute