



Lightning Safety

<http://www.lightningsafety.noaa.gov>



One dangerous aspect of weather that sometimes is not taken as seriously as others is lightning. Summer is the peak season for one of the nation's deadliest weather phenomena, but don't be fooled, lightning strikes happen at all times of the year. In the United States, on average over 60 people are killed each year by lightning. The reported number of injuries is likely far lower than the actual total because many people do not seek help or doctors do not record it as a lightning injury. People struck by lightning suffer from a variety of long-term, debilitating symptoms, including memory loss, attention deficits, sleep disorders, and numbness.

What is Lightning?

- The action of rising and descending air within a thunderstorm separates positive and negative charges. Water and ice particles also affect the distribution of electrical charge. Lightning results from the buildup and discharge of electrical energy between positively and negatively charged areas.
- The average flash could light a 100-watt light bulb for more than 3 months.
- Most lightning occurs within the cloud or between the cloud and ground.
- Most lightning deaths and injuries occur when people are caught outdoors, but can and have occurred when people are indoors. In recent years people have been killed while doing the following:
 - **Boating**
 - **Standing By A Tree**
 - **Playing Soccer**
 - **Swimming**
 - **Mowing the Lawn**
 - **Fishing In A Boat**
 - **Golfing**
 - **Talking On The Phone**
 - **Bike Riding**
 - **Loading a Truck**
- Most lightning casualties occur in the summer months and during the afternoon and early evening.
- The air near a lightning strike is heated to 50,000°F - *hotter than the surface of the sun!* The rapid heating and cooling of air near the lightning channel causes a shock wave that results in *thunder*.

**Avoid getting caught in a dangerous situation!
If you can hear thunder, you are close enough to be struck by lightning!**

Myth: It's not raining here, and skies above me are clear, therefore I am safe from lightning.

Fact: Lightning can strike many miles away from the thunderstorm. If storms are in your area, but skies happen to be clear above you, that certainly does not imply you are safe from lightning. Though these "Bolts from the Blue" are infrequent, lightning strikes 10 to 15 miles away from the storm are not out of the question.

Myth: Since I am inside my house and out of the storm, I am completely safe from lightning.

Fact: Just because you have taken shelter inside, you are not automatically safe. While inside waiting out a storm, avoid using the telephone or electrical appliances and do not take showers or baths. Also stay away from doors and windows. Telephone lines, cords, plumbing, even metal window and door frames are all lightning conductors and pose a threat.



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When Thunder Roars, Go Indoors!



In the United States, there are an estimated 25 million lightning flashes each year. Yet because lightning usually claims only one or two victims at a time and does not cause mass destruction of property, it is underrated as a risk. While documented lightning injuries in the United States average about 300 per year, undocumented injuries likely much higher.

Watch for Developing Thunderstorms: Thunderstorms are most likely to develop on spring or summer days, but can occur year round. As the sun heats the air, pockets of warmer air start to rise and cumulus clouds form. Continued heating can cause these clouds to grow vertically into towering cumulus clouds, often the first sign of a developing thunderstorm.

An Approaching Thunderstorm: When to Seek Safe Shelter: Lightning can strike as far as 10 to 15 miles from the area where it is raining. That's about the distance you can hear thunder. **If you can hear thunder, you are within striking distance. Seek safe shelter immediately.**

Outdoors: Most lightning deaths and injuries occur in the summer. Though no place is absolutely safe from lightning, some places are much safer than others. If caught outside, the SAFEST location during lightning activity is a large enclosed building, not a picnic shelter or shed. The second safest location is an enclosed metal vehicle, car, truck, van, etc., but NOT a convertible, bike or other topless or soft top vehicle. Do NOT seek shelter under partially enclosed buildings, and stay away from tall, isolated objects. Where organized outdoor sports activities take place, coaches, camp counselors and other adults must stop activities at the first roar of thunder to ensure everyone has time to get to shelter. Leaders of outdoors events should have a written plan that all staff are aware of and enforce.

Indoors: Inside buildings, stay off corded phones, computers and other electrical equipment that put you in direct contact with electricity. Stay away from pools, indoor or outdoor, tubs, showers and other plumbing. Buy surge suppressors for key equipment. Install ground fault protectors on circuits near water or outdoors. Stay away from windows and doors, and stay off porches. Also consider the safety of your family pets during thunderstorms. Dog houses are not safe. Dogs that are chained to trees or chained to wire runners can easily fall victim to a lightning strike.

Myth: The rubber soles of shoes or rubber tires on a car will protect you from being struck by lightning.

Fact: Rubber soles of shoes and rubber tires provide NO protection from lightning. However, the steel frame of a hard-topped vehicle provides increased protection if you are not touching metal. Although you may still be injured if lightning strikes your car, you are much safer inside a vehicle than outside.

Myth: People struck by lightning carry an electrical charge and should not be touched.

Fact: Lightning strike victims carry no electrical charge and should be attended to immediately. Cardiac arrest and irregularities, burns, and nerve damage are common in cases where people are struck by lightning. However, with proper treatment, including CPR if necessary, most victims survive a lightning strike. Contact your local American Red Cross chapter for information on CPR and first aid classes.