



Lightning Rods

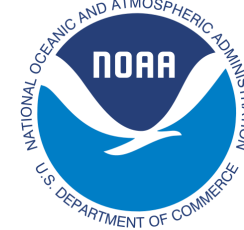
Lightning rods are pointed copper or aluminum rods placed on roofs of homes and buildings as a method of protecting property from lightning damage. **Lightning rods do not attract lightning, but simply provide a favorable path of low resistance for current to travel to ground.** The purpose of a lightning rod system is to **prevent physical damage** and to keep the protected structure from burning down **by conducting current and the associated heat away from the structure.**



However, electromagnetic waves produced by lightning can induce current in nearby electrical wiring and circuitry. This secondary effect of lightning can cause extensive damage to electronics, including computers and modems, televisions, telephones and answering machines.

Did You Know?

- There are about 100 lightning strikes per second on the Earth.
- Lightning kills an average of 48 people each year in the U.S.
- The energy from one lightning strike could power a 100W light bulb for 3 months.
- *Keraunomedicine* is the medical study of lightning casualties.
- Lightning often strikes the same place repeatedly.
- The distance (in miles) to lightning can be estimated by taking the time (in seconds) between seeing lightning and hearing thunder and dividing by 5.
- It is safe to perform CPR on lightning victims.



Lightning strikes over a field in Huntsville on May 10, 2007. Picture courtesy of Kayla Terry.

Lightning Safety:

**“When Thunder Roars,
Go Indoors!”**

**NATIONAL WEATHER SERVICE
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Lightning Safety Tips:

1. **The 30/30 Rule** - If lightning precedes thunder by less than 30 seconds, then the storm is close and **you need to take cover. After the storm, wait at least 30 minutes before leaving shelter and resuming outside activities.**
2. **Do not wait** for rain. **Take shelter as soon as you hear thunder.** Lightning can strike more than 10 miles from the area of rainfall.
3. **Remember your pets.** Never leave an animal chained to a tree during a thunderstorm. Provide a lightning-safe shelter for animals.
4. Listen to **NOAA Weather Radio** or other weather sources to keep up with changing weather conditions.
5. Lightning can enter a building directly, through the ground, or through pipes or wires that extend outside. **Stay away from windows and doors. Also, avoid phones, electrical equipment and plumbing.** Avoid contact with concrete floors and walls .
6. **Protect personal property.** Typical surge protectors will not protect electrical equipment from a lightning strike.



What to do When Caught Outside in a Thunderstorm:

1. **Seek shelter** in an enclosed building if possible. Open shelters, like those at picnic areas, provide little protection. Small wooden or metal sheds should also be avoided. If a building is not available, get in a vehicle with a metal roof. **The metal shell of the car protects you, not the rubber tires.**
2. **Get out of water!** It is a great conductor of electricity. Do not swim, stay off the beach, and do not stand in puddles.
3. **Stay away from trees!** Keep twice as far from a tree as it is tall to avoid current traveling through the ground.
4. If thunderstorms are in the forecast, **consider postponing activities** to avoid being caught in a storm.

The Six Most Common Dangerous Activities Associated with Lightning Strikes:

1. Activities in open fields.
2. Boating, fishing, and swimming.
3. Working on farm or road equipment.
4. Playing outdoor sports.
5. Talking on the corded phone.
6. Using electrical appliances.



SOMETHING TO REMEMBER:

If the hair on your head or neck begins to stand on end during a thunderstorm, you are in immediate danger of being struck by lightning. **Take shelter immediately!**



For More information

NWS lightning information, links, and more:

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

NOAA Weather Radio:

<http://www.nws.noaa.gov/nwr>

American Red Cross:

<http://www.redcross.org>