



Lightning Risk Reduction

The National Weather Service recommends “**When Thunder Roars, Go Indoors!**” The only completely safe action is to get inside a safe building or vehicle.”

When you first hear thunder, see lightning or observe dark, threatening clouds developing overhead, the best risk-reduction technique to avoid being struck or injured by lightning is to shelter in a substantial building or hard-topped vehicle. **Stay inside until 30 minutes after you last hear the rumble of thunder before resuming outdoor activities.**

- **Safe Building**—one that is fully enclosed with a roof, walls, and floor, and has plumbing or wiring. Examples of safe buildings include a home, school, church, hotel, office building, or shopping center.
- **Safe Vehicle**—any fully enclosed, metal-topped vehicle such as a hard-topped car, minivan, bus, truck, etc. If you drive into a thunderstorm, slow down and use extra caution. If possible, pull off the road into a safe area. Do NOT leave the vehicle during a thunderstorm.

WHEN A SAFE BUILDING OR HARD-TOPPED VEHICLE IS NOT CLOSE BY

- If camping, hiking, etc., far from a safe vehicle or building, avoid open fields, the top of a hill, or a ridge top.
- Spread your group out 100 feet from each other if possible.
- Stay away from tall, isolated trees; flag poles; totem poles; or other tall objects. If you are in a forest, stay near a lower stand of trees.
- Stay away from water, wet items (such as ropes), and metal objects (such as fences and poles). Water and metal are excellent conductors of electricity.
- If boating and you cannot get back to land to a safe building or vehicle: On a small boat, drop anchor and get as low as possible. Large boats with cabins, especially those with lightning protection systems properly installed, or metal marine vessels offer a safer but not risk-free environment. Remember to stay inside the cabin and away from any metal surfaces.

Common Myths*:

- **Myth:** Lightning never strikes the same place twice. **Fact:** Lightning often strikes the same place repeatedly, especially if it's a tall, pointy, isolated object. The Empire State Building is hit by lightning nearly 100 times a year.
- **Myth:** If it's not raining or there aren't clouds overhead, you're safe from lightning. **Fact:** Lightning often strikes more than three miles from the center of the thunderstorm, far outside the rain or thunderstorm cloud. “Bolts from the blue” can strike 10-15 miles from the thunderstorm.
- **Myth:** Rubber tires on a car protect you from lightning by insulating you from the ground. **Fact:** Most cars are safe from lightning, but it is the metal roof and metal sides that protect you, NOT the rubber tires. Remember, convertibles, motorcycles, bicycles, open-shelled outdoor recreational vehicles and cars with fiberglass shells offer no protection from lightning. When lightning strikes a vehicle, it goes through the metal frame into the ground. Don't lean on doors during a thunderstorm.
- **Myth:** A lightning victim is electrified. If you touch them, you'll be electrocuted. **Fact:** The human body does not store electricity. It is perfectly safe to touch a lightning victim to give them first aid. This is the most chilling of lightning Myths. Imagine if someone died because people were afraid to give CPR!
- **Myth:** If outside in a thunderstorm, you should seek shelter under a tree to stay dry. **Fact:** Being underneath a tree is the second leading cause of lightning casualties. Better to get wet than fried!
- **Myth:** Structures with metal, or metal on the body (jewelry, cell phones, Mp3 players, watches, etc), attract lightning. **Fact:** Height, pointy shape, and isolation are the dominant factors controlling where a lightning bolt will strike. The presence of metal makes absolutely no difference on where lightning strikes. Mountains are made of stone but get struck by lightning many times a year. When lightning threatens, take proper protective action immediately by seeking a safe shelter — don't waste time removing metal. While metal does not attract lightning, it does conduct it so stay away from metal fences, railing, bleachers, etc.
- **Myth:** If trapped outside and lightning is about to strike, I should lie flat on the ground. **Fact:** Lying flat increases your chance of being affected by potentially deadly ground current. If you are caught outside in a thunderstorm, you keep moving toward a safe shelter.

* See <http://www.lightningsafety.noaa.gov/myths.htm>.

Note: For additional information regarding lightning safety, see <http://www.lightningsafety.noaa.gov>