



Protect Yourself from Thunderstorms

Thunderstorms can happen at any time of year. Weather conditions that allow thunderstorms to form usually happen during the summer. Lightning and heavy rains can be dangerous and even deadly, so it's important to learn how to protect yourself during thunderstorms.



What are thunderstorms?

- Thunderstorms happen when certain conditions, like low-lying warm, moist air, are present. In some parts of the country, like New Mexico, and at certain times of the year, thunderstorms can happen every day.
- There are several kinds of lightning. Cloud-to-cloud lightning happens when lightning travels from one cloud to another. Cloud-to-ground lightning happens when lightning travels from a cloud to the ground or an object on the ground.
- Thunder is the sound that is produced by lightning. If you can hear thunder, you are at risk of being struck by lightning. High winds, hail and heavy rain can also happen in a thunderstorm.

What are some thunderstorm hazards?

- **Lightning:** Lightning strikes 300 people and kills 62 people each year in the US.
- **Hail:** Hail is formed when freezing water drops collide to make balls of ice. Hailstones can get as big as a softball. Hail can damage homes and property and can injure or kill people and animals.
- **Wind:** Winds from thunderstorms cause damage more often than winds from tornadoes. Winds in thunderstorm winds can reach up to 100 miles per hour. Strong winds can damage trees and power lines. Blowing debris can also cause injuries.
- **Flash flooding:** Flash flooding happens when a lot of rain falls too quickly for the ground to absorb it. The runoff collects and flows downhill, which means that flooding can reach far downstream from where the rain fell. Flash floods are dangerous because they happen quickly and with little warning. In fact, they are the number one weather killer in the US.

How can I stay safe during a thunderstorm?

If you are indoors when the storm strikes:

If you are inside a building, you are already in a safe place. As long as the building has electric wires or plumbing, any lightning that strikes it will run along the wires or pipes, into the ground, and away from you. To stay safe:

- Stay indoors for 30 minutes after you hear the last clap of thunder to be sure that the storm is far enough away.
- Do not take a shower or wash dishes. Lightning can travel through water pipes and touching water raises your risk of electrical shock.
- Do not use a phone, computer, or other electrical appliances during a thunderstorm. Lightning can strike the electrical wires that connect to your house and strike you if you are using these items.

If you are outside when the storm strikes:

- Move to a sturdy building or car. If possible, get inside an enclosed space, like a building (safest) or a car, bus, or van. This is much safer than staying outside. **Remember: buildings like picnic pavilions and vehicles like convertibles will not protect you.**
- Stay away from water and metal objects, including fences and bikes.
- Stay away from tall, isolated objects, like trees in a field. Lightning is more likely to hit tall objects, so stay 10-15 feet away.
- If you are in a group spread out. Stay 10 to 15 feet away from other members of your group and crouch down.
- If you begin to feel your hair stand on end, this means lightning is about to strike. Crouch down with your hands on your knees, so you are as short as possible. Do not touch the ground with any part of your body besides the balls of your feet and do not lie down since this will only make you a bigger target.

If you are driving when the storm strikes:

- Slow down.
- Pull off to the shoulder of the road. Be sure you are away from tall objects, such as trees, which could fall due to wind or lightning and do not clog highway underpasses.
- Turn on your emergency flashers.
- Make sure your windows are up.
- Stay in the car until the storm passes.
- Do not touch any metal objects in the car.
- Avoid driving on roads covered by water.

Where can I learn more?

- ⚡ FEMA has information on what to do before, during, and after a thunderstorm. Take a look at: <http://www.fema.gov/hazard/thunderstorm/index.shtm>
- ⚡ Ready.gov's thunderstorm website has information on preparing for many threats, including thunderstorms and lightning, tornadoes, and floods. Visit the page at: <http://www.ready.gov/america/beinformed/thunderstorms.html>
- ⚡ The National Severe Storms Laboratory's Lightning Safety website has tips on staying safe during a thunderstorm and links to safety tips for other types of severe storms. Visit their site at: <http://www.nssl.noaa.gov/edu/safety/lightning.html>



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