

This preparedness guide explains lightning and lightning hazards and suggests lifesaving actions that YOU can take to protect yourself, your family, your home or your business.

MESMERIZING BUT DEADLY

Each year in the United States, more than 400 people are struck by lightning. In Florida, about 7 people are killed and many others are injured from lightning in the state each year. Lightning is Florida's #1 storm-related killer and Florida leads the nation in the number of lightning deaths and injuries. Most of these tragedies can be avoided if the proper precautions are taken.

WHAT IS LIGHTNING?

Lightning is the result of the buildup and discharge of electrical energy. The air in a lightning strike is heated to 50,000 degrees Fahrenheit. It is this rapid heating of the air that produces the shock wave that results in thunder.

A cloud-to-ground lightning strike begins as an invisible channel of electrically-charged air moving from the cloud toward the ground. When one channel nears an object on the ground, a powerful surge of electricity from the ground moves upward to the clouds and produces the visible lightning strike.

The danger of lightning poses a major threat to people. A direct lightning hit can cause serious injury or death, and can also result in damage to property.

Know the facts about lightning and its dangers.

► **All thunderstorms produce lightning and are dangerous.** Lightning kills on average more people in the U.S. than either tornadoes or hurricanes.

► **Lightning often strikes outside the area of heavy rain and may strike as far as 10 miles from any rainfall.** Many deaths from lightning occur ahead of storms because people wait too long before seeking shelter, or after storms because people return outside too soon.

► **If you hear thunder, you are in danger.** Any time thunder is heard, the thunderstorm is close enough to pose an immediate lightning threat to your location.

► **Lightning leaves many victims with permanent disabilities.** While only a small percentage of lightning strike victims die, many survivors must live with very serious and lifelong disabilities.

► **Rubber-soled shoes and rubber tires provide NO protection from lightning.** It is the steel frame and roof of a vehicle that can protect you, as long as the windows are closed and there is no metal touching you. Convertibles, bikes and open or soft shelled vehicles are not safe.

► **Lightning CAN strike the same place twice.** Lightning often strikes the same place repeatedly, especially tall and isolated objects.



HOW CLOSE IS THE LIGHTNING AND IS IT COMING MY WAY?

You can tell how close you are to a lightning strike by counting the seconds between seeing the flash and hearing the thunder. For every five seconds you count, the lightning is one mile away. Remember, lightning can strike as far away as 10 miles from the thunderstorm. If you see a flash and instantly hear the thunder, the lightning strike is very close. Take shelter immediately.

WHAT TO DO WHEN LIGHTNING THREATENS

The principle lightning safety rule is "When Thunder Roars, Go Indoors". As soon as you see lightning or hear thunder, go inside because the lightning is close enough to strike you. Wait at least 30 minutes after the last rumble of thunder to go back outside. More than one half of lightning deaths occur after the thunderstorm rains have passed.

Avoid the lightning threat.

- **Have a lightning and thunderstorm family plan.** Know where to find safe shelter in the home and in the neighborhood.
- **Check the latest forecast.** If thunderstorms are expected, consider postponing outdoor activities to avoid being caught in a dangerous situation.
- **Monitor the weather.** Look for darkening skies, lightning, thunder, or increasing wind which could be signs of an approaching storm.
- **Go to a safe place.** Substantial buildings provide the best protection though hard-topped vehicles with closed windows will also offer good protection. Stay away from electronic devices, metal, wiring and plumbing.

Unsafe buildings include car ports, open garages, covered patios, picnic shelters, beach pavilions, golf shelters, tents of any kind, baseball dugouts, sheds and greenhouses.

Unsafe vehicles include convertibles, golf carts, riding mowers, open cab construction equipment and boats without cabins.

What to do if you can't get to a safe place.

- Find a low spot away from trees, fences and poles.
- Avoid open areas and isolated tall objects. Lightning tends to strike taller objects and the electrical current can travel great distances along the ground.
- If you are in the woods, take shelter under shorter trees.
- Stay away from metal objects as lightning can travel great distances through metal.
- If you are boating or swimming, get to land and find shelter immediately or seek shelter in the cabin.
- If in a large group, spread out. This reduces the risk of multiple lightning injuries.
- **The Lightning Crouch.** As a last resort, crouch down on the balls of your feet, put your hands over your ears and bend your head down. This makes yourself a small target and minimizes your contact with the ground. Do not lie flat on the ground.



WHAT TO DO WHEN SOMEONE IS STRUCK BY LIGHTNING

Lightning victims do not carry an electrical charge and require immediate medical attention. Cardiac arrest is the primary cause of death in lightning fatalities. Some deaths can be prevented if the victim receives the proper immediate first aid.

► **Call for help.** Call 9-1-1 for ambulance service.

► **If possible, move the victim to a safer place.** An active thunderstorm is still dangerous. Be extremely careful not to let the rescuers become victims themselves.

► **Give first aid.** Check the victim's pulse and breathing. Begin CPR if necessary. An Automatic External Defibrillator (AED) may also be useful if one is available.



Stay informed, listen to NOAA Weather Radio!

There are an estimated 25 million cloud-to-ground lightning flashes in the United States each year. About 1.4 million flashes occur in Florida.

While the National Weather Service issues severe thunderstorm watches and warnings for storms that produce damaging wind or hail, watches and warnings are NOT issued for lightning. Therefore, **it is up to YOU to protect yourself.** The sound of thunder should serve as an immediate warning of lightning danger.



NOAA Weather Radio is “the voice of the National Weather Service,” broadcasting weather information 24 hours a day, every day. With a NOAA All-Hazards Weather Radio, you can monitor current weather conditions and forecasts for your local area. These radios also have an alert feature which will sound a loud alarm—followed by important weather information—whenever a watch or warning is issued.

This device has been credited with saving countless lives. Accessories such as strobe lights and pillow shakers, specifically designed for people with special needs, can be added to the radio. NOAA All-Hazards Weather Radios can be purchased at most electronics stores, hardware stores, retail stores, or online. Prices start at around \$30. Accessories are sold separately.

Lightning Safety Awareness Week

The last week of June.

For additional information on lightning and lightning safety, visit:

www.LightningSafety.noaa.gov

www.FloridaDisaster.org



A Guide to

Lightning Safety