



# Thunderstorms and Lightning

## Preparedness Empowers You It saves lives, property, and time.

Emergencies happen, often with little or no notice. By taking action beforehand you can be prepared for any emergency.

**Be Ready Navy!  
I am. Are you?**

Severe weather can impact any location to varying degrees. The typical thunderstorm is 15 miles in diameter and lasts an average of 30 minutes. While they impact a smaller area than other storms, it is important not to take thunderstorms lightly. ALL thunderstorms are dangerous. They often occur with associated dangers like tornadoes, straight-line winds that can exceed 125 mph and cause destruction equal to a tornado, flash floods, hail that can be larger than a softball and fall at speeds faster than 100 mph, and wildfires or injuries caused by lightning.

Lightning occurs with all thunderstorms and is caused by the buildup and discharge of electrical energy. As the electrical energy builds, it rapidly heats the air, producing a shock wave that results in thunder. Lightning strikes, which can heat the air to 50,000° Fahrenheit, continue to be one of the top three storm-related killers, often because an individual waited too long to find shelter. Survivors struck by lightning often report a variety of debilitating injuries.

## How to Prepare

- Be **informed** and know thunderstorm terminology:
  - » **Severe Thunderstorm Watch**—Tells you when and where severe thunderstorms are likely to occur. Watch the sky and stay tuned to NOAA Weather Radio, commercial radio, or television for information
  - » **Severe Thunderstorm Warning**—Issued when severe weather has been reported by spotters or indicated by radar. Warnings indicate imminent danger to life and property to those in the path of the storm.
- Listen to weather reports for your area.
- Make a written family **emergency plan** that includes where you will shelter if caught outside in a storm, and discuss thunderstorm safety with your family members.
- Make a written emergency **communication plan** in case family members are separated.
- Trim trees and remove any dead or rotting limbs that could fall and cause injury or damage in a severe thunderstorm.
- Secure any outdoor items that could blow away or cause damage.
- Unplug any sensitive electrical equipment.
- Build an **emergency kit**.
- Always heed warnings; even calm conditions can deteriorate rapidly.

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## What to Do During Thunderstorms and Lightning

- **When thunder roars; go indoors!** Seek shelter in a house, building, or hard top automobile.
- Follow the 30-30 safety rule:
  - » If the time between when you see the flash and hear the thunder is **30 seconds** or less, the lightning is close enough to hit.
  - » After the last flash of lightning, wait 30 minutes before leaving your shelter.
- If in an open area—go to a low place, but watch for flash floods.
- If on open water—get to land and find shelter immediately.
- Anywhere you feel your hair stand on end—squat low to the ground on the balls of your feet, making yourself the smallest target possible. Minimize your contact with the ground. **DO NOT** lie flat on the ground.
- Stay away from electrical equipment, wiring, and plumbing. Do not use corded phones, and do not take baths or showers during a thunderstorm.
- Stay tuned to a NOAA weather radio, local TV, or radio stations for changing or worsening weather conditions, such as flash floods, hail, and tornadoes, and follow all precautions.

## What to Do After Thunderstorms and Lightning

- Continue to listen to a NOAA weather radio, local TV, or radio stations for updated information and instructions on road closures, flooding, and other hazards in your area.
- Be aware of residual dangers. More than one half of lightning deaths occur after a thunderstorm has passed.
- Do not walk or drive through flooded areas. Turn around, don't drown.
- Stay away from downed power lines and report them immediately.

## What to Do if Struck by Lightning

- If you, someone you know, or someone in your proximity is struck by lightning, call 911 as soon as possible, and relay your location and as much information as you can.
- Check for breathing, heartbeat, pulse, and other injuries such as burns.
  - » If breathing has stopped, begin mouth-to-mouth resuscitation.
  - » If there is no heartbeat, begin CPR.
  - » If pulse is weak, watch closely, and administer mouth-to-mouth resuscitation or CPR if breathing or heartbeat stops.
  - » Be aware that other injuries may be present such as burns, neurological injuries, broken bones, and/or vision and hearing loss.

## Where to Find Additional Information

- Department of Homeland Security (Ready.gov) & FEMA—<http://www.ready.gov/thunderstorms-lightning>
- National Weather Service-National Oceanic and Atmospheric Administration (NWS-NOAA)—
  - » <http://www.nws.noaa.gov/om/severeweather/resources/ttl6-10.pdf>
  - » <http://www.nws.noaa.gov/om/severeweather/index.shtml>