



## Severe Storm Guide

How to stay safe in the event of a Severe Storm

### STORM SUPPLIES

- Your disaster kit
- Your evacuation kit
- Surge protectors
- Blanket for the car, in case you're sheltering from hail

### BEFORE THE STORM STRIKES

Know the county you live in and the names of the major nearby cities or towns. Severe weather warnings and statements are issued by county and reference major cities.

Check the latest weather forecast and hazardous weather outlook on the storm prediction center webpage. <http://www.spc.noaa.gov/>

Watch for signs of an approaching thunderstorm.

If a storm is approaching, keep a NWR and/or AM/FM radio with you.

Postpone outdoor activities if thunderstorms are imminent. This is your best way to avoid being caught in a dangerous situation.

Buy surge suppressors for key equipment.

Install ground fault protectors on circuits near water or outdoors

### WHAT TO DO DURING A STORM

Remember that if you can hear thunder, you are close enough to a storm to be struck by lightning. Go to safe shelter immediately.

At the first clap of thunder, go a large building or fully enclosed vehicle and wait 30 minutes after the last clap of thunder to back outside.

Inside building, stay off corded phones, computers and other electrical equipment that put you in direct contact with electricity. Stay away from pools, indoor or outdoor, tubs, showers and other plumbing.

If you are boating or swimming, get out of boats and away from the water, get to land and find shelter immediately.

If you are caught outside and no shelter is available:

Find a low spot away from trees, fences, and poles

Squat low to the ground on the balls of your feet, place your hands on your knees with your head between them, make yourself the smallest target possible and minimize your contact with the ground.

Move to a sturdy building or car. Do not take shelter in small sheds, under isolated trees, or in convertible automobiles.

If a person is struck by lightning, call 911. Cardiac arrest and irregularities, burns, and nerve damage are common in cases where people are struck by lightning. However, with proper

treatment, including CPR if necessary, most victims survive a lightning strike. You are in no danger helping a lightning victim. The charge will not affect you.

If you're in a car when hail strikes, look for a shelter like a garage or a highway overpass. Make sure you pull completely off the highway. Do NOT leave the vehicle until it stops hailing. Stay away from car windows. Cover your eyes with something. If possible, get onto the floor face down, or lie down on the seat with your back to the windows. Put very small children under you, and cover their eyes.

### **What makes a thunderstorm severe?**

The National Weather Service (NWS) uses wind speed and hail size to decide if a thunderstorm is "severe." If the wind gusts reach 58 mph or higher, or tornadoes are present, or the hail bigger than 1 inch.

A severe thunderstorm is a thunderstorm that produces...

wind gusts of at least **58 mph** (50 knots), and/or  
hail at least **1 inch diameter** (quarter size) and/or  
a **tornado**

### **HAIL**

Hail are balls or chunks of ice larger than  $\frac{1}{4}$  in diameter. Since they're formed by updrafts within a storm, they occur even when it's not freezing outside. They are associated with storms and tornados, and often come during the warm spring months of April and May. Hail can be extremely damaging and sometimes deadly, so seek shelter immediately when there's a hail warning.

### **Hail Size Chart:** *(diameter in inches)*

**Pea Size:** 0.25 inches  
**Small Marble:** 0.50 inches  
**Penny:** 0.75 inches  
**Nickel:** 0.88 inches  
**Quarter:** 1.00 inches *<--Any hail this size or larger is severe thunderstorm criteria*  
**Half Dollar:** 1.25 inches  
**Ping Pong Ball:** 1.50  
**Golf Ball:** 1.75 inches  
**Hen Egg:** 2.00 inches  
**Tennis Ball:** 2.50 inches  
**Baseball:** 2.75 inches  
**Grapefruit:** 4.00 inches  
**Softball:** 4.50 inches

The strong wind gusts of severe thunderstorms can damage buildings, knock down trees, and create a hazard due to wind-blown debris:

### **Wind Speed Estimate:**

**25-31 mph:** Large branches in motion; whistling heard in telephone wires.  
**32-38 mph:** Whole trees in motion; inconvenience felt walking against the wind.  
**39-54 mph:** Twigs break off trees; wind generally impedes progress.  
**55-72 mph:** Damage to chimneys and TV antennas; pushes over shallow rooted trees.  
**73-112 mph:** Peels surfaces off roofs; windows broken; light mobile homes pushed or overturned; moving cars pushed off road.  
**113-157 mph:** Roofs torn off houses; cars lifted off ground.

## LIGHTNING

Lightning can be described as similar to a static discharge between clouds and the earth. With the disruption of moisture and heat in our atmosphere, a static charge is formed from the countless collisions of raindrops and/or hailstones in cumulonimbus clouds. Experts believe these collisions give the base of these clouds a negative charge and with the right conditions, will release the charge of energy with different objects on the ground

Even if you don't see the flash from lightning, we all know it's near us from the sound we call thunder. Thunder occurs when the light heats the air to nearly 10,000 degrees Celsius. The rapidly heated air effectively explodes and creates a shock wave that we know as thunder.

If you hear thunder but are not sure how far away it is, simply watch for a strike of lightning, count the seconds until you hear the thunder and divide by 5. Let's say you see a flash of lightning in the distance and begin counting. You reach "10" just as the thunder crashes... taking 10 and dividing by 5 would give you 2... as in 2 miles away.

Which means you need to seek shelter. A simple rule for lightning is that if you see it, OR hear it, you need to seek shelter.

<http://www.weather.gov/os/lightning/pdfs/lightning-safety.pdf>

(NWS Indianapolis, NWS Central Ill)