

**FIRST**  
**WARNING weather**



## WHAT ARE SEVERE STORMS?

Texas is famous for its thunderstorms, hurricanes, lightning strikes and hail. The National Weather Service (NWS) uses wind speed and hail size to decide if a thunderstorm is “severe.” If the wind gusts reach 57 mph or higher, or tornadoes are present, or the hail bigger than  $\frac{3}{4}$ -inch.

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

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.

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.

## 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.
- 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. Go to a large building or fully enclosed vehicle and wait 30 minutes after the last clap of thunder to back outside.
- Inside the 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 OUTSIDE, OR WITHOUT SHELTER:**

- 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.

## **HELPFUL LINKS FOR SEVERE STORMS:**

National Oceanic and Atmospheric Administration – Storm safety

<http://www.srh.noaa.gov/abq/preparedness/safesvr.htm>

NOAA Watch Thunderstorms

<http://www.noaawatch.gov/themes/severe.php>

National Weather Service site for Lightning Safety

<http://www.lightningsafety.noaa.gov/>

National Weather Service site for lightning prediction (click on Texas to see lightning probability)

[http://aviationweather.gov/exp/mdl\\_ltg/](http://aviationweather.gov/exp/mdl_ltg/)

Free lightning map of the United States (same data we use in LiveStrike)

<http://thunderstorm.vaisala.com/explorer.html>

A list of the lightning-related deaths across the United States (simple people doing simple things)

<http://www.lightningsafety.noaa.gov/fatalities.htm>

Medical Aspects of a lightning strike victim

<http://www.uic.edu/labs/lightninginjury/overview.htm>

See the latest research on lightning

<http://thunder.msfc.nasa.gov/>

Fascinating lightning photography

<http://www.lightningphotography.com/>

**SOURCE:**

NOAA, FEMA, USA Today