

# Thunderstorms & Lightning

***It's estimated that at any given moment nearly 2,000 thunderstorms are in progress over the earth's surface, and lightning strikes the earth 100 times each second.***

Thunderstorms can bring heavy rains, flash flooding, tornadoes, strong winds, lightning, and hail.

- Flash Floods/Floods are the number one killer associated with thunderstorms with nearly 140 fatalities a year.
- Although thunderstorms in upper Michigan are less likely to spawn tornadoes than elsewhere in the United States, most wind-related damage caused by thunderstorms is from "straight-line" rather than tornadic winds. "Downbursts," a type of straight-line wind, can cause damage equivalent to a strong tornado.
- Lightning occurs with all thunderstorms; its electrical charge and intense heat can electrocute on contact, cause electrical failures, split trees, and ignite structure and brush fires.
- Hail associated with thunderstorms can be smaller than peas or as large as softballs and can be very destructive.
- While some thunderstorms can be seen approaching, others hit without warning. It is important to learn to recognize the danger signs and to plan ahead.
- When thunderstorms are forecast or skies darken, look and listen for:
  - Dark, towering, or threatening clouds
  - Increasing wind
  - Flashes of lightning
  - The sound of thunder

## ***When a thunderstorm is approaching...***

### ***At Home:***

- Secure outdoor objects such as lawn furniture that can blow away and cause damage or injury
- Bring lightweight objects inside
- Listen to a battery-operated radio or television for the latest storm information
- Do not handle any electrical equipment or telephones because lightning could follow the wires
- Avoid bathtubs, water faucets, and sinks because metal pipes can transmit electricity
- Pets are particularly vulnerable to hail and should be brought inside.

### ***If Outdoors***

- Attempt to get into a building or car.
- If no structure is available, get to an open space and squat low to the ground as quickly as possible (If in the woods, find an area protected by a low clump of trees)
- Never stand underneath a single large tree in the open).
- Be aware of the potential for flooding in low-lying areas.
- Kneel or crouch with hands on knees.
- Avoid tall objects such as towers, tall trees, fences, telephone lines, and power lines.

- Stay away from natural lightning rods such as golf clubs, tractors, fishing rods, bicycles, and camping equipment.
- Stay away from rivers, lakes, and other bodies of water.

### **What is a severe thunderstorm?**

- A thunderstorm is considered **severe** if it produces hail at least 3/4-inch in diameter, winds of 58 mph or higher, or tornadoes.

### **What is the difference between a watch and a warning?**

A severe thunderstorm **watch** is issued by the National Weather Service when the weather conditions are such that a severe thunderstorm is likely to develop

A severe thunderstorm **warning** is issued when a severe thunderstorm has been sighted or indicated by weather radar. At this point, the danger is very serious and everyone should go to a safe place, turn on a battery-operated radio or television, and wait for further information



### **LIGHTNING**

Lightning is a major threat during a thunderstorm. In the United States, between 75 and 100 people are hit and killed by lightning each year.

**Myth:** Lightning never strikes the same place twice.

**Fact:** Lightning can strike the same place twice and may strike it multiple times during the same discharge.

**Myth:** If it is not raining, then there is no danger from lightning

**Fact:** Lightning has been detected as far as ten miles from the edge of a thunderstorm cell, and at locations with blue skies overhead

### **First aid recommendations for lightning victims:**

Most lightning victims can actually survive an encounter with lightning, especially with timely medical treatment. *A person who has been struck by lightning does not carry an electrical charge that can shock other people.*

- If a person is struck by lightning:
- Call 911 to provide location and information about the incident including the number of people injured
- Look for burns where the lightning entered and exited the body

- If the strike caused the victim's heart and breathing to stop, give cardiopulmonary resuscitation (CPR) until medical professionals arrive and take over

***If your house is struck by lightning:***

- Check all around the interior and exterior to make sure that it did not start a fire
- If you smell or see smoke, call 911
- All appliances and electrical devices that were plugged in when the lightning struck the house should be checked for damage before being used. Indications of possible damage include scorched outlets, scorch marks on the device, melted cords, and broken light bulbs.

Remember to help neighbors who may require special assistance (infants, senior citizens, and people with disabilities).

If you are driving after a thunderstorm, be vigilant for downed branches and power lines or other debris lying in the road.

Fill out these Contact and family meeting place cards, then clip and carry them with you for easy reference. Make sure your school-aged children have cards, and that caregivers for younger children have this information on file. If a disaster occurs during work and school hours, it is critical that children or their caregivers know who to contact.

***OUT-OF AREA CONTACT***

Name \_\_\_\_\_

Telephone: (day) \_\_\_\_\_ (eve) \_\_\_\_\_

LOCAL CONTACT:

Name \_\_\_\_\_

Telephone: (day) \_\_\_\_\_ (eve) \_\_\_\_\_

REUNION LOCATION

Name \_\_\_\_\_

Telephone: (day) \_\_\_\_\_ (eve) \_\_\_\_\_

***OUT-OF AREA CONTACT***

Name \_\_\_\_\_

Telephone: (day) \_\_\_\_\_ (eve) \_\_\_\_\_

LOCAL CONTACT:

Name \_\_\_\_\_

Telephone: (day) \_\_\_\_\_ (eve) \_\_\_\_\_

REUNION LOCATION

Name \_\_\_\_\_

Telephone: (day) \_\_\_\_\_ (eve) \_\_\_\_\_