

## **Do You Know What to Do in A Severe Thunderstorm?**

### **Lightning Facts and Fiction**

**Fiction:** If it is not raining, there is no danger from lightning.

**Facts:** Lightning often strikes outside heavy rain and may occur as far as 10 miles away from any rainfall. This is especially true in the western United States where thunderstorms sometimes produce very little rain.

**Fiction:** The rubber soles of shoes or rubber tires on a vehicle will protect you from being struck by lightning.

**Facts:** Rubber-soled shoes and rubber tires do not provide protection from lightning. The steel frame of a hard-topped vehicle provides increased protection if you are not touching metal. Although you may be injured if lightning strikes your vehicle, you are much safer inside a vehicle than outside.

**Fiction:** People struck by lightning carry an electrical charge and should not be touched.

**Facts:** Lightning-strike victims carry no electrical charge and should be attended to immediately.

**Fiction:** Lightning never strikes twice in the same place.

**Facts:** Just because lightning struck a place once does not make it less likely that it will strike again in the same place. In fact, it may indicate that the place is more vulnerable to lightning strikes than other places in the immediate area.

### **How dangerous is lightning?**

Lightning is a major threat during a thunderstorm. Lightning produces thunder in a thunderstorm and is very unpredictable, increasing the risk to individuals and property.

According to the National Weather Service, lightning kills on average more than 70 people and injures at least 300 each year in the U.S. While only about 10 percent of those struck are killed, the large majority of the 90 percent who survive suffer long-term injuries, such as memory loss, dizziness, muscle spasms, depression and fatigue. Lightning also causes about \$5 billion in economic loss each year in the U.S.

You are in danger from lightning if you can hear thunder. Because light travels so much faster than sound, lightning flashes can sometimes be seen long before the resulting thunder is heard. When the lightning and thunder occur very close to one another, the lightning is striking nearby. Every five seconds between the flash of lightning and the clap of thunder equals 1 mile of distance. This can help you to estimate the number of miles you are from a thunderstorm. Heat lightning is actually lightning from a thunderstorm too far away to be heard.

More than 50 percent of lightning deaths occur after the thunderstorm has passed. The National Weather Service encourages you to practice the 30/30 lightning rule: If the time between seeing the lightning and hearing the thunder is less than 30 seconds, you are in danger. Stay indoors for 30 minutes after hearing the last clap of thunder.

### **What to do if you are outside**

- Find shelter immediately. If you are boating or swimming, get to land, get off the beach and find shelter immediately.
- Take shelter in a substantial, permanent enclosed structure, such as a reinforced building. Avoid gazebos, rain or picnic shelters, golf carts, baseball dugouts, bleachers and other isolated structures in otherwise open areas because such places are often struck by lightning.
- If there is no reinforced building in sight, take shelter in a vehicle. Keep the windows closed and avoid convertibles. Do not touch any of the car's metal framework when in the car.
- If you are in the woods, find an area protected by a low clump of trees. Never stand beneath a single large tree in the open.
- As a last resort and if no suitable structure or vehicle is available, go to a low-lying, open place away from trees, poles or metal objects. Make sure the place you pick is not subject to flooding. Crouch low to the ground on the balls of your feet. Place your hands on your knees and your head between your knees. Minimize your body's surface area, and minimize your contact with the ground.
- Avoid tall structures, such as towers, tall trees, fences, telephone lines and power lines. Lightning strikes the tallest objects in an area.
- Stay away from natural lightning rods such as golf clubs, tractors, fishing rods, bicycles and camping equipment. Lightning is attracted to metal and poles or rods.
- If you are isolated in a level field or prairie and you feel your hair stand on end (which indicates that lightning is about to strike), crouch low to the ground on the balls of your feet. Place your hands on your knees and your head between your knees. Minimize your body's surface area, and minimize your contact with the ground. Lightning current often enters a victim through the ground rather than by a direct overhead strike.
- Do not use cell phones except for emergencies.

### **What to do if someone is struck by lightning**

You should:

- Check the scene for safety.
- Call for help. Get someone to dial 9-1-1 or your local emergency number. Medical attention is needed as quickly as possible.
- Give first aid. Check for life-threatening conditions, such as respiratory or cardiac arrest. If the person has stopped breathing, begin rescue breathing. If the person shows no signs of circulation, a trained person should give CPR. If the person has a pulse and is breathing, look for other possible injuries and care for them if necessary.
- Check the person for burn marks on the skin (entry and exit of current). The injured person has received an electrical shock and may be burned both where the current entered and where it exited his or her body. Being struck by lightning can also cause nervous system damage, broken bones, and loss of hearing or eyesight.