

LIGHTNING: THE SILENT KILLER

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Did you know that lightning claims more lives each year than tornadoes? Lightning claims about 73 lives per year, compared to 68 lives per year claimed by tornadoes. On average 20% of lightning strike victims die and 70% have long-term symptoms that include: memory loss, attention deficits, sleep disorders, numbness, dizziness, stiffness in joints, irritability, fatigue, weakness, muscle spasms, depression and an inability to sit for long.

Lightning can strike as much as 10 miles away from the rain area in a thunderstorm, or about the distance you can hear thunder. When a storm is 10 miles away, it may be difficult to tell a storm is coming. If you can hear thunder, you are within striking distance of lightning and should seek safe shelter immediately. The first stroke of lightning is as deadly as the last. If the sky looks threatening, take shelter even before hearing lightning. The 30/30 rule should also be followed. When visibility is good and there is nothing obstructing your view when you see lightning you need to count the time until you hear thunder. If that time is 30 seconds or less, the thunderstorm is within 6 miles of you and is dangerous. You should seek shelter. The threat of lightning continues for much longer than most people realize. You should wait at least 30 minutes after the last lightning flash before leaving shelter. Don't be fooled by sunshine or blue sky. In addition to the visible flash of lightning that travels through the air, the current associated with lightning travels along the ground. Although some victims are struck directly by the main lightning stroke, many victims are struck as the current moves in and along the ground.

If you see or hear a thunderstorm coming or your hair stands on end, you should go inside a sturdy building. If no sturdy building is nearby, a hard-top vehicle with windows closed will offer some protection, if you are not touching metal. Avoid leaning against vehicles. Get off of bicycles and motorcycles.

What if I can't get to shelter? Stay away from trees, crouch in the open, keeping twice as far away from a tree as it is tall. Get out of water, stay off the beach and out of small boats or canoes. If caught in a boat, crouch down in the center of the boat away from metal hardware. Swimming, wading, snorkling and scuba diving are not safe. Lightning can strike the water and travel some distance beneath and away from its point of contact. Don't stand in puddles of water, even if wearing rubber boots. Avoid metal: stay away from clothes lines, fences and other metal objects. Don't hold metal items such as golf clubs, fishing rods, tennis rackets or tools. Move away from a group of people. Stay several yards away from other people. Don't share a bleacher bench or huddle in a group. Be the lowest point. Lightning hits the tallest object. In the mountains if you are above treeline, you ARE the highest object around. Quickly get below the treeline and get into a grove of small trees. Don't be the second tallest object during a lightning storm.

What is considered a safe shelter? A house or building offers the best protection. It is more important to consider what happens if the structure gets struck by lightning, rather than whether the structure will be hit by lightning. For a shelter to provide protection

from lightning, it must contain a mechanism for conducting the electrical current from the point of contact to the ground. These mechanisms may be on the outside of the structure, within the walls of the structure, or may be a combination of the two. On the outside, lightning can travel along the outer shell of the building or may follow metal gutters and downspouts to the ground. Inside a structure, lightning can follow conductors such as the electrical wiring, plumbing, and telephone lines to the ground. Unless specifically designed to be lightning safe, small structures do little, if anything, to protect occupants from lightning. A shelter that does not contain plumbing or wiring throughout, or some other mechanism for grounding from the roof to ground is not safe.

How do I remain safe inside a safe shelter? Stay off the phone during a thunderstorm. Did you know that phone use is the leading cause of indoor lightning injuries in the United States? Once inside a structure, lightning can travel through the electric, phone, plumbing, and radio/television reception systems. Lightning can travel long distances in both phone and electrical wires, particularly in rural areas. Stay away from windows and doors as these can provide the path for a direct strike to enter a home. Stay off porches as well. Do not lie on the concrete floor of a garage. Basements are usually a safe place to go during thunderstorms, however, avoid contact with concrete walls which may contain metal reinforcing bars. Avoid contact with washers and dryers since they not only have contacts with the plumbing and electrical systems, but also contain an electrical path to the outside through the dryer vent. Avoid contact with plumbing: do not wash your hands, take a shower or wash dishes.

What about my pet? Dog houses are not lightning-safe. Dogs that are chained to trees or chained to wire runners can easily fall victim to a lightning strike.

How do I protect my personal property? Typical surge protectors do not protect equipment from a lightning strike. To the extent possible, unplug any appliances or electronic equipment from all conductors well before a thunderstorm threatens. If you plan to be away from your home when thunderstorms are possible, try to unplug unneeded equipment before you leave.

What if someone is struck by lightning? Call 9-1-1 or your local ambulance service and follow any directions given to you by the dispatcher. If the person has stopped breathing, a trained person should begin rescue breathing. If the person's heart has stopped beating, a trained person should give CPR. If the person has a pulse and is breathing, address any other injuries. Check for burns in two places, the person has received an electric shock and may be burned. A lightning strike may also cause nervous system damage, broken bones and loss of hearing or eyesight. People struck by lightning carry no electrical charge that can shock other people, you can examine them without risk.

Information for this article was obtained from the National Weather Service website, www.lightningsafety.noaa.gov.