



Goal

This program will aid in teaching individuals the protective measures to take when lightning is present.

Objectives

This program is designed to make individuals aware of the dangers of lightning and teach them the steps they can take to protect themselves.



Background

Lightning causes more deaths in the United States than hurricanes or tornadoes. In fact, lightning is the number two storm-related killer, surpassed only by flooding. Lightning also causes about \$5 billion in U.S. economic losses annually.

Only about 10 percent of those struck by lightning are killed. Of the 90 percent who survive a lightning strike, the majority suffer life-long severe injury. Those injuries are primarily neurological with a wide range of symptoms and are difficult to diagnose.

The real tragedy of lightning's devastation is that protecting yourself is easy, even though the simple safety precautions are sometimes inconvenient. It requires diligence and continual reinforcement and encouragement. Lightning safety is a multi-step process, with each step providing a decreasing level of protection – plan around the weather, and have a lightning safety plan.

30/30 RULE

If there is less than 30 seconds between a flash of lightning and the sound of thunder, seek shelter.

Wait at least 30 minutes after the last clap of thunder before leaving shelter.

30-30 Rule

If you are planning to be outside, watch the weather forecast and know your local weather patterns. Plan around the weather to avoid the lightning hazard. If you are outside when a storm is approaching, stay near proper shelter and use the '30-30 Rule' to know when to seek proper shelter. When you see lightning, count the time until you hear thunder. If you count 30 seconds or less, seek proper shelter. If you can't see the lightning, wait 30 minutes or more after last hearing thunder before you leave shelter.

Shelter from Lightning

The best shelter commonly available against lightning is a large, fully enclosed, substantially constructed building (e.g., your typical house). Substantially constructed means it has wiring and plumbing in the walls. Once inside, stay away from any conducting path to the outside: stay off the corded telephone, stay away from electrical appliances, lighting, and electric sockets, stay away from plumbing and don't watch lightning from windows or doorways, as inner rooms are generally safer.

If you can't get to a house, a vehicle with a solid metal roof and metal sides is a reasonable second choice. As with a house, avoid contact with conducting paths going outside: close the windows, lean away from the door, put your hands in your lap, and don't touch the steering wheel, ignition, gear shifter, or radio. Convertibles, cars with fiberglass or plastic shells, and open framed vehicles don't count as lightning shelters.

MYTH: Cars are safe because the rubber tires insulate them from the ground.

TRUTH: Cars are safe because of their metal shell.

Places to Avoid

If you can't get to proper lightning shelter, at least avoid the most dangerous locations and activities.

Those are:

- Higher elevations.
- Wide-open areas, including sports fields.
- Tall, isolated objects like trees, poles, and light posts.
- Water-related activities: boating, swimming (includes indoor pools), and fishing.
- Golfing.
- Wide-open vehicles like farm tractors, open construction vehicles, riding lawnmowers, golf carts (even with roofs), etc.
- Unprotected open buildings like picnic pavilions, rain shelters, and bus stops.
- Metal fences and metal bleachers.

Last Resort Safety Measures

If you've been caught unaware and are outside far away from proper shelter when lightning threatens, proceed to the safest location. If lightning is imminent, it will sometimes give very few seconds of warning. Sometimes your hair will stand-up on end, or your skin will tingle, or light, metal objects will vibrate, or you'll hear a crackling sound. If this happens and you're in a group, spread out so there are several body lengths between each person so that if one person is struck, the others may not be hit and can give first aid. Once you've spread out, use the lightning crouch: put your feet together, squat down, tuck your head, and cover your ears. Minimize ground contact. Don't lie down. Once the immediate threat of lightning has passed, continue heading to the safest spot possible. Remember, this should only be used as a desperate last resort. You are much safer having followed the previous steps and not being in this high-risk situation.

All deaths from lightning result from either cardiac arrest or respiratory failure. The recommended first aid treatment for cardiac arrest is CPR and for respiratory failure, mouth-to-mouth resuscitation.

MYTH: Lightning victims are electrified. If you touch them, you'll be electrocuted.

TRUTH: It is perfectly safe to touch a lightning victim to give them first aid.

Review

1. When counting time until you hear thunder, seek shelter if the count is ___ seconds or less.
 - a. 45
 - b. 15
 - c. 30
 - d. 60
2. It is not safe to talk on a corded telephone when lightning is present.
 - a. True
 - b. False
3. When lightning is present, avoid all the following except:
 - a. Water related activities
 - b. Metal fences and bleachers
 - c. Substantially constructed buildings
 - d. Trees
4. All deaths from lightning result from cardiac arrest or
 - a. Shock
 - b. Burns
 - c. Trauma
 - d. Respiratory failure
5. The lightning crouch is the last resort as protection if you are caught outdoors when lightning is present.
 - a. True
 - b. False

Answers

- | | |
|------|------|
| 1. C | 4. D |
| 2. A | 5. A |
| 3. C | |

For more information on weather safety and other topics, see the Service Lloyds website. In Risk Control's Training Materials section, we have additional resources including:

- Flash Flood Alert – Toolbox Talk
- Tornado Safety – Toolbox
- Severe Weather Action Planning
- Heat Illness Prevention

Remember to practice Safety; don't learn it by accident.

*For additional assistance, please contact
RiskControl@ServiceLloyds.com
P.O. Box 26850, Austin, Texas 78755
(512) 212-7064
www.servicelloyds.com*