

Safe Shelters and Indoor Lightning Safety Tips

What is a Safe Shelter?

A house or other substantial building offers the best protection from 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. 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.

Avoid Unsafe Shelters

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 the ground, is not safe.

How Lightning Enters a House or Building

The three primary ways lightning enters homes and buildings are (1) a direct strike, (2) through wires or pipes that extend outside the structure, and (3) through the ground.

Regardless of the method of entrance, once in a structure, the lightning can travel through the electrical, phone, plumbing, and radio/television reception systems.

Stay Safe While Inside!

- **Avoid contact with electrical equipment, including corded phones and handheld video games.**
- **If you plan to unplug any electronic equipment, do so well before the storm arrives.**
- **Avoid contact with plumbing.** Do not wash your hands, do not take a shower, do not wash dishes, and postpone doing laundry.
- **Stay away from windows and doors, and stay off porches.**
- **Do not lie on concrete floors and do not lean against concrete walls.** Concrete floors and walls usually contain rebar or other reinforcing metal.