

# Fact Sheet



## Lightning – Thunderstorms Common Dangers A Safety Guide for Outdoor Camping and Sports

Utah is nature's playground and a vacation Mecca for those who love outdoor activities. Camping, boating, hiking, fishing, golf, bike riding, skiing and many more activities place eager outdoor enthusiasts in nature's playground year around.

When people are having fun, enjoying their families or taking pleasure in the wonders of life, the thought of danger or peril is far from their minds. This fact sheet is a safety reminder that Nature, in all its beauty and majesty can and will, if one is not careful, harm and kill you or a loved one.

Utah Center for Climate and Weather studies have found, Lightning is the number one killer among weather related phenomena in Utah, with 57 deaths caused by lightning, 26 by Flash Floods and 1 from a Tornadoes.

Briefly described, lightning is a massive electrical discharge, caused by the flow of electrons between oppositely charged parts of a cumulonimbus (thunderstorm) cloud or between the cloud and the ground. Electrons are discharge through the cloud and onto the ground and an upward moving return stroke heats the air and makes lighting visible.

Lightning is very powerful. It can discharge millions of volts of electricity at the speed of light and heat surrounding air up to thousands of degrees Fahrenheit. When this superheated air explodes away from the electrical current it creates a shock wave called "thunder."

Lightning is extremely dangerous, highly unpredictable and very fickle. It can strike and destroy one object without touching another one nearby; or it can hit an object and travel across the ground for dozens of feet electrocuting anything in its path.

What this means to you, is that as a thunderstorm approaches, you need to be acutely aware of your surroundings during the storm and practice some avoidance strategies that may save your life.

### Prepare before you go:

- ✿ The majority of people killed or injured by lightning were outside at the time.
- ✿ Have a clear evacuation plan in mind. Since most storms occur in warmer months and thus coincide with outdoor activities, there's no excuse not to provide a clear evacuation plan.
- ✿ Share the safety and evacuation plan with others who will be going on the trip.



**Note of interest:** *Contrary to popular belief, the "rubber steel belted tires" of a car or truck do NOT protect people from lightning. Instead, the metal covering of the vehicle usually protects the occupants by conducting the electrical discharge across the vehicle and down into the ground.*

**When a Thunderstorm approaches, here is what to do:**

**● Be aware of your surroundings.**

The safest location during a thunderstorm is a nearby building or vehicle. Remember: "When thunder roars, go indoors." If you can get to shelter, do so quickly.

The building must have four sides and a roof. (A carport, lean-to, three-sided structure or dugout is not considered a safe shelter to guard against lightning.)

- If inside a building, remain inside. (Avoid seeking shelter in a small shed or pump-house.)
- If inside a home or work place do not use telephones, computers or electrical appliances.
- If inside a vehicle, remain inside. (A convertible, four wheeler or golf cart is not considered safe during a lightning storm.)



**● Act fast if no shelter is nearby.**

If outside and there is no time to reach shelter and because campsites, hiking and fishing are typically in the woods, you never want to be near tall trees in a thunderstorm.

Tents offer no protection from lightning from flash flooding or wind. Also, if the tent is pitched in a gully, wash or dry creek, a flash flood may come out of no where. Falling limbs during an associated windstorm may also be disastrous for any one in a tent.

- Do not stand underneath a natural lightning rod such as an isolated tree (move away from any tree a distance that is twice the height of the tree).
- Avoid standing tall or projecting above the surrounding landscape as you would if you were standing on a hilltop, in an open field, on a beach, or fishing in a small, open boat.
- Get out of and away from open water, streams or water drainages.
- Get off of and away from motorcycles, scooters, four-wheelers, golf carts, bicycles, and tractors without enclosed cabs. (A sunshade on a four-wheeler is not an enclosed cab.)
- Put down and move away from, golf clubs, golf bags, bike-pumps in backpacks and umbrellas.
- Stay away from metallic equipment. From wire fences, clotheslines, metal pipes, metal rails, and other metallic conductors that can carry lightning to you from some distance away.

**● Separate and move away from others:**

Separation should be at least 15 feet from others. This decreases the chance that a charge will jump between people.

Laying flat on the ground to stay low – is not a safe practice when lightning strikes.

**● Run to a safer area.**

If you are in a forest and getting out isn't possible, seek shelter in low areas, move to a stand or growth of lower trees. If you make it to open ground, seek a hilly area, but avoid the uppermost elevations. Instead, choose the base of a lower hill, while still avoiding a wash or riverbed.

**● Avoid standing up.**

Should you crouch down, hands and balls of feet on the ground – the so-called "safe-position" during a lightning storm. Recent research indicates that the "safe-position" during a thunder & lightning storm does not exist. Proper shelter, separation and keeping a low profile do help.

**Wait 30 minutes after you hear the last rumble of thunder before heading back to camp.**