

Lightning Strikes – Truths and Myths

1. Lightning never strikes the same place twice.

☐ True

☐ False

2. It's not raining, or if clouds aren't overhead, I'm safe from lightning.

☐ True

☐ False

3. Rubber tires protect you from lightning in a car by insulating you from the ground.

☐ True

☐ False

4. A lightning victim is electrified. If you touch them, you'll be electrocuted.

☐ True

☐ False

5. If outside in a rainy thunderstorm, go under a tree to stay dry.

☐ True

☐ False

6. If I'm in a house, I'm safe from lightning.

☐ True

☐ False

7. Carrying an umbrella increases my risk of being hit.

☐ True

☐ False

8. When playing sports and thunderstorms threaten, it's okay to finish the game before seeking shelter.

☐ True

☐ False

9. Structures with metal, or metal on the body (jewelry, glasses, backpacks, etc.), attract lightning and increase your chance of being struck by lightning.

☐ True

☐ False

10. If trapped outside and lightning is about to strike, lie flat on the ground.

☐ True

☐ False

11. If we could just harness lightning we could use that to power the world for months.

☐ True

☐ False

12. Go near a tall pointy isolated object when thunderstorms threaten, to be within the 45° "cone of protection."

☐ True

☐ False

1. Lightning never strikes the same place twice.

False: Lightning often strikes the same place repeatedly, especially if it's a tall pointy isolated object. The Empire State Building used to be used as a lightning laboratory, since it is hit nearly 25 times a year. Places prone to lightning are places to avoid when thunderstorms are nearby!

2. If It's Not Raining, Or If Clouds Aren't Overhead, I am still not Safe From Lightning

True: Lightning often strikes more than three miles from the thunderstorm, far outside the rain or even thunderstorm cloud. 'Bolts From The Blue', though infrequent, can strike 10-15 Miles from the thunderstorm.

3. Rubber tires protect you from lightning in a car by insulating you from the ground.

False: Lightning laughs at two inches of rubber! Most cars are reasonably safe from lightning. But it's the metal roof and metal sides that protect you, not the rubber tires. Thus convertibles, motorcycles, bicycles, open shelled outdoor recreational vehicles, and cars with plastic or fiberglass shells offer no lightning protection.

Likewise, farm and construction vehicles with open cockpits offer no lightning protection. But closed cockpits with metal roof and sides are safer than going outside. And don't even ask about sneakers! ☺

4. A lightning victim is electrified. If you touch them, you'll be electrocuted.

False: The human body doesn't store electricity. It is perfectly safe to touch a lightning victim to give them first aid. This is the most chilling of lightning myths. Imagine someone dying needlessly, for want of simple CPR or mouth-to-mouth resuscitation, when their chances of survival was ~90%!

5. If outside in a thunderstorm, go under a tree to stay dry.

False: Being underneath trees is the second leading activity for lightning casualties – enough said?!

6. I'm in a house, I'm safe from lightning.

False: While a house is a good place for lightning safety, just going inside isn't enough. You must avoid any conducting path leading outside, such as corded telephones, electrical appliances, wires, TV cables, plumbing (including plastic pipes with water in them), metal doors or window frames, etc. Don't stand near a window to watch the lightning. An inside room is generally best.

7. Carrying an umbrella increases my risk of being hit.

True. Increasing your height by any amount increases your chances of being hit by a calculable amount, although a prospective, population-based, double-blind, randomized study has not been done to prove this, nor has the composition (metal versus composite or plastic) of the umbrella or one-iron been studied. Other dangerous things to avoid: avoid being the highest object anywhere, be it a beach, small open boat, pier, meadow, or ridge. Avoid being under a lightning rod (except when inside a substantial habitable building that is protected) or standing near a metal fence, underground pipes, or other metallic paths that can transmit lightning energy from a nearby strike. Avoid swimming, because lightning energy can be transmitted through the water to you. Sailboats should be equipped with adequate lightning protection systems.

8. When playing sports and thunderstorms threaten, it's okay to finish the game before seeking shelter.

False: Sports is the activity with the fastest rising rate of lightning casualties. No game is worth death or life-long severe injury. All people associated with sports should have a lightning safety plan and stick to it strictly.

9. Structures with metal, or metal on the body (jewelry, watches, glasses, backpacks, etc.), attract lightning

Questionable! Height, pointy shape, and isolation are the dominant factors controlling where a lightning bolt will strike. The presence of metal makes virtually no difference on where lightning strikes. Mountains are made of stone, but receive many strikes each year. When lightning threatens, take proper protective action immediately. Don't waste time shedding metal off your body, or seeking shelter under inadequate structures. But while metal doesn't attract lightning, touching or being near long metal objects (fences, railings, bleachers, vehicles, etc.) is still unsafe when thunderstorms are nearby. If lightning does happen to hit it, the metal can conduct the electricity a long distance (even over 100 yards) and still electrocute you.

10: If trapped outside and lightning is about to strike, lie flat on the ground

False: This advice is decades out of date. Better advice is to use the 'Lightning Crouch': put your feet together, squat low, tuck your head, and cover your ears. Lightning induces electric currents along the top of the ground that can be deadly over 100 Feet away. While lying flat on the ground gets you as low as possible, which is good, it increases your chance of being hit by a ground current, which is bad. The best combination of being low and touching the ground as little as possible is the 'Lightning Crouch'. But the 'Lightning Crouch' should be used only as a last resort. Much better would be to plan outdoor activities around the weather to avoid thunderstorm exposure and to have proper shelter available.

11. If we could just harness lightning we could use that to power the world for months.

False it is impractical to intercept a sufficient number of the lightning strikes occurring in the world, and most of the energy in a lightning strike is converted to thunder, heat, light, and radio waves. He notes, "If its total energy were available, a single lightning flash would run an ordinary household light bulb for only a few months."

12. Go near a tall pointy isolated object when thunderstorms threaten, to be within the 45° "cone of protection"

False: The "cone of protection" is a myth! While tall pointy isolated objects are statistically more likely to be struck by lightning, it's not nearly reliable enough to rely on for safety. Lightning can still strike you near the tall object. Besides, the lightning electricity will likely spread out along the surface of the ground and can still kill you over 100 Ft from the "protecting" object. Also, if you are close to or touching the tall object, you can be electrocuted via side flash or contact voltage. NO PLACE OUTSIDE IS SAFE NEAR A THUNDERSTORM!

Distance and proper shelter is your best protection from lightning.