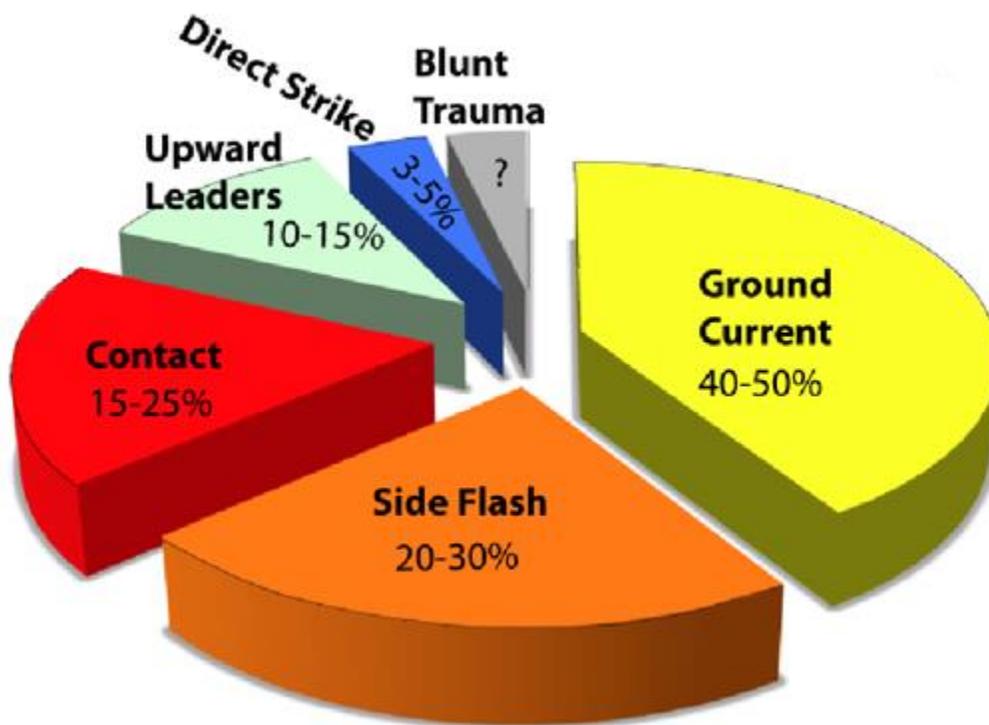


The Dangers Of Lightning: The Many Ways That Lightning Can Hurt You!

When we think of how lightning can hurt us, we often think of a direct strike which can injure or kill the person struck. However, it has been shown that a direct hit from lightning is responsible for only a small percentage of lightning-related injuries, compared to other causes.

Lightning dangers can also be caused by [ground current](#), [side flash](#), [contact](#) (to an object struck by lightning), [upward leaders](#), [direct strike](#) and [blunt trauma](#) (shockwave).



This chart shows the six ways a lightning strike can kill or injure a person.

Here's the way it works: a lightning strike that hits the ground typically hits a primary object and then the current disperses through the ground until it dissipates. Research shows that a lightning strike that hits the ground is hazardous out to 10 metres. Some people have been injured 15 to 30 metres away from where a lightning strike has hit the ground.

Lightning danger definitions:

Ground Current

Lightning enters the earth, travels through it and voltages are set up in the ground. One part of your body contacts one voltage, and another part of your body contacts a different voltage. The difference in voltage is what drives the current through your body. See also [surface arc lightning](#).

Side Splash/Flash

When lightning that has hit an object travels partly down the object before jumping to a nearby victim. Never seek shelter near a lone tree or other tall object, as a side flash can splash lightning from these tall objects onto a nearby object to reach the ground.

Contact

The person is touching or holding onto an object which lightning attaches itself to, such as wire fencing, telephones poles, etc. When inside a house, either a corded telephone or water pipe such as a faucet can also cause this.

Upward Leaders

Or streamers, are currents of positive charges that start growing upward from the ground from elevated objects. They are produced in response to the [step leaders](#) coming down from the cloud base. If a downward step leader and a streamer meet, a conductive path will be formed and a lightning stroke will occur. Other streamers in the area of the main stroke still carry a charge. This charge is much smaller than the main stroke but still large enough to cause injury or death to humans.

Direct strike

Is when lightning attaches directly to the victim. Only three to five per cent of lightning fatalities result from a direct strike.

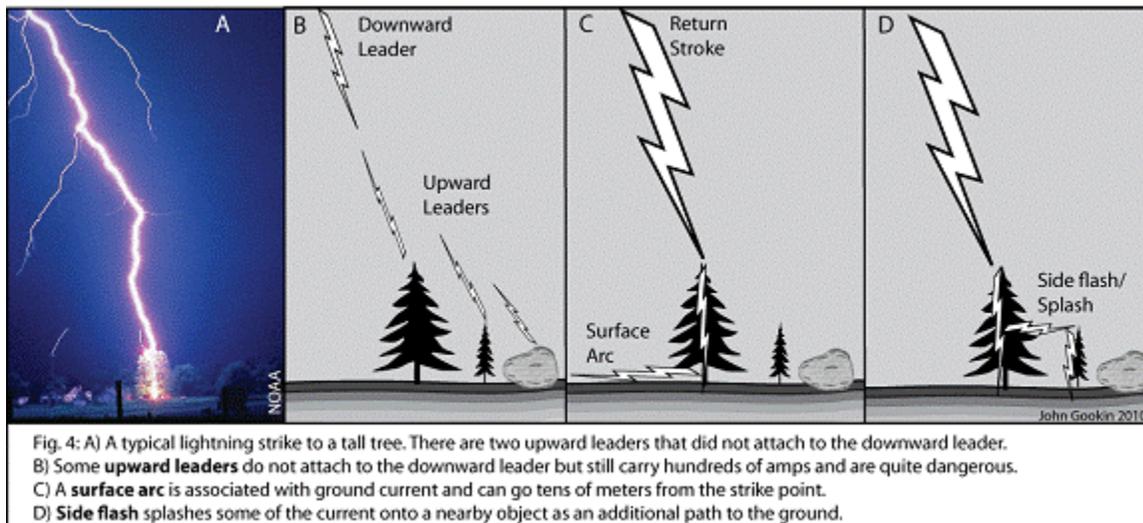
Blunt trauma

This often occurs when a shock wave on the ground throws a person up to two metres away (10 feet) which results in bodily harm/injury. Blunt trauma can also occur from injuries related to fire, explosions, or falling objects, that are caused by a result of the lightning strike.

Surface Arc

High current surface arcs are associated with ground currents. They appear in photographs as bright arcs of light radiating from a strike point like spokes of a wheel, in the air just above the ground's surface.

The graphic below illustrates some of these phenomena.



Ultimately it is two types of lightning strikes (ground current and side flash) that account for 60 to 80 per cent of all the lightning strikes that see people being killed or injured.

As always with lightning is it important to remember: **When thunder roars, go indoors!**

To find out what else you can do to keep yourself safe from lightning, visit our section on [Lightning Safety](#)