

PERSONAL SAFETY
during

LIGHTNING

Training Program Contents

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Lightning Accidents

- 2 engineers die while inspecting road construction.
- A boy was struck by lightning in a Texas football field but survived
- Parents killed, 3 children injured when they sought shelter under an isolated tree
- 3 men struck by lightning while installing a chain link fence
- 2 caddies die of lightning in a golf course

Lightning - Facts

- Virtually anything can get struck by lightning!
 - Tree / Animal / Humans / Building / Aircraft / Ship / Bush / Light pole / Process Plant / Crane / Truck
- Lightning strikes are absolutely **UN-PREDICTABLE!!!!**
 - Place of strike / Intensity / Destruction Potential
- Lightning discharges produces very high current!!- **Kilo Amperes**

Lightning - Facts

- **25% of Lightning victims die!**
- **Lightning damage probability is more in summer**
- **85% of the lightning strike victims are children and young men (10 to 35 years old) engaged in work & recreation (US data)**
- **14 % under tree lightning strike deaths**
- **70% strikes happen between June & August**

Lightning - Facts

- **Most lightning strikes occur between 2 pm to 6 pm.**
- **Lightning strikes are UN-Predictable!**
 - **During a football match, one team of 11 were struck by lightning whereas the other team was untouched!**

Lightning Myth - 1

- Lightning strikes only on tall objects!

But the probability of a tall object getting struck is more! In African animal parks, more **Giraffes** die of lightning than any other animal!

Lightning Myth - 2

Lightning Never strikes the same place twice!

- **EMPIRE STATE BUILDING WAS STRUCK 25 TIMES!!!!**

Lightning Myth - 3

- Standing under a tree during lightning is safe!

Lightning Myth - 4

You are completely safe inside a metal bodied car!

- Not completely true! So long as you jump out or stay inside, you are safe. **DONOT STEP OUT!** Safest thing to do is not to get into any vehicle.

UNSAFE AREAS

- **Small structures including huts & rain shelters.**
- **Nearby metallic objects like fences, gates, instrumentation and electrical equipment, wires, and power poles.**
- **Also---AVOID isolated trees, AVOID water, AVOID open fields, AVOID using the (hard wired) telephone and headsets.**
- **Avoid being in or near high places (tanks / towers / stacks) or open fields or under isolated trees, under communication towers, flagpoles, metal fences, rivers**

UNSAFE AREAS

- When inside a building, avoid use of the telephone, taking a shower, washing your hands, electrical wiring, cable TV wiring, plumbing, being near windows & balconies
- Parking lots / Tennis Courts / Golf Courses / athletic fields / tents & temporary structures
- Near clotheslines, wire fences, overhead wires and rail-road tracks

SAFE AREAS

- Large metal-framed & enclosed structures
- **Lightning** **protected buildings**
- Fully enclosed metal vehicles, with rolled-up windows (avoid contact with metal surfaces outside or inside the vehicle)
- City Streets shielded by nearby buildings
- Underground shelters such as tunnels, caves
- Seek depressed areas / dense woods
- **Do not go out-of-doors or remain out, unless it is necessary**

LIGHTNING SAFETY CROUCH

- If hopelessly isolated from shelter during close-in lightning, adopt a low crouching position with feet together and hands on ears (**Crouching**).

Maintain lowest possible height

Lightning Safety Crouch

- SAFEST POSITION DURING THUNDERSTORMS IN THE CROUCHING POSITION!!! (when no shelters are available, in open areas)

Lightning Safety Rating

- In order of descending safety where 10 is the best
- Lightning Certified Safe Shelter, Rating = (10)
- Lightning Protected Building, Rating = (9)
- Large enclosed substantially constructed building (the center of a low level interior room is better).
Rating = (7)
- An enclosed metal car, bus, airplane, train or tractor,
Rating = (3)
- The safety crouch position rating = (1/2)
- ~~Outdoors, Rating = (0)~~

Outdoor Lightning Safety Tips

- If you hear **thunder**, suspend all outdoor activities!
- If you see **Lightning**, seek a shelter immediately!
- **Vehicles:**
 - Cranes - lower boom, stop and driver to jump out of vehicle and move into a shelter
 - All trucks - Drivers to stop work, move into the shelter

Outdoor Lightning Safety Tips

- Those people who are working at heights - climb down and take shelter in a protected building / room or in the safe areas mentioned
- Avoid unnecessary exposure to lightning (go out only if absolutely essential!!!)
- Depend on the radio to keep updated of weather conditions

Lightning Pre-Cursors (Warning Signals)

- High Winds
- Heavy Rainfall
- Cloud cover / Cloudy Sky
- Use lightning warning devices

“Many casualties occur because people ignore these obvious precursors”

First Aid Recommendations

- **Re-locate the victim to a low lightning risk area**
- **Start resuscitation, if the victim is not breathing**
- **If no pulse is detected, start cardiac compression**
- **Take to a qualified doctor immediately**

Most lightning victims can actually survive their encounter with lightning, especially with timely medical treatment

Being aware of lightning hazards
itself is a big step towards
lightning safety!!!!