The 101 DAYS OF SUMMER

Toolbox Talk Lesson Plan

What you need to know about lightning

Lightning is a capricious, random and unpredictable event. Lightning kills more people each year on average than hurricanes and tornadoes combined. There are about 100 lightning fatalities annually in the US. Beyond the tragic loss of life, however, are the many injuries. Injury from a lightning strike may occur in any of these ways:

1. Direct strike: Lightning directly strikes a person.
2. Contact strike: A person is touching an object (such as a tree) that has been struck by lightning.
3. Side splash: Lightning jumps from the primary strike object on its way to the ground.
4. Ground strike: Lightning strikes the ground and the current spread out in a circle from that spot.
5. Blunt injury: A person is thrown violently from the lightning strike or from the explosive force that occurs as surrounding air is superheated and rapidly cooled.

Lightning safety should be practiced by all people during thunderstorms. Preparedness includes: get indoors or in a car; avoid water and all metal objects; get off the high ground; avoid solitary trees; stay off hard wire telephones.

The ***"30/30" Rule*** for lightning safety could save your life. The first "30" means that you need to take cover if you hear thunder within 30 seconds of the lightning flash (flash to bang ratio). Then wait at least 30 minutes after the last lightning flash or thunder in order to resume normal activity.

Lightning can strike 10 to 15 miles from the rain portion of the storm. Measuring lightning's distance from you is easy. Use the "***Flash/Bang" (F/B) Technique***. For every count of five from the time of seeing the lightning flash to hearing the associated thunder, lightning is one mile away. A F/B of 10 = 2 miles; an F/B of 20 = 4 miles, etc.

All deaths from lightning are from cardiac arrest and stopped breathing at the time of the strike. Only about 10% of lightning strike victims are killed; 90% survive. But many of the estimated 1000 survivors suffer severe, life-long injury and disability.

The victims are not electrified and are safe to touch. Lightning may cause numerous other injuries:

- Up to two-thirds of the seriously injured people struck by lightning have a temporary paralysis unique to lightning strike.
- Victims may experience superficial burns. Contrary to common belief, deep burns are rare. They occur in fewer than 5% of lightning injuries

If caught outdoors during nearby lightning, adopt the ***Lightning Safety Position*** (LSP). LSP means staying away from other people, taking off all metal objects, crouching with feet together, head bowed, and placing hands on ears to reduce acoustic shock.

A safe building is one that is fully enclosed with a roof, walls and floor, such as a home, school, office building or a shopping center. Picnic shelters, deck overhangs and other partially open structures are **NOT** safe unless a Lightning protection (i.e. lightning rods and ground wires) system is installed.

This lesson plan is intended for general information purposes only. It should not be construed as legal advice or legal opinion regarding any specific or factual situation. Always follow your organization's policies and procedures as presented by your manager or supervisor. For further information regarding this bulletin, please contact your Safety Director at 877.398.3046.

