

HAZARD ALERT

CPWR
THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

Lightning



Am I in danger?

If you hear thunder and are not in an enclosed building, then the answer is **YES**.

- ▶ Lightning injures or kills hundreds of people in the U.S. each year. Construction workers who work in open spaces, on roofs, or other high places are at risk of being struck by lightning.
- ▶ Lightning can stop your heart and kill you. It can also cause burns, nervous system damage, and other health problems you may not notice until months after a lightning strike.

Source: OSHA 29 CFR 1926.35
Source: <http://elcosh.org/document/4154/d001459/osha-noaa-fact-sheet%3A-lightning-safety-when-working-outdoors.html>

If you are out in the open and have nowhere to go...

- 1. Squat down** with your feet together. Only let your feet touch the ground. Do not sit or lie flat on the ground. Since lightning travels through the ground, the more contact you have with the ground, the greater your risk for injury or death.
- 2.** Put your hands over your ears to protect against noise.

Use this position to reduce your risk of being struck by lightning.



Source: <http://elcosh.org/document/4154/d001459/osha-noaa-fact-sheet%3A-lightning-safety-when-working-outdoors.html>

If someone is injured by lightning...

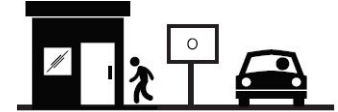
- ▶ **Call 911.**
- ▶ A victim does not stay electrified. You can touch him/her right away.
- ▶ If the victim has no pulse, perform CPR (cardio-pulmonary resuscitation).
- ▶ If there is a portable defibrillator, follow the instructions.
- ▶ Avoid staying in the open during a storm to take care of the victim. Move the victim to a sheltered area.



Source: <http://elcosh.org/document/4154/d001459/osha-noaa-fact-sheet%3A-lightning-safety-when-working-outdoors.html>

If you hear thunder...

1 Get into an enclosed building



- ▶ If you hear even a distant rumble of thunder, the Occupational Safety and Health Administration (OSHA) says you “should get to a safe place immediately” and “remain in the shelter for at least 30 minutes after hearing the last sound of thunder.”
- ▶ If you can't find a building, get into a hard-topped car or truck with the windows closed. Do not touch the doors or other metal inside.
- ▶ **Do NOT** stand out in the open, on a roof, covered porch or open shelter, like a baseball dugout or bus shelter.

2 Avoid objects that conduct electricity



- ▶ Metal objects—scaffolds, heavy equipment, or light poles.
- ▶ Plug-in power tools or telephones, even if indoors.
- ▶ Water—puddles or pipes.
- ▶ Trees (if the tree is hit, you can be too.)

3 Follow the Emergency Action Plan



Photo Courtesy of Earl Dotter/SNC-LAVALIN/CPWR

Your employer should have an Emergency Action Plan (EAP)* that includes written lightning safety procedures. The EAP should identify locations and requirements for safe shelters, describe when to stop outdoor work, and when it is safe to resume work.

Source: OSHA 29 CFR 1926.35

To learn more:

- ▶ Regulations: OSHA 29 CFR 1926.35
<https://tinyurl.com/OSHA-Lightning>
- ▶ CPWR Toolbox Talk: Lightning Protection
<http://www.cpwr.com/publications/toolbox-talks>
- ▶ CPWR Construction Solutions:
<http://www.cpwr.constructionsolutions.org/search.php?q=lightning>

If you think you are in danger:

**Contact your supervisor.
Contact your union.**

**Call OSHA
1-800-321-OSHA**

To receive copies of this Hazard Alert and cards on other topics:
call **301-578-8500** or visit
www.cpwr.com

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