Electrocution

Construction workers are at risk of electrocution, with both electricians and non-electricians facing severe issues. Electrocutions are the fourth leading cause of death in the US, with electrical workers having the most electrocutions per year. Misuse of construction electrical equipment can cause death.

Methods to protect yourself and others from the general electrical hazards in construction:

To protect yourself and others from electrical hazards in construction, follow these guidelines: shut off power (when possible), use lock-out/tag-out procedures, replace frayed or worn cords, ensure extension cords have grounding prongs, and protect cords from damage. Regularly check and replace electric tools, ensure they are grounded, and use GFCI protection when servicing portable tools.

Methods to protect yourself and others from the effects of arc flash include:

Arc flash protection involves:

- Training workers.
- Understanding arc flash warning labels on circuits or equipment.
- Conducting a job safety briefing.
- Working on de-energized and locked-out circuits.
- Establishing safe work practices.
- Ensuring boundaries are established.

Electrical personal protective equipment (PPE) such as leather gloves, insulated rubber gloves, eye and face protection, hearing protection, non-conductive headgear, arc-flash protective clothing, electric blankets and barriers, and hot sticks should be used. Insulated and electrically safe tools and keeping non-essential people clear of the work area are also essential.

Methods to protect yourself and others from contact with overhead powerlines include:

- Contact utility companies in advance to de-energize or insulate overhead powerlines.
- Ensure all overhead electrical lines should be located and identified.
- Ladders, scaffolds, equipment, and materials should not be placed within 10 feet of overhead powerlines.
- Keep metal tools and other conductive objects away from overhead powerlines.
- Use a dedicated spotter when a crane travels closer than 20 feet to an overhead powerline.