



ELECTRICAL SAFETY

TOOLBOX TALK SERIES – HAZARD RECOGNITION

May 2024

Introduction: Electricity is a powerful and essential tool in our daily lives, but it can also pose serious risks if not handled properly. This handout aims to raise awareness about electrical hazards and provide guidelines for preventing accidents and injuries.

Understanding Electrical Hazards:

- **Electric Shock:** Contact with electrical currents can result in electric shock, which can cause injuries ranging from minor burns to cardiac arrest.
- **Arc Flash:** An arc flash is a sudden release of energy caused by an electrical fault, resulting in an explosion of intense heat and light. Arc flashes can cause severe burns and fatalities.
- **Electrical Fires:** Electrical malfunctions or overloads can lead to fires, posing a significant risk to life and property.

Safety Guidelines:

1. **Inspect Electrical Equipment:** Regularly inspect electrical cords, plugs, outlets, and equipment for signs of damage, wear, or overheating. Replace or repair damaged items immediately.
2. **Use Ground Fault Circuit Interrupters (GFCIs):** Install GFCIs in areas where electrical equipment may come into contact with water, such as kitchens, bathrooms, and outdoor locations, to protect against electric shock.
3. **Lockout/Tagout Procedures:** Follow lockout/tagout procedures when working on electrical equipment to ensure it is de-energized and cannot be accidentally restarted.
4. **Respect Lockout/Tagout Devices:** Never remove or tamper with lockout/tagout devices without proper authorization. They are in place to protect your safety.
5. **Stay Clear of Overhead Power Lines:** Maintain a safe distance from overhead power lines when working at heights or using ladders or other equipment.
6. **Proper Equipment Use:** Use electrical equipment and tools that are appropriate for the task and have been properly maintained and inspected for safety.
7. **Avoid Overloading Circuits:** Do not overload electrical outlets or extension cords by plugging in too many devices or appliances. Use power strips with built-in overload protection when necessary.



8. **Unplug Before Servicing:** Always unplug electrical equipment before performing maintenance or servicing to prevent accidental startup.
9. **Use Personal Protective Equipment (PPE):** Wear appropriate PPE, such as insulated gloves, safety glasses, and flame-resistant clothing, when working with or near electrical equipment.
10. **Training and Education:** Participate in training on electrical safety practices, including hazard recognition, proper procedures, and emergency response.

Emergency Procedures:

- **Electric Shock:** If someone receives an electric shock, immediately disconnect the power source if safe to do so and call for medical assistance. Do not touch the person until the power is off.
- **Electrical Fire:** In the event of an electrical fire, use a Class C fire extinguisher or smother the flames with a non-conductive material, such as a heavy blanket. Do not use water on electrical fires.

Reporting Electrical Hazards:

- Report any electrical hazards or malfunctions to your supervisor or Safety and Security immediately. Do not attempt to fix electrical problems unless you are qualified to do so.

Conclusion: By following these electrical safety guidelines and remaining vigilant, we can prevent accidents, protect lives, and create a safer work environment for everyone. Remember, safety is everyone's responsibility.