

Employee Safety

A Review of OSHA's Fatal Four: Electrical Hazards

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What You Need to Know

Dangers of electrical shock.

How employers can prevent electrical shock.



Employers must call for extreme caution when working on electrical equipment.

The Occupational Health and Safety Administration recognizes four common workplace safety hazards that can easily become fatal if the right precautions aren't in place ahead of time. In the first entry of this four-part series, we'll examine electrical hazards – one of OSHA's "Fatal Four" and a hazard that can strike anytime, often without warning.

Dangers of electrical shock

In this day and age, electricity is everywhere – it's all but impossible to find a workplace that doesn't use it, in some form or another. That's what makes it such an important hazard to guard against: It affects workplaces ranging from industrial manufacturers to financial offices.

While the incidence of electrical shock is relatively low, the damage can be exceedingly high, according to the National Fire Protection Association. Those incidents that do occur are more likely to cause severe injury or death than many more common workplace accidents. Data from the U.S. Bureau of Labor Statistics showed that 961 injuries occurred from electrical exposure from 2008 to 2010. Of those 961, 525 resulted proved fatal – a rate of 55 percent.

While the construction industry accounts for roughly half of the electrical shock fatalities reported between 2004 and 2013, the remainder are divided fairly evenly between Professional and Business Services, Trade, Transportation and Utilities, Natural Resources and Mining, and Manufacturing. Additionally, the number of worker fatalities attributed to electrical shock has been steadily declining as more employers address hazards proactively.

How employers can prevent electrical shock

There are two sides to shock prevention: mitigating the ability of a piece of equipment to cause injury and educating employees on safe practices.

In many cases, faulty equipment can cause shocks unexpectedly. Arc flash can occur during a short circuit and shock an individual who isn't even physically touching an electrical cabinet, for example. Unexpected equipment start-up can also cause electrical shock. In both of these cases, a lockout tag can help individuals recognize when a piece of equipment is or is not safe for use. Employers should make an effort to install safety guards on equipment that could energize and shock workers.

Educating workers on best safety practices is also essential. Individuals who presume a certain level of safety, fail to adhere to protocol, or forget to don necessary safety equipment can ***put themselves and others at risk*** of electrical shock or fire, according to OSHA. Safety signs play a major role in reminding employees to take the correct steps, avoid certain areas and perform other important safety-related tasks.

Electrical shocks can occur wherever electricity is in use and employers must take measures to protect their workers.

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