



YCPARMIA Safety Journal

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Shocking News

Electricity can kill

Electricity can save lives and it can take lives. Defibrillators save lives by transmitting an electric shock to the hearts of people who suffer cardiac arrest. More often, however, electric shock is harmful—and sometimes fatal.

Electricity generally kills in one of two ways:

- ✘ Given enough voltage, electrical current can stop your heart.
- ✘ Electricity can also be converted into heat by the body and literally cook you. This can happen even at a fairly low voltage, as long as the power is high enough to heat the body faster than it can get rid of the generated heat.

Even when it doesn't kill, electricity can give you a nasty shock, and it can burn your skin or even damage nerves and internal organs. Severe shocks can also cause shoulder joint injuries and break bones in your neck due to muscle contractions.

Electricity can kill or injure indirectly, too. For example, if you're up on a ladder when you receive a shock, you could fall and hurt yourself badly.

Clearly, electricity is nothing to fool around with. Since this month is National Electrical Safety Month, it's a good time to review some basic safety precautions everyone needs to follow:

- ⚡ **Follow manufacturer's instructions** for all electrical equipment.
- ⚡ **Leave electrical repairs to trained and qualified personnel.**
- ⚡ **Don't touch any electrical equipment with wet or sweaty hands**, or if you're standing on a wet surface.
- ⚡ **Don't overload circuits** or outlets.
- ⚡ **Use extension cords only when necessary** and make sure they are rated high enough for the job.
- ⚡ **Use waterproof cords outdoors.**
- ⚡ **Check cords to make sure insulation is in good condition.**
- ⚡ **Don't run cords across walkways** where they can be damaged.
- ⚡ **Make sure electrical equipment is locked and tagged out** before any repairs are made.

DYNAMICS OF ELECTRIC SHOCK

The severity of an electric shock depends on the amount of current running through your body. According to the Electrical Safety Foundation International (ESFI), at 0.5 - 3 milliamps (mA) you feel only a tingling sensation. But it quickly gets worse as the current increases:

3 - 10 mA	pain, muscle contraction
10 - 40 mA	grip paralysis—your brain says to let go, but physically you can't
30 - 75 mA	respiratory system shuts down
100 - 200 mA	heart fibrillation
200 - 500 mA	heart clamps tight
Over 500 mA	tissue and organs burn

FIRST AID FOR ELECTRIC SHOCK

Here is an abbreviated list of steps recommended by ESFI:

- ✚ **Always call for emergency help.** Even if a shock victim seems OK, he or she could be suffering from serious internal damage that could become evident hours later.
- ✚ **De-energize the circuit** and separate the victim from the energy source using a dry wood broom, leather belt, plastic rope, or similar nonconductive implement, making sure that neither you nor the victim are in contact with any electric source. Otherwise, don't move shock victims in case the shock has injured the neck or back.
- ✚ **Begin mouth-to-mouth resuscitation** and/or CPR, if necessary.
- ✚ **Keep the victim lying down**, warm, and comfortable until help arrives.

Chemical Contact

Don't risk exposing yourself and others

Unprotected contact with chemical hazards on the job can be hazardous to your health. But chemical contaminants can be dangerous in another way, too. They can be spread to other people such as workers in other parts of the facility. They can even reach your family and friends if you take contaminants home with you.

Protect yourself and others from harm by following these six steps:

1. **Follow all work rules and procedures.** This is the best way to protect co-workers, family, and friends from harm.
2. **Identify all potential contamination hazards on the job.** Check labels and material safety data sheets for safety information.
3. **Take effective steps to prevent hazardous exposures.** Follow work rules designed to prevent exposure to contaminants.
4. **Always use assigned PPE.** PPE can't protect you unless you use it.
5. **Follow required decontamination procedures.** Remove and properly dispose of contaminated work clothing and PPE, as well as any contaminated equipment or materials.
6. **Practice good hygiene.** Wash carefully after any contact with hazardous substances. Keep food, beverages, and personal items out of work areas where they could be contaminated.

YOUR PERSONAL SAFETY BARRIER

Why bother to wear personal protective equipment (PPE)? Because PPE creates a safety barrier between you and job hazards. This barrier prevents or minimizes injuries in the event of an accident.

For example: The *Erie Times-News* reported the story of a worker blown off the platform of a billboard he was working on by an unexpected gust of wind. Fortunately, he was wearing a safety harness in accordance with OSHA regulations. The harness held him in place, 15 feet below the platform, until a bucket truck was able to reach him and transport him to the ground 100 feet below.

Although in this case the accident itself couldn't be prevented, an injury—probably a fatal one—was avoided.

Buckle Up

Buckle Up America Week is May 22-29

When you think of all the hazards you face on the job and at home, it's easy to forget that the place you're most at risk is on the road. Traffic accidents are the leading cause of death and injury in the United States.

While you can't stop driving, you can do one very important thing to protect yourself and your passengers—wear seat belts! According to the Arizona Department of Public Safety:

- ☹ Every hour someone dies in America simply because they didn't buckle up.
- ☹ Failure to buckle up contributes to more fatalities than any other single safety-related driving behavior.
- ☹ Seat belt use is the single most effective thing we can do to save lives and reduce injuries on America's roadways. It's been estimated that seat belts currently save some 10,000 lives a year, and that if even just 90 percent of drivers buckled up, another 5,000+ deaths and well over 100,000 injuries could be prevented every year.

The message is clear. If you buckle up, you're more likely to survive an accident and perhaps even avoid injury all together. If you have children, think about this: Arizona DPS says research shows that if a driver is unbuckled, 70 percent of the time children riding in that vehicle won't be buckled either.

Stop Unwanted Start-up

Follow lockout/tagout rules

Many serious injuries occur each year because machines are not properly de-energized before maintenance and repairs are attempted. To prevent these accidents, OSHA has developed a set of special lockout/tagout procedures:

1. Prepare for shutdown by knowing the type of energy that powers the machine (e.g., electrical, hydraulic, pneumatic).
2. Notify workers in the area that equipment will be shut down and locked out for repairs/maintenance.
3. Turn off machine.
4. Deactivate energy-isolating devices—the circuit breaker, disconnect switch, or other device that provides energy to the machine.
5. Lock out and/or tag out control switches in an “off” or “safe” position to prevent accidental start-up or energy release.
6. Release blocked or stored energy.
7. Test operating controls by putting in “on” position to make sure machine does not start up. Return operating controls to the “off” position.
8. Perform necessary repairs or maintenance.
9. When work is completed, remove tools and other items from area, reinstall machine guards, make sure other workers are at a safe distance, remove locks and tags, turn on energy, test to make sure machine is working properly, and notify workers that machine is back on line.



Safety Wise Quiz

What do you know about job safety?

Test your safety smarts. Read each statement and decide if it is True or False. Then check your answers below.

1. Fire extinguishers should match the type of fire (e.g., trash, electrical, grease), but if you don't have the right type, using any extinguisher is better than taking no action at all.
2. Chemicals are only hazardous if they get into or onto your body.
3. If you're not climbing more than a few feet, it's safe to stand on a handy chair or box instead of getting a ladder.
4. You need to report an accident to your supervisor only if someone is actually hurt or if tools, materials, etc., are damaged.
5. Workers have no safety responsibilities. Safety is a management function.

Answers:

- (1) False. Using the wrong type of extinguisher can make a fire worse instead of putting it out.
- (2) False. Some chemicals are hazardous because they cause fires and explosions.
- (3) False. It's never safe to use a chair or a box in place of a ladder.
- (4) False. You should report all safety hazards and *all* incidents, including near misses and minor accidents to your supervisor. Simple problems, like an object lying in a hallway, should be corrected by the person who finds it.

DO YOU HAVE A SAFETY KIT?

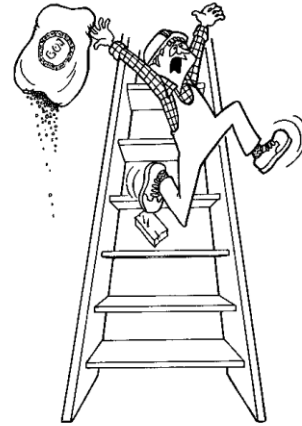
These items can fit in a small pouch:

- Fully charged cell phone programmed with emergency contact information.
- Laminated plastic ID card with name, address, telephone, date of birth, medical and insurance information.
- Small flashlight.
- Whistle.
- Small emergency pouch of water.
- Packaged snack with a long shelf life.
- First aid supplies.

20 Ways to Prevent Falls

Take these steps to avoid injury

1. Clean up grease, oil, and debris.
2. Report accidental spills immediately.
3. Provide dry standing areas for wet processes.
4. Keep walkways and stairs clear and well lighted.
5. Report loose carpeting and other flooring problems.
6. Set the base of a straight ladder 1 foot away from the wall for every 4 feet of ladder height.
7. Tie off the ladder or have someone support the base.
8. Never stand on the top two rungs of the ladder.
9. Don't climb ladders with tools in your hand.
10. Always extend stepladder legs fully and secure braces before use.
11. Put covers and/or guardrails over holes, pits, and vats.
12. Make sure lighting is adequate around holes.
13. Avoid edges of loading docks and other such areas where falls are likely.
14. Wear slip-resistant footwear.
15. Don't take stairs two at a time.
16. Look where you're walking.
17. Use nonslip surfaces for floors, ramps, and stair treads.
18. Make sure changes in floor level are properly marked.
19. Clear and sand outdoor walkways and stairs in icy or snowy weather.
20. Walk, don't run.



Are you 'gung ho' about Safety?

How to ensure a safer workplace

“Gung ho” is a Chinese term that means “working together.” It was popularized by a Marine division during World War II and has come to signify enthusiasm, teamwork, energy, dedication, and outstanding results.

To be gung ho about safety on the job you need to:

- ☺ **Work as if your life depends on it**—because it does! Follow all safety rules and procedures. Use assigned PPE. Don't take shortcuts.
- ☺ **Be a hazard hunter.** Identify and eliminate all the hazards in your work area. Keep alert to changing conditions, which could create new and different hazards you haven't anticipated.
- ☺ **Care about co-workers.** Watch out for the safety of those with whom you work. Lend a hand whenever it's required to make a job safer.
- ☺ **Be a problem solver.** Don't shrug and walk away from safety problems. Work to find a solution. If you can't, get your boss and co-workers involved.
- ☺ **Communicate constantly.** Talk to your co-workers and your boss about safety issues. Point out hazards and potential safety problems. Give and get the information you need to keep safe while you work.
- ☺ **Think about ways to make the job safer.** Put your brain power and expertise to work and always be thinking about ways to improve job safety.

**Safety
Requires
Teamwork**