

JOB HAZARDS

What is a hazard?

A hazard is the potential for harm. In practical terms, a hazard is often associated with a condition or activity that, if left uncontrolled, can result in an injury or illness. Identifying hazards and eliminating or controlling them as early as possible will help prevent injuries and illnesses.

Common Hazards and Descriptions

HAZARDS

Chemical (Toxic) A chemical that exposes a person by absorption through the skin, inhalation, or through the blood stream that causes illness, disease, or death. The amount of chemical exposure is critical in determining hazardous effects. Check Material Safety Data Sheets (MSDS) for chemical hazard information.



Chemical (Flammable) A chemical that, when exposed to a heat ignition source, results in combustion. Typically, the lower a chemical's flash point and boiling point, the more flammable the chemical. Check MSDS for flammability information.

Chemical (Corrosive) A chemical that, when it comes into contact with skin, metal, or other materials, damages the materials. Acids and bases are examples of corrosives.

Explosion (Chemical Reaction) Self explanatory.

Explosion (Over Pressurization) Sudden and violent release of a large amount of gas/energy due to a significant pressure difference such as rupture in a boiler or compressed gas cylinder.

Electrical (Fire) Use of electrical power that results in electrical overheating or arcing to the point of combustion or ignition of flammables, or electrical component damage.

Electrical (Shock/Short Circuit) Contact with exposed conductors or a device that is incorrectly or inadvertently grounded, such as when a metal ladder comes into contact with power lines. 60Hz alternating current (common house current) is very dangerous because it can stop the heart.



Electrical (Static/ESD) The moving or rubbing of wool, nylon, other synthetic fibers, and even flowing liquids can generate static electricity. This creates an excess or deficiency of electrons on the surface of material that discharges (spark) to the ground resulting in the ignition of flammables or damage to electronics or the body's nervous system.

Electrical (Loss of Power) Safety-critical equipment failure as a result of loss of power.

Ergonomics (Strain) Damage of tissue due to overexertion (sprains and strains) or repetitive motion.



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Ergonomics (Human Error) A system design, procedure, or equipment that is error-provocative. (A switch goes up to turn something off).

Excavation (Collapse) Soil collapse in a trench or excavation as a result of improper or inadequate shoring. Soil type is critical in determining the hazard likelihood.

Fall (Slip, Trip) Conditions that result in falls (impacts) from height or traditional walking surfaces (such as slippery floors, poor housekeeping, uneven walking surfaces, exposed ledges, etc.)



Fire/Heat Temperatures that can cause burns to the skin or damage to other organs. Fires require a heat source, fuel, and oxygen.

Mechanical/Vibration (Chaffing/Fatigue) Vibration that can cause damage to nerve endings, or material fatigue that results in a safety-critical failure. (Examples are abraded slings and ropes, weakened hoses and belts.)

Mechanical Failure Self explanatory; typically occurs when devices exceed designed capacity or are inadequately maintained.

Mechanical Skin, muscle, or body part exposed to crushing, caught-between, cutting, tearing, shearing items or equipment.

Noise Noise levels (>85 dBA 8-hr TWA) that result in hearing damage or inability to communicate safety-critical information.



Radiation (Ionizing) Alpha, Beta, Gamma, neutral particles, and X-rays that cause injury (tissue damage) by ionization of cellular components.

Radiation (Non-Ionizing) Ultraviolet, visible light, infrared, and microwaves that cause injury to tissue by thermal or photochemical means.

Struck By Accelerated mass that strikes the body causing injury or death. (Examples are falling objects and projectiles.)



Struck Against Injury to a body part as a result of coming into contact with a surface in which action was initiated by the person. (An example is when a screwdriver slips.)

Temperature (Heat/Cold) Temperatures that result in heat stress, Extreme exhaustion, or metabolic slow down such as hypothermia.

Visibility Lack of lighting or obstructed vision that results in an error or other hazard.

Weather Phenomena (Snow/Rain/Wind/Ice) Self explanatory.

There are multiple workplace hazards for every job in every workplace. Look around your workplace for the hazards mentioned above in addition to other hazards. Discuss any unprotected hazards with your supervisor. You should always be using the right tool for the job and wearing appropriate personal protective equipment to protect you from workplace hazards.