



## 042: Health Hazard Recognition

### Types

**Gases, mists, vapors, and dust.** Inhalation can damage the respiratory system or allow toxins to enter the body. These also pose a danger to your skin and eyes. Wear the proper PPE.

**Biomechanical.** Fatigue, overexertion, stress injuries, impact injuries. Take care where you place your hands and feet, pay attention to your body's alignment when you lift, and switch tasks when your joints start to ache or you get other indications of repetitive motion stress.

**Electrical.** Shocks, electrocution, arc burns. Electrical safety procedures constitute several topics in their own right, but the key concept is that you always ensure you are providing the means of isolating yourself from the energy source. Lockout/tagout is a primary tool toward this end.

**Noise.** If you have to raise your voice to carry on a conversation, wear hearing protection.

**Biological.** Contact with insects, rodents, fungi, or bacteria can make you ill. Good housekeeping and personal hygiene are your first lines of defense.

### Processes

Many of the processes you encounter are similar, but each poses its own hazards. Some of these, like noise, are obvious when you enter the area. Others are not so obvious, and you need to be alert to them.

- **Combustion.** The by-products can produce breathing hazards or skin irritation.
- **High temperature.** Whether combustion is present or not, a fire hazard exists at high temperatures. So are heat stress and a burn hazard.
- **Heating.** In the event of a leak, a microwave heat source can knock out pacemakers or cook internal organs. Heating of plastic releases toxic vapors.
- **Melting.** Melting of plastic produces an even higher level of toxic vapors than mere heating does. Melting of metals may release metal fumes and/or metal condensate and/or metal dust. Where you have melting, you also have high temperatures, so be aware of burn hazards. Melting pots and extruders may also pose slipping hazards because of oil or water used in the process, plus slag on surfaces.
- **Arc discharge.** Electric blast furnaces and robotic cutters use arc discharge. High levels of ozone and vaporized metal may be present. All contactor devices, such as circuit breakers, have the potential for an unintended arc discharge.
- **X-ray.** Where weld inspections are underway, assume the presence of x-rays and give the area a wide berth.
- **Grinding or crushing.** These operations produce dust in the air and slipping hazards on the floor.
- **Mixing.** Dust, solvent vapors, and mists produce breathing and slipping hazards.

### Discussion leader duties for this session:

Identify some major hazards or hazard sources on this job site. Be prepared to talk specifically about them.

### What this Safety Talk covers:

Some types of hazards you might encounter and some processes that produce them.

### Discussion notes :

