



## Asbestos Dangers Safety Talk

Asbestos is a material that was widely used in many building materials which are still found around us today. While it is still in use in a few different materials today, much of its use was stopped in the late 1980s after research revealed the negative health effects associated with its fibers. Many people have heard that asbestos is bad for human health, but don't understand how or why this is the case.

### **What is Asbestos and Where is it Found? (source: [OSHA.gov](https://www.osha.gov))**

Asbestos is the name given to a group of naturally occurring minerals that are resistant to heat and corrosion. It has been used in products, such as insulation for pipes (steam lines for example), floor tiles, building materials, and in vehicle brakes and clutches. Some occupations whose workers have historically been exposed include construction workers, demolition crews, shipyard workers, automobile technicians, and those who worked in factories that produced asbestos-containing materials.

### **How is Asbestos Bad for Our Health?**

**The International Agency on Research for Cancer** lists all forms of asbestos as "carcinogenic to humans". A **carcinogen** is defined as any substance or agent that tends to produce a cancer. The reason this mineral is a carcinogen is because of the effects its fibers have on human lungs. Asbestos is made up of extremely small fibers that are naked to the human eye. These fibers can become airborne and stay suspended in the air. When they are breathed in the fibers can make it past our bodies' natural defenses and get lodged into the tissue of our lungs. When this occurs, scar tissue begins to form which reduces the function of our lungs. It eventually progresses to disability and death. Mesothelioma is a common deadly illness caused by exposure to these fibers. Sometimes the effects are not realized for decades after exposure.

### **Best Practices for Working Around Asbestos**

Become familiar with what building products asbestos is found in and what it looks like. Knowing what to look for is important in order to avoid disturbing these materials. There are many materials in our workplaces that still contain asbestos to this day, but it is relatively harmless until it is disturbed in a way that creates airborne fibers. Smashing, breaking up, cutting, or grinding materials that may have asbestos in it should never be done. Creating dust through sweeping is another task that should be avoided if it is thought any of the dust is from materials that contain asbestos. Any asbestos-containing materials that are beginning to break down or flake need to be properly sealed or abated by professionals.

### **Summary**

While much of the occupational exposure to asbestos in developed countries has decreased, there is still exposure all across the world to this carcinogen. Cases of mesothelioma are still being diagnosed in the United States today due to exposure decades ago. Protect yourself by not disturbing any materials that could possibly have asbestos in them.

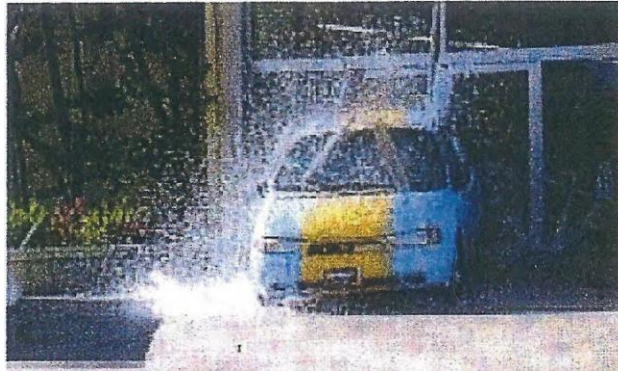




## **Backing Up (Motor Vehicle Safety)**

### **Backing Up Safety Talk**

Operating heavy equipment or a motor vehicle is inherently a hazardous task, however, backing up creates more risk for incidents to occur. **According to the National Safety Council**, backing accidents cause 500 deaths and 15,000 injuries per year. All too often unnecessary backing is responsible for injuries or property damage incidents. It is important to consider the hazards of backing and what can be done to mitigate these hazards.



### **H a z a r d s o f B a c k i n g ' ' ' - = . . . .**

With increased blind spots, backing leaves drivers and operators at more risk for error resulting in damage or injury. The most serious incident occurring due to backing is fatalities of ground personnel. OSHA states that dump trucks followed by semi-trucks and ordinary pickups are responsible for the majority of back over incidents in the past 10 years on the job. Outside of struck-by incidents involving ground personnel, there are many other hazards to consider. A few hazards include:

Less visibility/ more blind spots

#### **Fixed objects**

Moving equipment or vehicles

Uneven terrain (construction sites)

#### **Best Practices and Safeguards to Mitigate the Hazards of Backing**

The single best way to prevent backing-related incidents is to eliminate backing as much as possible. Most work areas and tasks can be setup in such a way that backing up is not necessary. Preplanning of movements is another way to eliminate unnecessary backing.

Look for pull through parking before choosing to park where your first move is backing up.

Always try to position yourself so that you can easily pull forward out of a parking spot.

If you need to back up after being in a fixed position, complete a walk around of your vehicle.

This allows you to be aware of what is in your blind spots prior to making a move.

Install backup cameras on equipment and vehicles.

Use a spotter when appropriate. If backing is necessary and there are hazards such as other ground personnel or fixed objects in the area then a spotter may be necessary. Always consider the additional hazards created when a spotter is used in a work area with moving equipment or vehicles.



Mark fixed objects so they are more visible to those operating a motor vehicle or heavy equipment in a work area.



Place protective barricades to protect critical or expensive equipment from struck-by incidents.

**Summary**

Backing can almost always be eliminated or greatly reduced when proper preplanning is used.

Elimination should always be the first choice before relying on less effective safeguards such as backup *cameras* or a *spotter*. *Discussion point: Are we doing a lot of unnecessary backing during our work tasks?*



## Bloodborne Pathogens



### Bloodborne Pathogens Toolbox Tal

Bloodborne pathogens are a huge concern for workers in certain industries, but they should also be a concern to everyone. While not everyone has the risk to be exposed to bloodborne pathogens on a daily basis at their job, there is always a chance that you could into contact with potentially infectious materials. Examples of scenarios include providing first aid after an accident or medical event or cleaning up potentially infectious materials.

#### **What are Bloodborne Pathogens?**

*(source: OSHA.gp\_v).*

Bloodborne pathogens are infectious microorganisms in human blood that can cause disease in humans. These pathogens include, but are not limited to, hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency virus (HIV).

#### **How Are Individuals Exposed to Bloodborne Pathogens?**

Exposure through a needle stick or another sharp object is a common way workers in the healthcare industry, emergency responders, and housekeepers are exposed to bloodborne pathogens. Exposure can also occur when an individual is exposed through contact with infectious materials to the nose, eyes, mouth, or broken skin.

#### **Best Practices to Prevent Exposure to Bloodborne Pathogens**

For workers in the healthcare industry, using a safer sharps device over a traditional needle can result in a huge reduction in exposure through needle sticks. Also correct handling and disposal of sharps is key to preventing exposure.

Individuals at risk for being exposed to bloodborne pathogens at their job can get a vaccine to prevent the HBV infection for free.

When dealing with bodily fluids or any potentially infectious materials, use "universal precautions". Using universal precautions means you treat all of these materials as if they contain bloodborne pathogens.

Utilizing safe work practices along with the correct PPE to protect yourself is a **larg part of using universal precautions.**

If you are exposed to potentially infectious materials, immediately flush and scrub the exposed area with warm water and soap. Notify a supervisor of the possible exposure and seek medical treatment.



## **Summary**

While you may not work an industry such as healthcare where exposure to bloodborne pathogens is a major concern, you should still be aware of how to prevent exposure. Whether at home or at work, the potential to have to provide first aid or clean up potentially infectious materials in your lifetime is high. Protecting yourself from exposure to bloodborne pathogens needs to be your first concern when dealing with potentially infectious materials.



# Carbon Monoxide Safety

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Carbon monoxide poses a serious threat to individuals both at home and on the job. According to the CDC, during 1999 to 2010, a total of 5,149 deaths from unintentional carbon monoxide poisoning occurred in the United States, an average of 430 deaths per year. CO poisoning is the leading cause of poisoning deaths in the US. Carbon monoxide is an invisible, odorless, colorless gas created when fuels (such as **gasoline**, wood, coal, natural gas, propane, oil, and methane) burn incompletely.

## **Never:**

Burn charcoal indoors

Leave your car running in a garage or any poorly ventilated area

Heat your house with your stove- this can lead to a buildup of CO in your house

Use a generator inside your house.

## **Symptoms of CO Poisoning**

Weakness a Dizziness

Nausea or vomiting a Shortness of breath

Confusion

Blurred vision

Loss of consciousness

If you or people around you are experiencing these symptoms it is important to get them and yourself out of the area. Being exposed to CO for an extended amount of time can cause irreversible brain damage and eventually death.

## **Prevention**

Avoid the situations mentioned above. Have gas-burning appliances and heaters regularly inspected by a professional to ensure there are no issues with using them in the home. Install CO alarms on each floor of a building or home. Test the alarms at least once a month and replace them according to the manufacturer's guidelines. People who are asleep or are intoxicated are very susceptible to CO poisoning and alarms are the only chance to alert them to danger before it is too late.

## **Discussion point:**

-Has anyone experienced a problem with a carbon monoxide leak?





## **Cold Stress**

### **Cold Stress Safety Talk**

Cold weather and environments pose many hazards to employees working in these conditions. A cold environment forces the body to work harder to maintain its temperature. An environment that is considered "cold" depends on the region of the country and the individual. Each unique situation needs to be analyzed and addressed individually to keep employees safe.

#### **Cold Stress Health Hazards** (*source: [www.cdc.gov](http://www.cdc.gov)*)

**Frostbite** is an injury to the body that is caused by freezing. Frostbite causes a loss of feeling and color in the affected areas. It most often affects the nose, ears, cheeks, chin, fingers, or toes. Frostbite can lead to permanent damage or amputation of the affected areas. First aid for frostbite: Get the victim into a warm area immediately. Do not walk on frostbitten toes or feet. This will cause more damage. Use warm water to warm the affected areas up. Hot water can burn the affected area.

**Trench foot** also known as immersion foot, is an injury of the feet resulting from prolonged exposure to

wet and cold conditions. Trench foot can

occur at temperatures as high as 60 degrees F if the feet are constantly wet. Wet feet lose heat 25 times faster than dry feet. To prevent heat loss, the body constricts blood vessels to shut down circulation in the feet. Skin tissue begins to die because of lack of oxygen and nutrients and due to the buildup of toxic products. First aid for trench foot: Remove any wet socks or boots. Dry feet and do not walk on them as this can cause more damage if already affected.

**Hypothermia**— When exposed to cold temperatures, your body begins to lose heat faster than it can be produced. Prolonged exposure to cold will eventually use up your body's stored energy. The result is hypothermia, or abnormally low body temperature. A body temperature that is too low affects the brain, making the victim unable to think clearly or move well. First aid for hypothermia: Alert a supervisor and get medical help on the way. Move the victim into a warm area. Warm the center of their body first—chest, neck, head, and groin area—using an electric blanket, if available; or use skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets. If the victim is not breathing begin CPR until the paramedics arrive on scene.

#### **Safe Work Practices for Cold Environments**

Eliminate or limit work as much as possible when extreme cold temperatures are present. (The ACGIH established recommendations for work in colder temperatures **that can be found here.**) Allow for acclimatization to cold environments or weather. If the weather is extremely cold for the area or time of year, you will not yet be used to it and are more susceptible to succumb to a cold related illness.

Layer up on **clothing** and keep clothes dry. It is important to remove any wet clothing or boots and put on dry items when working in a cold environment.

Take breaks in warm areas or vehicles as needed.

Drink warm beverages to help warm up your core temperature.

Monitor the condition of other workers around you. If you notice something could be wrong get them into a warm area and notify a supervisor.



**Discussion point:**





-What other hazards does the cold bring? (For example: ice, *slips/trips*, equipment problems, etc)



## **Concrete Work**

### **Concrete Work Safety Talk**

Concrete work is usually hard physical labor that presents many different hazards for the individuals who work in this field. While there needs to be a steady or even fast pace at times, it is important to take the time to recognize the hazards of the work and mitigate them. Through elimination and communication many of the related hazards to concrete work can be controlled.

### **Hazards of Concrete Work**

#### **Concrete burns**

#### **lip, it, falls**

Caught in or between incidents

Struck by incidents

Manual handling injuries

#### **Safe Work Practices**

**Concrete burns**— It is important to protect your skin from concrete. Fresh concrete is abrasive and caustic in nature. It can easily irritate and burn your skin if you do not protect yourself. Wear long pants, a long sleeve shirt, protective gloves, safety glasses and rubber boots. Covering the skin and washing off any concrete that comes into contact with the skin is the best way to protect yourself from concrete burns.

**Slips, trips, and falls**— Rebar, form work, uneven ground, and tools present many trip hazards in a concrete work area. It is important to keep the area as clear as possible to eliminate tripping hazards. Workers should take note of the work area and watch where they are stepping as they work.

**Struck by incidents**— **There are many hazards to the hands and body from hammers and other tools.** It is important to use tools correctly with the proper grip and motion. Swinging a hammer too hard or losing control of it can result in injury to yourself or another worker in the area. Another struck by hazard is the boom from a concrete pump truck or the chute of a concrete truck. Workers should be wearing hardhats when these overhead hazards are present. Utilizing a spotter to communicate with the operator of the equipment and to the workers on the ground is an efficient way to control and communicate the movements of a chute or boom.

**Manual Handling Injuries**— There is a lot of physical labor involved in concrete work. Workers need to practice safe lifting techniques or use a buddy system when lifting heavy or awkward objects. When shoveling concrete or dirt it is important to shovel an amount that is comfortable to do repeatedly. Avoid twisting the back when lifting or shoveling to avoid injuring the muscles in the back. Starting the day off with stretching or light physical labor will help prevent injuries due to muscles not being warmed up.

#### **Summary**

Concrete work presents a lot of hazards that can be difficult to mitigate against at times. Preplanning and recognizing the hazards will go a long way in preventing injuries. When workers communicate and help each other out while completing the work tasks it makes the environment safer for everyone involved. Before concrete work begins next, look at your work area and the tasks ahead. Work as a team to identify and eliminate as many hazards as possible.



**Discussion point:**

-What other hazards are present in concrete work?



## **Distracted Driving (Cellphone Use)**

## **Distracted Driving (Celiophone Use)**

### **Safety Talk**

Using cellphones or other devices while driving has proven to be deadly. Celiophone use during driving is very prevalent on our roads today. In fact, at any given time throughout the day, approximately 660,000 drivers are attempting to use their phones while behind the wheel of an automobile.

Smartphones have made it easy for us to stay connected at all times. But that can pose serious safety risks if someone decides to check his or her text messages, emails, phone calls, or any other mobile applications while driving.

### **Some Statistics about Celiophone Use and Driving:**

The National Safety Council reports that cell phone use while driving leads to 1.6 million crashes each year.

In 2013, 3,154 people were killed in distraction-related crashes.

Nearly 330,000 injuries occur each year from accidents caused by texting while driving.

1 out of every 4 car accidents in the United States is caused by texting and driving.

Texting while driving is 6x more likely to cause an accident than driving drunk.

Answering a text takes away your attention for about five seconds. Traveling at 55 mph, that's enough time to travel the length of a football field.

Texting while driving causes a 400% increase in time spent with eyes off the road.

### **Mitigation Actions:**

Put the cell phone down while driving.

Put your celiophone on airplane mode if needed to eliminate distractions as well as the urge to answer a text, call, or email alert.

If you need to text or call while driving pull over to safe area to do so.

When traveling as a passenger, urge any driver who is using their celiophone to put it down.

If there is another driver on the road who is using a phone while driving, maintain a safe distance from them and be a defensive driver. Always leave yourself an out in case of any type of accident occurs around your vehicle.

### **Discussion point:**

-Discuss your company's cell phone/electronics use policy on the job.



# Dropped Objects

## Dropped Objects Safety Talk

Objects and tools dropped from higher levels is a serious hazard for many worksites. In 2016, there were 255 workplace fatalities due to falling objects in the United States according to **the Bureau of Labor Statistics**. Furthermore, OSHA estimates that over 50,000 "struck-by a falling object" incidents occur each year on construction sites alone.

Objects as small as a bolt can cause serious injury or even death when dropped from a higher level and striking an employee working on the ground. Outside of injuries and deaths, dropped objects are responsible for a large cost to employers due to property damage incidents as well.

### Actions to Take to Prevent Dropped Object Incidents

**Eliminate the hazard:** Remove objects and tools from higher levels, scaffolding, or aerial lifts that do not need to be there. Removing objects that can pose a hazard to people working below is the best option to prevent a dropped object incident.

**Engineering controls:** Barricade zones below higher work levels to prevent personnel from walking into the line of fire of a dropped object. Install toe boards on higher work levels to make sure objects and tools cannot easily slide off an edge to a lower level. Place nets or some type of protective barrier above ground level workers if there is continuous work being performed above a work area. Another engineering control is the use of tethers or anchors for tools and objects that are being used on a higher work level. This limits the object from falling.

**EE:** Anytime there are overhead hazards present on a jobsite hardhats need to be worn. PPE is always a last line of defense. Wearing a hardhat will only limit the damage a dropped object does, not prevent it from happening. Rely on eliminating the hazard or installing engineering controls to reduce the chance of objects striking ground personnel not PPE.

Look at all work areas where a dropped object incident can happen. Situations such as using aerial lifts and working on scaffolds pose obvious hazards, but try to identify less obvious hazards. An example could be a large wrench sitting on the edge of a piece of equipment that has a mechanic working underneath or even a hot cup of coffee on top of a file cabinet. Paying attention to the smaller hazards translates to larger changes in the safety of your work site.

Discussion points:

- How can we prevent dropped object incidents on our site?
- When working in your job area today, look for hazards associated with dropped objects and report them to your supervisor or the safety department to get corrected.



## **Dump Truck Operation**

### **Dump Truck Operation Safety Talk**

Articulating dump trucks or just regular dump trucks are found on almost every single construction site and many other kinds of work sites. While the task of getting loaded, hauling material, dumping the material, and repeating sounds simple, there are a lot of associated hazards with the operation of this equipment. It is important not to be complacent as the operator of this equipment or as the ground personnel working around this equipment.

### **Injuries and Incidents Associated with Dump Truck Operation**

\* Back over incidents of people or other equipment. OSHA states that dump trucks followed by semi-trucks and ordinary pickups are responsible for the majority of back over incidents in the past 10 years on the job.

Tip over of entire truck or the bed of an articulating dump truck. Tip overs can cause serious injury to both the operator or ground personnel.

Property damage incidents. Due to the sizes of these trucks and lack of room of some job sites, there is a lot of money lost due to property damage incidents.

Contact with electrical lines.

Slips, trips, and falls. Climbing on and off of the equipment multiple times a day puts an operator at risk for falling while getting in and out of the cab.

### **Best Practices When Operating and Working Around Dump Trucks**

Avoid backing up whenever possible. Many incidents result from unnecessary backing up. Set up work areas so that operators are able to pull through instead of backing.

Use a spotter when it is necessary and safe to do so. **Spotters** need to stay out of blind spots as well as away from the truck in case of tip over.

Always dump on flat even ground. After the load is dumped pull up just enough to clear the load and put the bed down before driving off. Leaving the bed up while driving can result in contact with electrical lines as well as tip over.

Always inspect your truck thoroughly before the start of the shift.

Always wear your **seatbelt**.

Complete inspections of work areas to look for any hazards that can create conditions unsafe conditions for operation.

Complete a walk around of your truck any time before you get back into the cab. Check around the truck to ensure no person, vehicles, or materials are in your blind spots.

### **Human Performance Considerations**

It is very easy to become complacent when operating this equipment. Maintain focus while in operation of a dump truck. Stop work if you do not feel trained or comfortable with the task at hand. Not all haul roads and tasks are created equal when it comes to operating dump trucks.

Take breaks when needed and get out to stretch if **fatigue** or boredom sets in. The consequences of not paying attention behind the wheel are serious.

### **Discussion point:**





-What other hazards are there when it comes to this equipment?



## Dust(Construction)

### Dust (Construction) Safety Talk

There are many different hazards on any single construction site. Dust can be one of them. Dust can cause a variety of issues from health concerns to physical hazards for workers who are exposed to it. It is important to understand the issues dust cause can and what steps that should be taken to prevent it on site

### **Dust Health Hazards**

According to a **study published by WHO**, 'Airborne dusts are of particular concern because they are associated with classical widespread occupational lung diseases, as well as with systemic intoxications such as as lead poisoning, especially at higher levels of exposure.

There is also increasing interest in other dust-related diseases, such as cancer, asthma, allergic alveolitis and irritation, as well as a whole range of non-respiratory illnesses, which may occur at much lower exposure levels." Dust that contains crystalline silica is also a huge issue for workers on construction sites.

Crystalline silica respirable dust particles can penetrate deep into the lungs and cause disabling and sometimes fatal lung diseases, including silicosis and lung cancer, as well as kidney disease. It is never good to breathe in any excessive of amount of dust even if it is thought that no contaminants are present in the dust.

### **Other Dust Hazards**

Outside of health concerns that dust can create there are also other hazards it is responsible for. A few of these hazards include:

Injuries to **the ey**.

Dust can serve as a distraction from a work task creating more risk for injury or property damage.

Decreased visibility.

### **Best Practices to Avoid Dust Related Illnesses and Injuries**

**Eliminate the source** of the dust whether that is through engineering controls or a change in work processes.

Use collection or vacuum systems on tools that create dust to collect it at the point of operation.

Use wet methods when cutting or breaking any concrete or similar materials.

Use water as a means of suppression for the dust on roadways or in work areas.

Have trucks and equipment keep speeds down if dusty conditions are present onsite.

Stay out of areas where dust levels are high as well as avoiding being downwind from these areas.

Use proper respirators when engineering controls are not enough to protect you.



### **Summary**

Consider the hazards dust creates onsite. Realize the health issues it can create as well as the physical hazards. Elimination is the best way to protect yourself from dust or any other hazard onsite for that *matter*. *Discussion point: How can we reduce our exposure to dust at this worksite?*



## **Electrical Safety**

### **Electrical Safety (Safety Talk)**

The hazards associated with electricity affect the majority of workplaces. Whether you are in general industry, construction, or even farming electrical hazards are present. It is important to be able to recognize the electrical hazards around you and know how to mitigate them.

### **Electricity-Related Injuries**

According to the Electrical Safety Foundation International, between 1992 and 2010 there were 5,096 fatalities in the United States due to contact with electricity. There were a total of 66,748 injuries that required days away from work in the same time period due to electricity. The construction industry experiences the **ajjity of injuries and fatalities. In** these statistics they do not include injuries caused by secondary events. For example, an individual falling from a ladder and sustaining injuries due to getting shocked. If these types of injuries were included the statistics would be higher. Everyday individuals suffer some type of shock, but do not seek or require treatment for their injuries. Because of this, it is difficult to fully track the occurrence of electrical shock in the workplace.

### **Common Electrical Hazards**

Overhead powerlines

Underground powerlines

Lightning

Faulty equipment

Working on energized equipment

Improper grounding

Damaged insulation

### **Electrical Safety**

Maintain at least a 10 foot distance from 50kV overhead powerlines, add more distance as the voltage increases. Also avoid the poles themselves to avoid bringing lines to the ground.

Call your local 811 utility locator prior to digging to avoid unexpectedly striking an underground electrical line or any other utility.

Inspect all cords for damaged insulation or missing ground prongs. If either of these conditions exist get them fixed by a professional or remove them from use.

Never work on energized equipment. Always follow proper lock and tag out procedures before performing electrical work. Test the power after locking and tagging out to ensure there is no power being fed to what you are working on.

Do not operate electrical equipment in wet conditions. Also avoid having electrical components in a wet environment unless they are protected.

Secure all electrical boxes and panels. Ensure components in and around these panels are in good working condition and not missing.

### **Summary**

There are many different electrical hazards in any one workplace. It is important to understand electrical safety and respect the dangers electricity poses. Eliminate any electrical hazards in your work area to avoid an injury to yourself or another coworker.



**Discussion point:**

-What are some electrical hazards you can face today and how can you mitigate them to protect yourself?



## **Elimination of Hazards**

When discussing how to mitigate hazards in the workplace there is a hierarchy of controls that is often referred to. The safeguards we use to control hazards fall into the various levels on the hierarchy of controls. The hierarchy of controls outlines the safeguards used to mitigate a hazard from most effective to least effective. The hierarchy can have additional or less levels of controls listed depending on the version you are looking at. A common version of the hierarchy from most effective to least effective control is listed as: elimination, substitution, engineering controls, administrative controls, and PPE. Elimination should always be considered first when attempting to mitigate hazards in the workplace.

### **Relying on Lower Levels of Controls**

If employees are not trained to eliminate or use effective engineering controls to protect themselves against hazards, many of them will settle for some type of PPE to attempt to mitigate the chance they are injured. This is not an effective way to prevent injuries and accidents. Safeguards that would fall under the PPE level of the hierarchy of controls are far less effective than safeguards that eliminate or engineer out hazards. An example would be relying on a pair of gloves to **protect** yA-urfingers from a pinch point hazard instead of ensuring there is proper guarding around the pinch point. PPE should always be considered the last line of defense and employees should have this mindset as well.

### **Elimination**

Elimination of hazards is the most effective way to protect employees against injuries. However, far too often companies or individual employees do not take the time to plan out work tasks or the time to actually eliminate the hazards they are faced with. Everyday millions of workers are faced with hazards that they do not need to be exposed to.

Proper planning of work, thinking about alternative safer ways to complete a work task, and allocating the necessary resources to complete the task are some of the first steps supervisors can take to begin to eliminate hazards. At the worker level, hazard recognition and the elimination mindset is important to ensure any additional hazards are eliminated.

### **Quick Examples of Eliminating Hazards**

John Smith sees a hammer hanging half way off of a piece of equipment that is being worked on and tells the mechanic it is up there. Instead of just not trying to knock the hammer off the elevated surface the mechanic decides to remove it and put it back on the tool bench. This ensures he or anyone else will not be struck by it falling off the elevated surface.

Two cooks have cut their fingers while sharpening knives at XYZ Restaurant. The manager of the restaurant decided to make a new policy that knife sharpening is completed by a third party company and not by the cooks in the restaurant. The sharpeners are removed from the restaurant and the cooks are trained on the new policy.

ACME Construction Company is excavating and moving excessive dirt for a footer of a large warehouse. Due to excessive rain, the site conditions make it very dangerous for dump trucks to



operate. The superintendent decides to shut down dump trucks for the day and have only the dozer operators to come in to dress up the site.

**Discussion points:**

-Are there hazards that we are relying on PPE or a lower level control to mitigate the hazard instead of eliminating it completely?

-Is there any other example of eliminating hazards that you can think of?



## Excavation Safety

### Basic Excavation Safety Talk

According to the Bureau of Labor Statistics there were 250 excavation related fatalities from 2000 to 2009. Excavations are common on construction sites all across the United States, but they can be made safe by following basic safety guidelines. Some major hazards of excavations:

Cave in and collapses

Water accumulation (drowning)

#### **Falls into the excavation**

Utility strikes

Poisonous gases collecting in an excavation

#### **Ways to Mitigate Excavation Hazards**

**Follow OSHA's guidelines** for protective systems to protect employees entering the excavation.

Often times the soil being excavated is referred to "Type C which is the most hazardous for employees to enter. Excavations or trenches over 5ft should be sloped back 1.5 to 1. Trench boxes and shoring are other options to protect employees entering the excavation.

a Prohibit equipment and other employees from working above anyone working in the trench or excavation.

a Keep water out of the excavation. Use pumps to remove water from the excavation and do not allow employees to be in any excavation or trench that has water accumulating in it. Water affects the integrity of the excavation.

a Never leave the excavation open when work is not being performed in the area. Use barricades, fencing, and signage to protect both employees and anyone passing by from falling into the excavation or driving into it.

Always use the 811 service to ensure there are no utilities in proposed excavation areas or have utilities properly marked prior to digging. Look at as built drawings when they are available for the area the excavation is occurring.

When there is a chance for a hazardous atmosphere in and excavation ensure gas testing is done including any low points where gases can collect.

#### **Discussion points:**

-Has anyone experienced a trench collapse or cave-in at another job? -What are some other hazards excavation operations create onsite?

-How can we further protect ourselves from the hazards that excavation operations create?

#### **Falls (Construction Industry)**

#### **Falls (Construction Industry) Safety Talk**

Falls from heights is one of the leading causes for injuries and fatalities in the workplace and in the home. In the construction industry they are the leading cause of fatalities. Falls accounted for 359 out of 899 total deaths in construction in 2014. The standards set by OSHA for protecting workers from falls in the construction industry are some of the most commonly violated standards in the workplace. More work needs to be done by employers to ensure workers are protected while working at heights.

#### **Fall Prevention Through Plan, Provide, and Train**





OSHA uses a "plan, provide, and train" model in their fall prevention campaign that is a straightforward way to prevent falls in the workplace.

**Plan-** Plan work tasks ahead of time. Planning work tasks is especially important for high hazard tasks such as working at heights. First look at eliminating any work at heights. If possible, eliminate work at heights. If elimination is not possible then plan what you will need for performing the work at heights. Plan out what equipment, tools, personnel, and materials you will need. After looking at these items, look at what safety equipment, PPE, and training will be needed to safely complete the task.

**Provide-** Provide all necessary safety equipment and PPE when the work height exceeds six feet and engineering controls such as guardrails are not in place. Outside of equipment and PPE, provide the employees with the proper amount of time it takes to setup the job as well complete the work.

**Train-** Properly train employees to not only know how to use the safety equipment that is provided but also in hazard recognition. It is important that the employees are able to recognize hazards and understand how to properly address them before starting or continuing work. Train employees to first think about how to eliminate dangerous work tasks or the hazards that accompany working at heights.

### **Summary**

Compliance with OSHA standards should only be the start of working at heights safely.

Following a well thought out plan, providing all the necessary resources, and training employees can help to prevent injuries and fatalities due to falls.

### **Discussion point;**

-What are ways we can eliminate hazards during our work tasks that require working at heights?



## **Falls on the Same Level**

### **Falls on the Same Level Safety Talk**

Every single year slip, trip, and fall injuries are some of the most common and costly injuries that occur in the workplace. Many people probably assume that falls from heights cost companies more every year than falls on the same level, but this is not the case. According to the **2016 Liberty Mutual's Workplace Safety Index**, falls from heights were the third highest cause of disabling injuries at a cost to employers of \$5.4 billion. Falls on the same level came in higher at number two with a cost of \$10.1 billion.

### **Causes of Falls on the Same Level**

Falls on the same level are defined as a slip, trip, or fall in which the worker either impacts an object or the floor at the same level at which they are standing. Often times, slip and trip hazards are the cause for these types of incidents. The exact hazards that cause these incidents can vary greatly though depending on the workplace. Here are some common causes:

Oily or wet walking surfaces

Ice/ snow in colder climates

Uneven terrain

Cracks or chips in a walking surface

Changes in elevation

Objects on floor

Cords

Rugs

Improper or damaged footwear

### **Best Practices to Prevent these Incidents**

a Practice **good housekeeping** and **organization of work areas**. Many of these hazards, especially trip hazards, can be eliminated solely through keeping a tidy work area.

Do not be distracted when walking through work areas. Looking at your phone or something else can cause you to miss hazards that can lead to a slip or trip.

Ensure that you have proper footwear for your work and that it is in good condition.

Clean footwear of any **mud**, snow, ice, or moisture when possible when coming from outside to inside.

Ensure there is proper lighting in work areas and that any changes in elevation are brightly marked.

### **Summary**

Slips, trips, and falls are responsible for a countless amount of injuries in the workplace every single year. Take time every day to evaluate your work area for hazards that can cause these injuries. It is important to eliminate as many as the hazards that cause these incidents as possible in your workplace. *Discussion point: What are some other causes for falls from the same level in our workplace?*



## **Fatal Four Hazards (Construction)**

### **The "Fatal Four" Hazards in the Construction Industry Safety Talk**

There is inherent risk construction workers face every day at work. Construction is a dangerous field full of hazards. Despite the wide ranging hazards construction workers face, there are four types of hazards that are responsible for the majority of fatalities in the construction industry. These four types of hazards are falls, struck-by, caught-in between, and electrocution.

#### **Falls**

In 2014, **falls accounted for about 40% of all fatalities in the construction industry.** OSHA requires employees to be tied off during work at six foot of height or greater, but there are many companies that do not protect their workers from falls. The majority of employees who died due to a fall did not have any fall protection on or the fall protection was inadequate.

#### **Electrocutions**

Electrocutions followed falls in cause of fatalities with 8.2% of all fatalities in the construction industry in 2014. There are multiple causes of electrocution fatalities. The common types of electrocution fatalities include direct contact with an energized powerline, direct contact with energized equipment, contact between a boom and energized powerline, damaged equipment, and indirect contact with an energized powerline.

#### **Struck-By**

Struck-by incidents were responsible for 8.1% of all fatalities in the construction industry in 2014. There are many struck-by hazards on every construction site that can severely injure or kill workers on any given day. Common struck-by incidents include struck-by moving equipment, struck-by falling objects, and struck-by flying debris.

#### **Caught-In/Between**

The last of the fatal four hazards in the construction industry is caught-in/between incidents. These incidents caused 4.3% of all fatalities in the construction industry in 2014. OSHA defines caught-in/between hazards as: Injuries resulting from a person being squeezed, caught, crushed, pinched, or compressed between two or more objects, or between parts of an object. Two examples of caught-in/between incidents include excavation cave-ins and being pulled into moving equipment such as a conveyer.

#### **Summary**

This was just a quick overview and examples of the fatal four hazards in the construction industry. It is important that construction workers understand that these types of hazards are responsible for the majority of injuries and fatalities in their field of work. In your work today evaluate your work task and work area for these hazards.



## Fire Extinguishers Use and Inspection

### Fire Extinguisher Use and Inspection Safety Talk

Fire extinguishers can be an important tool in preventing a small fire from growing larger. However, they should not be used to combat large or rapidly spreading fires. The most important thing to do during a fire is to get yourself to safety then call the proper authorities to combat the fire. A building and the property inside is not worth putting yourself or anyone at risk trying to put it out with a fire extinguisher. It is important to understand how to use a fire extinguisher and the limitations they have.

**\*EMEMBEiP WE**

*P 4 5 . M E w o  
t E E x c u s c u E , a*

**Puli**

**A Aim the stream towards the base of the fire. S Squeeze the lever  
slowly and evenly.**

**S** 4

**RA.S.S. Method**

The easiest way to remember how to use a fire extinguisher is to follow the P.A.S.S. method. The PASS acronym was developed to allow people to remember the basic four steps to properly using a fire extinguisher.

**P- Pull.** Pull the pin. Hold the extinguisher away and release the locking mechanism.

**A- Aim.** Aim the stream towards the base of the fire. Spraying the flames will not put the fire out.

**S- Squeeze.** Squeeze the lever slowly and evenly. Pulling the lever too fast may shoot the stream from your target wasting the valuable firefighting agent.

**S- Sweep.** Sweep the nozzle side to side to combat the fire. **Fire Extinguisher Limitations**

A dry chemical fire extinguisher such as the common red "ABC" extinguishers will reach a distance between 5 and 20 feet. It is important to be familiar with the models used in your work areas and the effective distance they can be used for.

A 101b to 201b dry chemical fire extinguisher will last anywhere from 10 to 25 seconds. Again, this depends on the model and weight you are using.

Fire extinguishers are only designed to fight small fires. A rule of thumb a lot of professionals use is the size of the fire should not be any larger than the size of a small trash can.

**Fire Extinguisher Inspection Tips**



Extinguishers should be periodically checked every 30 days. There should be a formal check of all fire extinguishers onsite annually. These inspections should be documented.

Ensure the pressure is okay when inspecting a fire extinguisher. There is a gauge that has an arrow that should be in the green portion of the gauge. If the arrow is in the red the fire extinguisher needs to be tagged out of service until recharged.

Check to make sure the pin is still in place. Often times the pin is bumped out of place leaving the chance of accidental discharge occurring.

Look for rust on the container and ensure that the label is in good readable condition.

### **Summary**

It is important to know more than just where the fire extinguishers are located in your work area. Make sure you know how to properly use them in case the time comes where you need to extinguish a fire.

Always make sure the fire extinguishers in your work areas are in good condition through thorough inspections.

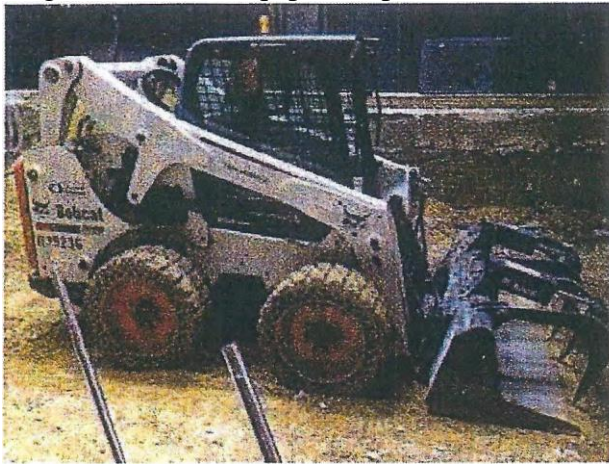
**Get the free P.A.S.S. method safety poster here!**



## Ground Personnel and Mobile Equipment

### Ground Personnel and Mobile Equipment (Construction) Safety Talk

Construction sites pose many dangers for the individuals who have to walk through them. Trip hazards, dust, slick conditions, and **ripped objects** are just a few of the many possible hazards present for those individuals walking around a construction site. A major hazard that can result in serious injury or fatalities for workers on the ground is mobile equipment operations.



### **M**obile Equipment Hazards for

#### Ground Personnel

Most insurance companies do not consider vehicles such as work trucks as "mobile equipment" for their purposes, but in this safety talk we will lump in personal vehicles with other mobile equipment such as tractors and skid steer loaders. While property damage incidents are very common on construction sites due to mobile equipment operations, personal injuries to ground personnel are the most serious outcome of these operations. Mobile equipment operation can easily result in struck-by incidents, caught-in or between incidents, crushed-by incidents as well as run over incidents involving ground personnel on construction sites. It is necessary to implement multiple safeguards to prevent these types of incidents from occurring.

#### **Best Practices to Avoid Incidents Between Mobile Equipment and Ground Personnel**

There are many factors that will affect what can be done to eliminate or mitigate the hazards relating to mobile equipment operations. Here are some general best practices that can be applied at most worksites:

Eliminate mobile equipment operation when possible. Obviously the less movement of this equipment equates to less chance an incident can occur. Elimination can be achieved through redesign of work areas as well as better preplanning of work tasks.

Eliminate **backing** as much as possible during mobile equipment operations. Backing is much more likely to result in an incident in comparison to moving forward.

Separate ground personnel work areas or walking paths from mobile equipment operations whenever possible.



Remove ground personnel from a work area temporarily if mobile equipment has to complete work in the area.

Utilize **spotters** when it is safe to do so to communicate with the operators of mobile equipment.

### **Summary**

Mobile equipment is necessary to get work done. The construction industry especially utilizes mobile equipment to complete work tasks efficiently. It is critical for ground personnel to avoid complacency when working in the same area as heavy equipment and vehicles. Consider utilizing the best practices mentioned here in conjunction with specific measures for your worksite and work tasks. *Discussion point: What steps can we take today to make it safer for the ground personnel working around mobile equipment?*



## Hand Safety

### Hand Injury and Prevention Safety

We use our hands for virtually every task we do at work and because of this fact they are commonly injured on the job. Keeping our hands and fingers out of harm's way at work is critical. A serious injury to an individual's hands or fingers results in a huge negative impact on their ability to work and overall quality of life. While gloves are the most common form of PPE found in the workplace, hand injuries are still the second leading type of injury on the job.

#### **Hand Injury Statistics** (source: [www.bls.gov](http://www.bls.gov))

There are 110,000 lost time cases due to hand injuries annually.

1 million workers are treated in an ER for hand injuries annually.

70% of workers who experienced a hand injury were not wearing gloves.

Another 30% of victims had gloves on, but they were damaged or inadequate for the work task.

#### **Three Common Types of Hand Injuries**

Lacerations are the most common type of hand injuries. Lacerations are due to sharp objects or

tools. Often inadequate gloves are used during an

activity that involves a sharp tool. A glove with Kevlar is effective in protecting the hand against a cutting or slicing motion. A straight stab motion can still easily penetrate these gloves. Caution needs to be used when using any tool that can easily penetrate the skin.

Crush injuries are usually due to employees placing their hands in the line of fire between two objects or in a rotating piece of equipment. **Pinch points** on equipment or tools also commonly lead to crush injuries.

Fractures occur when there is a sudden blow to the bones in the fingers or hands. Motor vehicle accidents often cause fractures to the hands. Another common cause of fractures is an individual extending out their hands to catch themselves from a fall.

#### **Safe Work Practices**

Use tools to remove your hands from the line of fire when doing a work task that could result in injury to your hands or fingers. Using tools such as push sticks when using a table saw is an example that removes your hands from the line of fire.

Avoid using fixed open blade knives. There are **safety knives that limit the length of the blade posed**. They also have a safety feature that retracts the blade when pressure is let off the handle or switch that controls the blade.

Never put your hand in an area where you cannot see it.

Always wear the proper **gloves** for whatever work task you are doing. Understand the limitations of your gloves and what work tasks they are appropriate for.

Never work on an energized piece of equipment. Lock and tag out the equipment to ensure there will not be unintentional start up while you are working on the equipment.

#### **Discussion points:**

What are some of the biggest hazards to our hands onsite?





-Next time you are doing a simple task at home such as setting the table for dinner, getting ready in the morning, or cleaning- try doing the task with one or two less fingers. It sounds like a silly exercise, but this can help put into perspective how hard it would be to complete tasks without some of our fingers. It is easy to take for granted our health and abilities when we have had them for so long.

*Check out **Atlantic Training's resources for hand safety** for your employees! By purchasing their training through our affiliate link we receive a small commission through no extra cost to you. This allows us to continue creating free content for the site!*



# Heat Stress

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Heat stress can be a killer on the jobsite. Deaths from heat-related issues between 2005 and 2009 rose to higher rates than any others observed during any other 5-year periods in the past 35 years. Outside of the direct consequences such as heat stroke, heat stress can cause incidents due to loss of focus or excessive fatigue on the job.

## Heat-Related Illnesses

(Source: [www.WebMD.com](http://www.WebMD.com))

**Heat Cramp:** Are painful, brief muscle cramps. Muscles may spasm or jerk involuntarily. Heat cramps can occur during exercise or work in a hot environment or begin a few hours later.

**Heat Exhaustion:** There are two types of heat exhaustion. 1. Water depletion- Signs include excessive thirst, weakness, headache, and loss of consciousness. 2. Salt depletion- Signs include nausea and vomiting, muscle cramps, and dizziness.

**Heat Stroke—** **Heat stroke is the most serious heat-related illness.** Heat stroke can kill or cause damage to the brain and other internal organs. Heat stroke results from prolonged exposure to high temperatures - usually in combination with dehydration - which leads to failure of the body's temperature control system.

## Medical Response

If anyone is displaying symptoms of a heat-related illness, it is important to get them the proper medical attention they need before the problem turns into heat stroke. For people displaying symptoms of heat exhaustion, have them stop work and get to a shaded area. The affected person needs to consume water or electrolyte replacing sports drinks. The person should not return to work the rest of the day.

Anyone who is displaying symptoms of a heat stroke, immediate medical attention is needed. Delaying calling 911 could result in irreversible injuries or death. Symptoms of heat stroke include fainting, throbbing headache, dizziness, lack of sweating, vomiting, or behavioral changes such as confusion. The person should be cooled down immediately in a shaded area or indoors. DO NOT put ice cold water on the victim as this can cause shock. Use cool water to lower the body temperature of the victim. Remove any unnecessary clothing and fan the victim until medics arrive.

## Safe Work Practices to Prevent Heat-Related Illnesses

Allow for acclimatization to a hot environment before any strenuous work begins. It takes roughly two weeks for an individual to acclimate to a hot environment.

Drink plenty of water during strenuous activities especially in hot environments. An average person sweats between roughly 27 oz. to 47 oz. per hour during intense labor. To put that amount into perspective, an average water bottle holds 16.9oz.

Take frequent breaks in the shade or indoors where there is AC.

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Take heat stress seriously. Know the signs and symptoms of heat stress. have a plan to get the proper medical attention for any individual displaying symptoms of heat stress. Dealing with heat stroke



especially, it may mean the difference between life and death.



## **HOUSEKEEPING**

### **Why is it important?**

Companies that hold general housekeeping of work areas to high standard usually have a better safety culture than those companies who do not. Housekeeping is an important part of a robust safety program. Poor housekeeping promotes inefficiency as well as leads to injuries and property loss.

### **Poor housekeeping leads to:**

**Slip, trip, and fall injuries**

Property damage incidents involving moving equipment or vehicles

Caught in-between injuries

Sprains/ strains due to unnecessary lifting and handling of objects that are in the way

### **Ways to improve the general housekeeping in your work area:**

Create **down yards** for equipment and tools when out in the field. At the end of the task, return tools and equipment to their proper locations such as a workshop or toolbox.

Designate walking areas or paths for employees in work area and keep equipment and objects out of that path.

Designate parking areas within specific work areas to avoid clutter and vehicles or equipment striking objects around them.

Barricade or place orange fencing around objects or areas where equipment, vehicles, or people should not be. This also helps control points of access into work areas.

Keep tools and equipment clean. Heavy equipment should not have loose cargo such as trash in the cab. These items can be a distraction or interfere with the controls.

### **Summary**

Paying attention to the small details translates to bigger changes in the safety culture in the field. Not only does good housekeeping help to lower property loss incidents as well as injuries, but it also shows the maturity of a safety culture within a company. Many of us work for a larger contractor or client in the construction industry and when your work areas are always clean and tidy it shows responsibility of your company to address the small issues onsite. Overlooking simple issues such as housekeeping can lead to big problems with injuries and property loss.

### **Discussion points:**

-How can we improve the housekeeping in our work areas?

-How will improving the housekeeping in our work areas improve our work?

**Check out Atlantic Training's products relating to housekeeping in the workplace. Any purchases made through our links earns us a small commission at no *extra* cost to you. This allows us to continue to create free content on the site.**



## Hydration: The Importance of Water The Importance of Water Safety Talk

Water is one of the most important substances on Earth. Without water there would be no life on Earth. All plants, animals, and people need water to survive. Water serves very important purposes to our bodies and our bodily functions. Some of which you may not even be aware of.

### **Interesting Facts Regarding Water's Role to Our Bodies**

Water comprises more than 60% of our body weight.

a Lack of water is the #1 trigger for **daytime fatigue**.

A 2% drop in water level of the body can spur problems with short term memory.

Water naturally cleanses the body of toxins.

Water regulates the body's cooling system.

Water acts as a lubricant and cushion to our joints.

### **Hydration Tips**

It is recommended to drink at least 50oz to 64oz of water a day depending on what source you refer to. That is about three to four regular sized water bottles a day. This amount is a

minimum amount to shoot for; you may need even more water than that. Many people do not realize how little water they actually drink. Pay attention to how much you drink today and add to it if needed.

Do not wait until you are thirsty to drink water. By time your body tells you that you are thirsty you are already starting to get dehydrated.

a Other beverages such as soda or coffee steal water from your body and make you more dehydrated. Limit these types of drinks throughout the day.

a Your urine can serve as an indicator whether you are hydrated or not. If you urine is clear or pale and you are using the restroom regularly, you are probably hydrated. If you urine is dark and you are visiting the restroom less frequently, you need to drink more water. While you should not solely rely on this indicator, it can be helpful in gauging whether or not you need to drink more water.

### **Discussion point:**

-How many people think they drink at least 3 to 4 water bottles worth of water a day?



## Hydrogen Sulfide

### Hydrogen Sulfide (H<sub>2</sub>S) Safety Talk

Hydrogen sulfide, also known as H<sub>2</sub>S, is a gas found both in nature and also produced by many industrial processes. Hydrogen sulfide is a colorless, flammable, extremely hazardous gas with a "rotten egg" smell. There are many dangers **if exposed** to too much H<sub>2</sub>S gas in a short time (acute exposure) or a lesser amount over a long time (chronic exposure). Many workers have been overcome and killed in environments that have had a large amount of H<sub>2</sub>S gas present in them. It is important to be familiar with the characteristics of hydrogen sulfide and the effects it can have on your health.

H<sub>2</sub>S gas is heavier than air and often collects in low areas such as basements, vaults, or pits. While the gas has the smell of rotten eggs at low concentrations, your sense of smell is effected at higher concentrations and should not be relied on. When hydrogen sulfide is burned it releases toxic gases and vapors such sulfur dioxide. Concentrations as low as 2 to 5 parts per million (ppm) can start to cause health issues if workers are exposed to the gas for an extended period of time.

### Hydrogen Sulfide Health Hazards

It is a chemical asphyxiant that interferes with oxygen utilization and the central nervous system.

It irritates eyes, nose, and throat at low concentrations.

It causes dizziness, nausea, and vomiting at moderate exposures.

Rapid loss of consciousness, coma, and death can occur at high exposure levels.

### Safe Work Practices for Hydrogen Sulfide Hazards (*source: [www.osha.gov](http://www.osha.gov)*)

Employers should always clearly mark areas where H<sub>2</sub>S gas may be present. All workers should be trained on H<sub>2</sub>S gas and what processes in their work areas produce this gas.

Any low lying areas or confined spaces should always be tested before any work begins for toxic gases including H<sub>2</sub>S. Some facilities should have permanent fixed alarm systems to alert workers if there is increased amount of H<sub>2</sub>S gas in their areas.

If gas testing shows that H<sub>2</sub>S gas is present and cannot be fully removed then proper continuous ventilation needs to be done to make the work area safe.

For concentrations less than 100ppm a full-face respirator should be used in conjunction with the appropriate air purifying cartridge to protect the worker.

A concentration over 100ppm is considered immediately dangerous to life and health. These environments should be avoided. If it is absolutely necessary to enter to complete work then an air supplying or air on demand system needs to be used

### Discussion point:

-Where can we be exposed to hydrogen sulfide gas in our jobs?



## Knowing What to do in an Emergency

### Knowing What to Do in an Emergency (Safety Talk)

When dealing with workplace safety, most of the focus is given to preventing injuries and incidents. While being proactive in preventing bad things from occurring is critical to an effective safety program, time also needs spent discussing what to do in different emergency situations if one does occur. No one wants to think of something bad happening at work, but when it does occur you need to be prepared for it.

### **Emergency Situations in the Workplace**

There are many different kinds of emergency situations that can occur in a workplace. Depending on factors such as the work being performed, workplace setup, the geographical area the business is located in, etc. will impact what kind of emergencies could occur. Some common types of emergency situations that should be considered when discussing emergency response:

Medical emergencies such as **heart attack** or stroke

Caught-in or between moving equipment

Electrical-related incidents

Fires

### **Weather-related disasters**

### **Emergency Response**

Obviously every type of emergency will have a different response and even the same types of emergencies may have completely different responses depending on the situation. Some things to consider when discussing emergency response in the workplace:

Before helping a victim of an incident or before assisting in an emergency, always ensure it is safe for you to do so. Sometimes the best plan is just to get to safety. An event such as a failed confined space rescue resulting in multiple fatalities is an example of making a bad situation worse by trying to help.

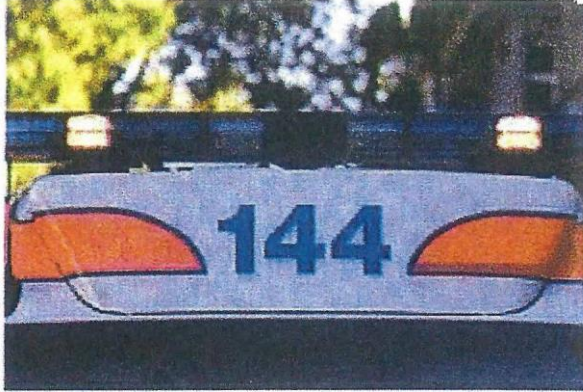
Do not overreact. Rushing or making poor choices when dealing with an emergency can result in more victims or create a worse situation in general.

Understand your company's policies and procedures regarding specific weather emergencies such as a tornado or flood.

Know where emergency meeting points are at your worksite. Also be familiar with the address of where you're at on a jobsite or for your workplace. If you have to call 911, one of the first questions they ask is-"Where are you located?".

Know where emergency response equipment is located onsite and how to use it. Also be familiar with emergency shutoff switches on equipment or machinery.

Know the signs and symptoms of common medical emergencies or medical emergencies that can occur in your workplace. Knowing what to look for can make the difference in whether someone gets the medical attention they need or not.



## Summary

Knowing what to do in an emergency is just as important as knowing how to prevent them from happening in the first place. All too often bad situations are made worse when individuals are ill prepared for the bad things that can happen- whether that is at work or home. Take company policies and procedures regarding emergency response seriously. Keeping calm and knowing how to respond to an emergency may save your life or those around you one day.





## **Ladder Safety**

### **Ladder Safety Talk**

Ladders are an essential tool on many jobsites and at home across the United States. Because of their wide spread use and the inherent danger of working at heights, they are responsible for a large number of injuries both on and off the job. The U.S. Consumer Product Safety Commission reports there are an average of 165,000 injuries at home every year and the COG reported there was over 50,000 injuries on the job resulting from ladders in 2011.

### **Ladder Injury Facts and Statistics**

In 2011, 113 workers died while using a ladder.

43% of **fatal falls** on the job from 2001 to 2011 involved a ladder.

According to the BLS 50% of all ladder-related injuries occurred when the individual was climbing with objects in their hands.

Fractures are the most common type of ladder-related injury.

### **Common Causes of Ladder Falls**

Unsafe actions when using ladders— People often do not follow the safe work practices when using ladders. Standing on the top step of a ladder is a common and deadly practice. Other actions like climbing up a ladder carrying objects, leaning to reach for something, and attempting to move the ladder while still on it are some common practices that lead to injuries.

No inspection prior to use— Problems such as cracked or broken rungs, loose bolts, non-approved fixes, etc. lead to injuries.

Not using the correct ladder— People will often use the same ladder for many different jobs and situations. Choosing a ladder that is too short for the job is often a problem that leads to an injury. Also choosing a ladder not stable enough for the ground conditions or one that is not rated properly for the job are issues that can lead to injury.

### **Ladder Safe Work Practices**

Never stand on the top step if it is not designed to be a step.

Do not lean or reach to grab something while on a ladder. Climb down and reposition the ladder closer to the object or area you were trying to reach.

Do not carry objects up the ladder in your hands. Use a tool belt or a retrieval system to bring tools up to you once you have climbed the ladder. Always have your hands free when climbing so you are able to have three points of contact with the ladder.

Always inspect a ladder before use. If there is any problems with it, immediately tag it out of use and find a properly functioning ladder.

Use the correct ladder for the job. There are many types of ladders to work in different situations. Check weight ratings to ensure you do not overload the ladder during use.

Always secure the ladder. Make sure the ladder is stable on the ground before climbing up. Tie off the ladder to the structure you are next to. Have someone hold the ladder to secure it.

### **Discussion point:**



-Does anyone have a personal story about someone they know who was injured while using a ladder?



## **Lead Paint**

### **Dangers of Lead Paint Safety Talk**

Many people have at least heard that old paint can contain lead that can be harmful, but many do not know how or why it is. The lead found in old paint is considered inorganic lead. Inorganic lead compounds are classified as "probably carcinogenic to humans" by the **International Agency f Research on Cancer** also known as IARC. A **carcinogen** is defined as any substance or agent that tends to produce a cancer.

### **What is Lead and How Are We Exposed?**

The **CDC defines lead** as, "Lead is a soft, blue-gray metal. Lead occurs naturally, but much of its presence in the environment stems from its historic use in paint and gasoline and from ongoing or historic mining and commercial operations." Lead is found in abundance in our environment and because of this it is traceable in most people's bodies today. The most common route of exposure occurs primarily through ingestion and the second common route is inhalation. Deteriorating lead paint is the biggest source of elevated levels of lead in the blood in children.

### **The Effects of Overexposure to Lead (source: [CDC.gov](http://www.cdc.gov))**

Lead toxicity can affect every organ system. It is impossible to list off all of the effects here.

Some quick facts about the effects on health due to lead toxicity:

The nervous system is the most sensitive target

Can cause depression and mood changes

Inhibits the body's ability to make hemoglobin

Causes severe cramping abdominal pain in cases of serious overexposure

Can contribute to hypertension

Creates more adverse pregnancy outcomes

Visit the CDC website for a list of all possible health effects of lead exposure.

### **Best Practices to Reduce Exposure to Lead Paint**

Lead-based paints were banned for use in housing in 1978, but are still remain today in older homes and in workplaces. Some basic best practices to reduce exposure to lead from old paint:

Assume paint in older homes or older workplaces contain lead unless tests show otherwise.

Have lead paint removed or sealed by a professional especially if it is flaking or chipping.

Do not disturb old paint. Creating dust or breaking off flakes can increase the likelihood of the lead being inhaled or ingested.

Clean children's toys and play areas often.

Wet mop floors and wipe down window sills. Lead dust can collect on these areas.

### **Summary**

It is important to understand where lead is found in our environment and the health effects related to overexposure. Often times many people develop an illness, but it is misdiagnosed by a doctor or disregarded by the individual altogether. If you suspect you or a loved one is suffering from lead



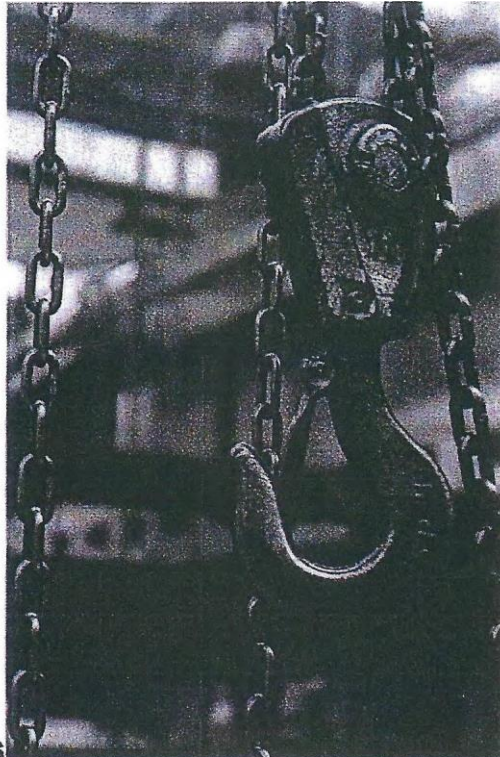
poisoning talk with your doctor. Blood tests are available that can determine the amount of lead in a person's blood.



## Lifting and Rigging

### Lifting and Rigging Safety Talk

Lifting and rigging work tasks are considered a high hazard task by many companies. There are a lot of associated hazards that accompany lifting any loads with cranes or equipment. It is important to not only understand proper rigging techniques, but also the other hazards that accompany this type of work task.



### Lifting and Rigging Incidents

The first type of incident that comes to someone's mind regarding lifting and rigging is some type of breakage of a sling, wire rope, or chain resulting in a dropped load. While these type of incidents usually have the most severe consequences, there are often many other types of less severe incidents that cause the majority of injuries or property damage. Some of the other injuries and incidents that occur are sprains, falls, crush injuries, electrocutions, and struck-by incidents just to name a few. Hazards such as swinging loads, manual handling of heavy rigging, holding on to tag lines, moving equipment, **pinch points**, working on elevated surfaces, trip hazards, slippery surfaces, etc. can all be present during lifting operations.

#### **Safe Work Practices**

Anyone in a work area where a lift is being performed should be properly trained on the work scope, hazards, and mitigations of the task.

Have a written lift plan. A lift plan ensures the desired rigging, angles of equipment, lifting capacities, etc. are thought about prior to the start of the lift.



Plan the travel area and potential lines of fire prior to the lift. This helps to avoid striking other objects or having to moving objects or equipment after the load is already is in the air. Inspect all rigging prior to using it for a lift. Continuously check the integrity of the equipment throughout the day if there are multiple lifts.



AU rigging should be properly stored after lifting operations are complete. Proper storage helps prevent the rigging from being damaged.

Keep away from the load. Always strive to use tag lines or push sticks to ensure space from the load.

**Summary**

This is not an exhaustive list of all the hazards and safe work practices when completing lifting and rigging activities. Proper planning and forethought is important to eliminate hazards and avoid incidents. Be aware of the hazards that affect you and your coworkers on each unique lift that is completed.

**Discussion point:**

-What are other hazards when we are completing lifting and rigging activities onsite?



## **Manual Handling Injury Prevention**

### **Manual Handling Safety Talk**

There are many injuries on the job caused by individuals moving objects by hand. The Bureau of Labor Statistics reported that strains and sprains are the most prevalent type of injury on the job. While these types of injuries can be hard to prevent it is possible through taking the right steps. Many injuries are suffered due to individuals who are willing to take risks while completing lifts.

### **Types of Injuries Sustained While Completing Lifts**

Strains

Sprains

Repetitive motion injuries

Pinch point injuries

Struck-by injuries

**Sfigg, tripa, falls**

### **Best Practices for Manual Handling**

The single best protection you can take from getting an injury while completing a lift is to eliminate lifting by hand! Elimination should always be the first consideration while discussing mitigating hazards on the job. Much of the manual handling on the job can be completely eliminated through proper planning, engineering controls, or use a piece of equipment to complete the lift. When setting up any job area or placing an object down, the next person who has to move the object should be thought of. If the object is awkward or heavy and there is no room for a piece of equipment to be able to lift it then someone will have to end up handling the object again. These situations can lead to injury. Properly plan out work tasks so that objects do not need to be repeatedly lifted and moved. Each time a lift is made there is chance for injury.

A best practice is to establish a weight limit of what one person or a team of people are allowed to lift and carry on a work site. Consider a cut-off weight before mechanical means need to be used to lift the object. For example some companies have the policy that no single person can lift an object heavier than 50lbs and a team of people cannot lift anything over 100lbs. While you may be able to handle these weights, it is good to have an established point where manual handling is no longer an option.

### **Summary**

Injuries due to manual handling can be hard to prevent, that is why eliminating as many of these lifts as possible is important. Plan out your work tasks and your work areas to reduce the chance of manual handling injuries. It is important to know your limits and not to exceed them. Even if you are strong it is easy to injure back muscles due to lifting awkward or heavy objects.

### **Discussion point:**

-Are we taking unnecessary risks while lifting objects?





## **Introduction**

### **Weather Hazards**

Weather can create many hazards and slow down production for construction sites and other work sites that are outdoors. This is especially true when rain creates excessively muddy conditions. There are many different hazards to consider if work is going to take place in muddy conditions.

### **Hazards and Injuries Created by Muddy Work Areas**

Equipment vehicle crashes or over turn. Traction and control is greatly reduced when operating on mud.

Slips, trips, and falls. Walking around or getting into equipment in the mud can lead to slipping or falling.

Sprains! strains. Many people will pull muscles due to getting their boots stuck in the mud and trying to yank them out. Also, falling over with your feet stuck in an awkward position can lead to suffering a sprain or strain injury.

### **Best Practices When Working in Mud**

The single **best practice is eliminating** work in excessively muddy areas until it clears up or work areas are addressed.

Dress up areas with equipment such as a bull dozer to get down to more solid ground.

If work is continuing in an area that is muddy stop when needed to dress it up again. It takes less time to fix an area to make it safer than it does to pull out stuck vehicles or equipment that tips over.

Never drive into excessively muddy areas or down slick slopes. Getting stuck creates more hazards due to other personnel having to come into the field to pull out your vehicle or equipment.

If you get your foot stuck in the mud, slowly work it out by moving your foot back and forth. Yanking on it is not very effective and can result in injury.

Maintain clean steps on equipment and remove mud off of your boots before climbing up and down equipment. Always use three points of contact.

### **Summary**

While these safeguards seem like common sense, many injuries and property damage incidents occur every year due to poor site conditions. Use your best judgement when working in the mud. Do not put yourself in a situation where you make a bad situation worse. Always adjust work plans to site conditions.

### **Discussion point:**

-What other hazards or considerations do we need to take into account when dealing with muddy site conditions?



# Silica Dust

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There has been much discussion about silica dust in the past few years. OSHA has issued a regulation to help protect workers from overexposure to this dust. It has been largely unregulated in the past and because of this, many workers have been faced with overexposure to silica dust. The CDC reports that an estimated 1.7 million U.S. workers are exposed to silica dust on the job. **OSHA issued its final rule for silica dust** on June 23, 2016, but employers have between a year and five years to be fully compliant with the standard depending on the industry. The construction industry has to be fully compliant with the standard in September of 2017, general industry/ maritime has until June of 2018, and hydraulic fracturing has until June of 2018 except for engineering control which has a compliance date of June 2021.



## What is Silica Dust and Where is it Found?

(source: [OSHA.gov](http://www.OSHA.gov))

Crystalline silica is an important industrial material found abundantly in the earth's crust. Quartz, the most common form of silica, is a component of sand, stone, rock, concrete, brick, block, and mortar. Materials containing quartz are found in a wide variety of workplaces. Common industries and operation where crystalline silica is found include: construction, glass products, concrete products, foundries, cut stone products, railroad track maintenance, abrasive blasting, and many more. Occupational exposure to respirable crystalline silica occurs when cutting, sawing, drilling, and crushing of concrete, brick, ceramic tiles, rock, and stone products.

## Health Effects and Illnesses Caused by Silica Dust

Silica dust is hazardous when very small respirable particles are inhaled. These respirable dust particles can penetrate deep into the lungs and cause disabling and sometimes fatal lung diseases, including silicosis and lung cancer, as well as kidney disease. Crystalline silica is I of 119 agents listed as "carcinogenic to humans" by the **International Agene of Research on Cancer** also known as IARC.

## Best Practices in Reducing Exposure to Silica Dust

**Eliminate** the source of the dust whether that is through engineering controls or a change in work processes.



Use collection or vacuum systems to collect dust at the point of operation to avoid suspended the dust in the air.

Use wet methods when cutting or breaking any concrete or similar materials.

Use water as a means of suppression for the dust on roadways or in work areas.

Stay out of areas where silica dust levels are high as well as avoiding being downwind from these areas.

*Use proper respirators when engineering controls are not enough to protect you.*

### **Summary**

*It is important to understand the hazards that silica dust creates for the workers who are exposed to it.*

While the regulation for silica dust is new, the hazards and health consequences have been known for decades. Use engineering controls and other effective safeguards to reduce the amount of this dust in the air to reduce overexposure.

*Note: Much of this talk was taken straight from OSHA. Sources are listed in talk.*



## Stopping Work

### Stopping Work Safety Talk

When there are hazards present or some other issue that interferes with being able to perform a work task safely then it is important to feel comfortable to stop the work until it is safe to continue. Many companies stress the importance of being able to stop work without punishment, but there are many employees who do not feel comfortable doing this for many reasons.

#### Reasons Why Individuals are Afraid to Stop

Afraid of punishment from supervisors

Want to avoid conflict with others

Do not want to be seen as scared or a "snitch"

Do not want to slow work down

It is easier said than done to stop work in the name of safety, but it needs to be communicated that it is encouraged and okay to do so. Even if the highest levels of management in a company stress the importance of being able to stop work, a single individual can make it hard for the employees on the work site to actually do so comfortably. Employees need to know different avenues of reporting safety hazards to the management in a company. If a certain

manager or supervisor makes it uncomfortable for you to stop work or report a hazard, go to another supervisor or your safety officer to do so. You should be able to go to someone who will work to fix the problem as well as not disclose who reported the hazard in the first place if you feel that you could be punished for doing so. Outside of the company you have the right as an employee to report safety issues to OSHA without the fear of retaliation. You can do so confidentially.

#### Reasons to Stop Work

A dark blue/black rectangular graphic with white and yellow text. The main text reads 'ARE YOU DEALING WITH... STOP WORK!' with a list of reasons in yellow. At the bottom, it says 'TAKE ACTION TO HAVE THE SITUATION CORRECTED.' and 'safetytalkideas.com' in the bottom right corner.

**ARE YOU DEALING  
WITH...**

Unclear instructions?  
Lack of training?  
Unaddressed hazards?  
Missing safeguards?  
Unexpected conditions?

**...STOP WORK!**

TAKE ACTION TO HAVE  
THE SITUATION CORRECTED.

safetytalkideas.com



To protect yourself and your fellow coworkers  
To protect property or equipment from damage or loss  
To protect the company's bottom line and reputation

### **Situations Where Stopping Work is Necessary**

When there is an unaddressed hazard.

When **the correct personnel** are not a part of the task. For example- a company policy states that a spotter is needed while working on an aerial lift and the spotter needs to leave the area. You need to stop work until the spotter returns.

When you do not have the right tool or equipment for the job. Using tools not designed for the task can lead to an incident.

When you do not understand the work task or procedures. Stop and get clarification for the task.

When you do not have the correct knowledge or training to do a task safely.

### **Summary**

These are just a few of the situations where stopping work is necessary. Individuals need to feel comfortable stopping work to address whatever the problem is to be able to complete the work safely and efficiently. Many times the fixes that will make a job safer are quick and easy. You have the power to make a difference and stop work when it is needed. Despite how uncomfortable some of these situations can be, if an incident occurs it is much more painful for everyone involved.

### **Discussion points:**

- What are some situations that could come up in your work today where stopping work is necessary? -Do you feel comfortable stopping work? Why or why not?
- Discuss a past incident and how stopping work could have prevented it.