



### **Avoiding Back Injuries**

Back pain is one of the most common ailments for a construction worker. A study in New England which interviewed over 175 workers indicated that over 75% of the respondents reported having back pain within the last three months. Why does this matter? Because back pain will lead to less effective work and can affect the mental health of those injured.

#### **Stretch Before Lifting**

Conducting a stretch and flex before lifting or beginning the workday can increase circulation and decrease the risk of an injury. A brief 2-minute stretch is also a great idea for after breaks.

#### How Can We Avoid Back Pain?

Improper lifting of heavy objects is the number one reason for back pain. Workers should be discouraged from attempting to lift objects too heavy for them. While lifting always keep the load close to your body.



Holding a load farther away will create more of a load on the back which will increase risk of injury. Always lift with your legs. An easy way to remember this is to not bend at the waist to pick something up. Focus on bending and raising at the knees. At no point should the spine look rounded, the natural curvature of the back should be consistently held throughout the lift.

Twisting while lifting can quickly lead to a back injury. Focus on keeping your back straight and getting your feet pointed toward the place you will set the object down.

#### **Maintain Good Posture**

A healthy back can be maintained with proper lifting techniques and great posture throughout your day. While standing, stand with the spine erect maintaining the natural curvature of the spine keeping your head in a neutral position. When sitting, use a sturdy seat where you can keep your back upright without slouching to the side or down in the chair.

#### **Use Proper Lifting Techniques**

As well as maintaining good posture throughout the day. If something is too heavy for a worker to lift alone, ensure another worker helps them with the lift. If another worker isn't available, try to decrease the size of the load before lifting.

Back health is essential for workers to be at their best. When back health declines, work productivity declines.

#### **Discussion Questions**

Can anyone recall a time that they injured their back? How did it happen? Could it have been prevented?

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### **Compressed Gas Cylinders**

Compressed gas is in the form of a gas at room temperature and pressure. Usually, it is stored in a cylinder. Compressed gas cylinders are used by many industries, laboratories, hospitals, universities, and other businesses. Some compressed gases can be extremely dangerous if they are handled improperly. They can be flammable, combustible, corrosive, explosive, and toxic.

All compressed gases are hazardous due to the pressure inside cylinders. For example, if a cylinder is leaking it may explode and cause serious injuries to employees or major property damage. The pressure gauge indicates the pressure, in psi, of the tank. Empty tanks must still have 25 psi residual pressure in the gas or mixture cylinder. Gas tanks or cylinders must be inspected for safety by certified companies.

OSHA, DOT, and Compressed Gas Association (CGA) all have requirements and guidelines for storage, handling, and use of compressed gas cylinders. All employees (users, handlers, transporters) in general industry, construction, manufacturing, warehousing, trade, distribution, and health care must be trained on how to handle, store, and transport compressed gas cylinders according to OSHA and DOT safety retirement.

#### Safe Compressed Gas Practices:

- Compressed gas must be handled by trained employees.
- Cylinders must clearly identified and labels must be clear and readable.
- Workplace must have MSDS or SDS with detailed information for all products.
- Workplace must have a hazardous communication program.
- All cylinders must be inspected regularly.
  - Inspect regulator and valve for dirt, oil and solvent.
- Keep cylinder valves closed when not in use.
- Always open valves slowly.

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- Do not drag or slide cylinders, and do not lift cylinders by the cap.
  Cylinders must be moved with a handcart or other tool.
- Cylinders must be secured with chain in the upright position.
- An Acetylene cylinder must never be tipped on its side.
- Storage area must be dry and well ventilated.
- Cylinders should not be in a public area.
- In storage, gas tanks must be stored according to hazard class.
- Oxygen and other oxidizers must be stored separate from flammables or combustibles by 20 feet.
- Make sure protective cap is in place when moving gas cylinders.

- Cylinder should not be subjected to freezing or above 125 F temperature.
- Never place a gas tank next to a heat source.
- Never use copper fittings or tubing on acetylene tanks.
- Before removing the regulator from a cylinder close the cylinder valve and release all pressure.
- Wear required PPE such as face shields or glasses when you are connecting or disconnecting the regulators.
- Do not place cylinders on soil or unimproved surfaces.
- Empty cylinders must be marked, and valves must be closed
- All transporters must be trained in accordance with DOT requirements (signs, regulations, etc.).

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## **Falling Objects**

On site, workers can be exposed to injuries from flying or falling objects. These types of injuries can cause cuts, abrasions, concussions, or more severe ailments. Falling and flying objects are a concern especially when working with power tools, pushing/pulling loads, working under scaffolds, or performing any work overhead. Construction materials handlers, tree care workers, and manufacturing employees are especially exposed to being hit by flying or falling objects. However, working conditions should ideally not pose a risk of serious injuries to employees.

By law, employers are required to provide a safe workplace free from recognized hazards for employees. One way to achieve this is to analyze job sites for hazards. Before work begins, a safety assessment of the worksite must be conducted in order to identify any hazards to employees. In addition, OSHA requires all employees to be trained on the specific hazards and associated safety measures involved with their specific jobs. This includes training on personal protective equipment that may be needed for each job assignment.

#### Falling Objects Safety Practices:

- Assess the worksite for falling or flying object hazards.
- Consider floor opening, wind, power lines, and unstable soil when identifying hazards.
- Never work under suspended loads. Barricade hazard areas and post warning signs.
- Materials should not be stored within 6 feet of hoists or floor openings.
- Do not use tools with loose or cracked handles, as they could fly off and harm others.
- All workers must be trained to use tools for their task.
- Inspect tools before use.



- Train workers on safe operating practices for power tools.
- Secure tools and materials to prevent them from falling or sliding.
- Wear appropriate PPE for each task.
- Have emergency procedures in place before a job starts.
- Roofing materials and equipment should not be stored within 6 feet of a roof edge unless a guard rail is in place.
- Excess materials and devices must be kept away from working areas.
- Masonry and mortar cannot be stored within 4 feet of a working edge.
- Use guardrails and toe bards on scaffolds to prevent objects from falling.
- Use debris nets to grab falling objects.
- Use safety glasses if power tools produce flying objects.
- Check machines or power tools before use.
- If it is possible, do not work under moving loads.
- Make sure cranes and hoists are working properly before work begins.
- Place barricades and post warring signs near hazardous work zones.
- Do not exceed the lifting capacity of cranes and hoists.
- Attend all safety meetings and training sessions.

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### Got Water?

Water is life; 71% of earth's surface is water, and all forms of life depend on water. The human body needs water to function properly, and the use of water for humans depends on temperature, food climate, and activities being done. Based on studies, 6 to 8 glasses is the daily minimum of water that must be taken in to prevent dehydration and allow the human body to function. Unfortunately, water scarcity is a future problem many people in the world may face. This is a phenomenon caused by humans as well as nature. Waste, pollution, and unsustainable management are some sources of the problem.

EPA's Clean Water Act (CWA) regulates water pollution. It provides assistance to publicly owned water treatment and wastewater treatment facilities, and it aims to maintain and protect wetlands. We can all help to manage the use of water wisely, prevent pollution, and contribute to safe drinking water.

#### To Conserve Water:

- Run washer and dishwasher only when full.
- Water your flowers and grass once a week, not every day. Use a stopper to plug the sink if you wash dishes by hand, reduce the amount of time spent in the shower.
- Before stepping into the shower, collect a bucket of cold shower water for your house plants. Have drinking water in the refrigerator.
- Do not let water run when you are shaving or brushing your teeth.
- Train and educate kids on proper water use at home or school.
- Drink water every day (about 2 liters or 7-8 glasses).
- Remember, not wasting water will help reduce your water bill.

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