Back Injury When Lifting a Compressed Gas Cylinder

An employee was loading a truck with supplies. The employee had to walk approximately 60 feet from the storage room to the truck’s loading dock. The employee was tasked to load a compressed CO2 gas cylinder into the truck. The cylinder weighed approximately 20lbs and was 27 inches in length. When lifting the load, they bent and lifted with their back. This awkward lifting posture caused the employee to strain their back. As shown in the picture, the small CO2 cylinder is an awkward load to lift due to its weight and its low height. The cylinder also does not have handles or good handholds for a comfortable lift. After the incident, the employee reported the incident to their supervisor, who then directed them to seek treatment. The employee left work to rest and the injury required pain medicine to relieve their back pain.

To prevent similar incidents in the future, employees should:

- Evaluate what you are lifting and know your limits. Never lift awkward, bulky, or heavy loads alone.
  - Gas cylinders are awkward loads to lift and carry alone, even for short distances.
- To prevent awkward lifts, move cylinders using a gas cylinder cart or dollie.
  - Utilize the cart or dollie to transport the cylinder. The cart or dollie should be designed in a way that puts the cylinder in proper position with minimal manual handling. There should also be a way to lock the cylinder with a chain or other restraining device. When the cylinder is properly locked, incline it to the transport position (refer to the picture below).
    - Never move a gas cylinder without a cart or dollie. Never drag or roll a cylinder.
  - When pushing the cart or dollie, stay close to the load and always use the force of both arms to move it, keeping your back straight. The cylinder must always be locked for the duration of the transport.
  - When removing cylinders from the cart or dollie, be sure the cylinder is in an upright position. When storing the cylinder, be sure to use a chain or other restraining device to prevent the cylinders from tipping.

![Picture of gas cylinder cart and dollie with instructions]

- Keep your back straight throughout the whole task
- Suitable chain for locking the cylinder into place