

Material Lifting Hoists

Material lifting hoists are versatile equipment that provides an efficient way to lift and move heavy objects, such as equipment or piping. Some hoists are manually operated, while others are electrically or pneumatically operated (*see example photos to the right*). Although there are various types and sizes of hoists utilized at Northwestern, they all share similar hazards, like falling loads, which may result in material or property damage and injuries to you or your coworkers if hoists are used improperly. Review Northwestern's [Material Handling Equipment](#) program and follow the safe work practices below when using a hoist:

- ✓ Inspect lifting equipment before use, and do not use if damaged
- ✓ All lifting equipment must be marked with the rated *working load limit* or WLL; select equipment rated for the load to be lifted
- ✓ Ensure the work area is clear of non-essential people, tools, and equipment prior to lifting loads
- ✓ Never work under a suspended load or in a position where the load can pinch or trap you against another object, like a wall
- ✓ Always wear personal protective equipment (PPE) appropriate for the task, such as impact-resistant gloves, safety glasses, hard hat, and steel-toe boots
- ✓ When not in use, store lifting equipment in dry environments away from extreme temperatures, sunlight, and chemicals to protect them from damage

Learn more: Complete online [Crane Safety](#) training and review the Occupational Safety and Health Administration (OSHA) [standards](#) for rigging equipment for material handling.

Report all injuries, property damage, and near misses on the Risk Management [website](#) or call 847.491.5582.

Tips for Success When Talking to Your Team

Preparation is Key: Keep the topic relevant. Work with your team to review potential material lifting hoist hazards in your workplace and discuss how they can be avoided.

Stay Positive: Keep the focus on what can be done to create a safe workplace, instead of focusing on what has gone wrong in the past.

Share a Story, Ask for a Story: Storytelling is a powerful method to convey information. Stories from your employees make the topic even more relatable.



electrically-operated wire hoist



manually-operated chain hoists

Rigging equipment

Rigging equipment selection, inspection, and use are just as critical as the hoist (*see example photos below*). Damaged or modified rigging equipment may significantly reduce the lifting capacity, and if used, may result in dropped materials. Always adhere to the manufacturer's recommended inspection guidelines and never use rigging equipment with damage, such as:

- **Nylon web slings:** cuts, excessive wear, knots, chemical damage, heat damage, or broken stitches
- **Shackles:** cracks, deformations, corrosion (e.g., rust), elongation, or incorrect pin
- **Wire rope slings:** Damaged fittings, kinks, broken wires, severe wear, or corrosion (e.g., rust)



nylon web sling

wire rope sling

shackles

Mobile Cranes

In some instances, a large mobile crane may need to be utilized on campus, such as when materials or equipment needs be to hoisted onto a rooftop or through a building rooftop hatch. Numerous hazards are associated with mobile crane use on campus, such as overhead power lines, underground utilities, obstructed building exits, and blocked fire lanes. To ensure the safety of the Northwestern community and property, follow all requirements in the Mobile Crane Critical Lift Operations [Checklist](#).



For Additional Information

Contact Environmental Health & Safety at ehs@northwestern.edu

Do you or your team have a safety story you'd like to share? Contact Environmental Health & Safety for details.