



Improving Work Conditions and Safety in the Roofing Industry



Workers in the construction trades face many physically demanding tasks as an integral part of their daily routines. Roofers stand out among these trades due to their manual material-handling activities, which places them at a particularly high risk of over-exertion injuries and work-related musculoskeletal disorders (MSDs). An alarming 29% of CNA insurance workers' compensation claims in the roofing sector are linked to Manual Material Handling (MMH) such as lifting and strains. Ensuring the safety and well-being of roofers requires proactive management of the risks associated with their job.



Proactive Risk Management: Ensuring Safety and Efficiency

Efficiency and employee capabilities are crucial in designing work processes that prioritize safety. When tasks are thoughtfully designed with these considerations, the outcome is enhanced safety and increased workforce productivity. Implementing such solutions makes the job safer and promotes inclusivity by accommodating workers of varying strengths and experience levels. This guide provides an overview of high-injury risk exposures and challenges related to process efficiency and discusses potential solutions.

Material Transfer and Movement: A Key Challenge

One of the critical loss drivers in the roofing industry is material handling and lifting. The nature of roofing work often involves lifting and carrying heavy and awkward materials like membrane rolls and insulation boards, leading to potentially harmful twisting motions, especially when working in confined spaces or beneath elevated rooftop equipment.

Roofers frequently make multiple trips between staging areas and installation points, significantly increasing the time and labor required for each job.

To tackle this challenge:

- **Plan and pre-arrange:** Strategically plan material storage upon delivery. Anticipate the path from staging areas to installation points and identify optimal material staging locations on the roof.
- **Minimize trips:** Reduce the need for carrying, twisting and lifting by utilizing carts, dollies or conveyor systems to transport materials.
- **Mechanical assistance:** Whenever possible, deploy mechanical equipment for lifting and moving. Emphasize team lifting for tasks where such equipment is unavailable.
- **Safe lifting techniques:** Prioritize safe lifting practices, including sizing up the load, getting assistance for heavy or awkward loads, and maintaining a clear lifting path.

Efficient Tool Usage: The Power of Appropriate Tools

Roofing professionals rely heavily on a range of hand and power tools. Selecting the right tools for specific tasks is essential for effectiveness and worker well-being. Overexposure to vibration from inadequately damped power tools and reliance on non-powered tools for repetitive tasks can lead to excessive strain and awkward postures.



To address this:

- **Upgrade tools:** Identify commonly used tools that could benefit from being upgraded to their powered counterparts. Consider adopting battery-powered tools with improved power, lighter weight and reduced vibration impact.
- **Tool modifications:** Make tools accessible to a diverse workforce by implementing modifications that ensure safe use.
- **Ergonomic tools:** Introduce specialized tools like upright automatic feeding screw guns for tasks that involve repetitive forward bending.

Managing Fatigue

Fatigue significantly contributes to errors, accidents and heightened safety risks. Fatigued workers experience diminished alertness, slower reaction times, compromised cognitive function and reduced physical strength. As muscle effort increases due to fatigue, the risk of injury rises.

Addressing fatigue involves:

- **Job rotation:** Implement job rotation for highly repetitive tasks to alleviate mental and physical fatigue by engaging alternative muscle groups.
- **Ergonomic solutions:** Utilize equipment like insulation stacks, tables and lifts to elevate materials to waist height, reducing worker strain.
- **Awareness and rest:** Promote worker awareness about the importance of rest and recovery to combat fatigue-induced injuries.
- **Hydration:** Provide fluids at easily accessible locations. Staying well-hydrated by drinking enough fluids throughout the day plays a crucial role in managing fatigue, as it helps maintain optimal bodily functions, ensuring adequate energy levels and cognitive performance.

Optimizing Demolition Tasks

Manual stripping and removal of roofing materials are tasks that often involve the use of non-productive manual equipment. Additionally, roofers may perform tasks in prolonged kneeling

positions, leading to contact stress. Improving efficiency while maintaining safety requires innovative solutions.

Consider:

- **Powered equipment:** Utilize powered cutting and tear-off equipment to replace manual forceful tasks with high force and awkward postures.
- **Mechanical leverage:** Adopt upright scraping tools to provide mechanical leverage, reducing the need for forward bending.
- **Streamlined processes:** Review debris management procedures to eliminate double debris handling on roof and ground levels.

Meeting Additional Challenges: A Comprehensive Approach

Various factors beyond physical tasks influence efficiency, productivity and ergonomics. Challenges like rework, skilled labor shortages, supply chain disruptions and project management inefficiencies can impact roofing projects. The solutions discussed above can also be applied to address these issues.

In addition, CNA offers risk control consulting solutions such as “*Motion is Money*,” tailored to clients’ specific needs. This program assists in improving process efficiencies and reducing the risk of injuries, creating a safer and more productive roofing industry.

Enhancing the Future of Roofing

In the demanding field of roofing, where physical strain and injury risks are high, implementing proactive measures can revolutionize how work is performed. By prioritizing safety through efficient material handling, proper tool usage, fatigue management and innovative solutions for demolition tasks, the roofing industry can provide its workforce with safer and more productive working conditions. As the challenges in the industry continue to evolve, solutions like those discussed here, along with comprehensive risk management support, pave the way for a future where safety and efficiency go hand in hand, ensuring the well-being of workers and the success of roofing projects.

To learn more about managing risk and increasing efficiency, visit cna.com/riskcontrol.