Reduce Material Handling Injuries
With Mechanical Assist Devices

Assist devices such as the powered-pallet mover (Figure 1) and stocking cart (Figure 2) have the potential to reduce the risk of material handling injuries. The powered-pallet mover reduces lifting, bending, reaching, and repetitive motions. Because of its size, there is an added risk of a “contact-with-object” injury, such as bumping into the side of the trailer. Prior to using this device, employee training is required. One of the more challenging tasks is to teach the operator how to safely move the device with a loaded pallet across the loading dock’s threshold and into the facility’s receiving area without tipping over or falling off the connecting ramp, causing an injury or fatality.

In Figure 2, the stocking cart shown was designed to reduce excessive bending, holding, and reaching when used by employees to stock shelves. The top shelf slides up and down to reduce grip duration as products can be easily pushed from the holding tray onto the shelves. The device also allows the employee to use both hands and can increase his/her efficiency.

To learn more about other assist devices, you can view Ergonomic Solutions for Retailers: Prevention of Material Handling Injuries in the Grocery Store [NIOSH 2015-100].

Stages of Change

The Stages of Change model is one of a number of approaches used in training programs where the goal is to change or eliminate an undesirable or unsafe behavior of an employer or an employee. The model is based on the theory that the change process is a series of stages as shown in the adjacent figure. When faced with a behavioral change goal, each person, depending on their prior experience with their goal to improve, will typically be at one of the six stages. To be successful in changing behaviors, one needs to tailor the information to the person’s appropriate stage in the six-step change process. To learn more about this approach, consult Wikipedia or contact Vern Anderson at vep1@cdc.gov for additional source materials.
Emerging Issues
Aging and Risk of Injury

A poster presented by Vern Anderson at a NORA NIOSH Program Portfolio Science Symposium in October 2014 identified risk factors associated with young workers (under age 24) in the Wholesale and Retail Trade Sector (WRT).

The WRT sector employs a large percentage of young workers. The assessment data focused on demographic features and characteristics of fatal and non-fatal injuries of young WRT workers from 2003-2009.

Figure 1 shows the percent change in injuries over the years 2003–2009 for all aged workers as compared to those workers under 24 years, all working in the private sector.

Young workers are at a higher risk of injury from contact with objects, falls, and overexertion. Their injuries consist of sprains, strains, cuts, lacerations, and punctures. The source of those injuries include: the floor, containers, and vehicles.

Young workers who are hurt on the job usually are employed performing “service functions” (45%), “transportation and material moving” (16%), and “sales/related jobs” (11%).

Young workers typically work at grocery stores (21%), department discount stores, (14%), and clothing stores (10%).

In Figure 2 for each age category, WRT workers experience a disproportionate percentage of nonfatal injuries/illnesses as compared with their employment share; nearly 29% for the 16 - 19 age group. To learn more, visit Occupational Health Disparities page.

Figure 1. Percent Changes of Injured Youth (Under 24) in WRT among Private Industry, 2003-2009

Figure 2. WRT share of nonfatal injury/illness and employment in all industries by age group, 2009

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