

Protecting Older Workers Web site: 2005 q1 updates

Protecting older workers - Safety tips

Older individuals comprise the fastest-growing age group in the United States. For the purposes of our review we identify these individuals as older than 50 years of age. Due to their good health and desire to remain active, or as a result of their financial circumstances, many individuals 50 years and older will choose or will need to remain employed.

The safety tips below are based on the results of a study BWC undertook in partnership with the University of Cincinnati and input from our safety consultants. To provide you with as much information as possible, we will post new tips periodically. For more detailed safety tips, click on the link [Accident prevention tips for older workers](#) located on the [Protecting older workers: A call to action page](#). BWC hopes you will check back for updated information.

New for March: Low-back protection

Research indicates 65 percent of individuals 65 years and older suffer from stiffness in the joints, with 30 percent of people in this age group suffering from back pain.

Tips:

- Whenever possible, use good planning, material handling aids, and automation to eliminate manual lifting.
- When you must perform manual lifting:
 - Keep the object close to your body.
 - Step closer to the object rather than reaching out, even for small objects.
 - Eliminate obstacles between you and the object you are lifting.
 - Avoid bending for a prolonged period of time particularly below knee level.
- It is always a good idea to maintain physical fitness, activity and strength.

Slips and falls

Although statistics vary greatly by industry, falls account for 14 percent to 40 percent of non-fatal occupational injuries. Injuries related to falls are more common among older workers than younger workers. This could be caused by more falls among older workers or at least more significant injuries when falls do occur.

Tips:

- Maintain exterior walkways in good condition, free from cracks, raised areas, ice and snow accumulation, and provide good quality illumination.
- Wear snug-fitting footwear with firm non-slippery soles. Encourage workers to wear shoes with pliable soles and low heels. Shoes that tie are preferred.
- Although aging changes are very individual, consider the workers' age with respect to specific job assignments or requirements (e.g., climbing ladders and scaffolds).

- Ensure high-quality illumination for walking areas, particularly stairwells and other changes in elevation.
- Provide color contrast in stairs and other changes in elevation to draw attention to the change and to make the surface easier to identify.

Reaction time

As an individual ages reaction time frequently increases. Therefore, an older worker may not be able to react as rapidly to a hazardous situation, which may include operating certain types of machines, particularly if they are not familiar with the equipment.

Tips

- Encourage older workers to get a vision exam to identify any problems or the need for corrective lenses. Vision-based problems are very individual and an in-depth analysis of each worker situation can be helpful.
- Aging workers will need more light. It's preferred to have nearly uniform lighting throughout the workplace. Design gradual transition zones between areas of low and high lighting.
- Place signage in places easily seen, and avoid distractions and cluttering.
- Minimize sources of background noise, such as machine and air conditioning. Avoid work environments and rooms that create echoes.
- Ensure equipment warning devices are loud, properly working and recognizable.

Balance

Balance is reduced in older individuals due to aging, development of medical conditions or the effect of medications used to treat other conditions such as high blood pressure. The rate and extent of such changes are variable among individuals. With aging, the physiological systems that play a key role in maintaining balance may become impaired (i.e., vision, muscle strength tone, inner ear sensing body orientation and nervous system providing feedback about position of body parts).

Tips

- Make sure all areas have good environmental lighting.
- Keep walking surfaces free of contaminants such as water, oil and ice.
- Provide handrails on inclines or stairs.
- Keep one hand on a handrail when carrying items up and down stairs and ramps.
- Wear slip-resistant and low-heeled shoes that fully support your feet.
- Maintain a regular exercise program.

Respiratory system - Breathe easy

Cardiovascular respiratory function, which is associated with maximum exercise levels, declines 15 percent to 25 percent from age 20 to age 65. Oxygen consumption sharply declines after the age of 50, which makes intense physical activity more difficult for the older age group.

Tips

- Due to reduced capacity and stress from temperature extremes, be cautious or avoid strenuous work in hot/humid environments or cold environments.
- If environment is hot, take precautions to avoid dehydration. Drink plenty of water and other fluids that do not contain caffeine.
- Be cautious with physically demanding work, particularly if the individual does not routinely perform such work.
- Encourage self-paced rather than machine paced work.
- Breaks are necessary.

Musculoskeletal back

With persons age 55 and over being the fastest growing work force age group (expected increase of 3.9 percent annually to 16.9 percent of the work force by 2010), this sector of the population will represent the greatest number of individuals who suffer from low back pain. Recent estimates of the total cost of low back pain are between \$25 billion and \$95 billion per year. While back pain is widespread, there are a few tips that can reduce the potential for developing a low back injury as well as reduce the effects of current symptoms.

Tips

- Lift objects from waist level. Place heavier objects on shelves at or above knee height, preferably at waist height.
- Get as close to the object as possible when lifting. Bend your legs to lift the object. Avoid twisting or bending to the side when lifting or moving.
- Reduce the object weight as much as possible by lifting fewer items at a time. Use carts and other mechanical assist devices when possible.
- Provide adequate rest between repetitive lifting tasks. Ensure good foot traction. (Approximately 20 percent of back injuries are due to falls/slips/trips.)
- Avoid prolonged static postures. Position objects, controls and displays in locations that minimize prolonged flexed, bending or resting postures.

Musculoskeletal system

According to 2001 U.S. Bureau of Labor Statistics data, while back injuries account for the greatest number of occupational injuries and illnesses, upper extremity and lower extremity injuries follow closely behind. With an aging musculoskeletal system, high repetitive and sustained loading associated with prolonged standing and/or walking may detrimentally affect the health of the weight bearing joints (hip, knee and ankle). The effects of skeletal aging will be felt mainly in the knees, fingers, hips and spinal column.

Tips

- When increased efforts are needed, use a mechanical aid or get help from other operators.
- Organize the work station to avoid lifting or reaching above shoulder level.
- Avoid repetitive tasks, incorporating job rotations if possible.
- Avoid prolonged standing. If prolonged standing is necessary to the job, provide the worker with anti-fatigue mats.

- The older worker can usually work just as fast as the younger with the proper job design, including a sufficient spacious work station so the task can be performed in alternating posture and location, tools that avoid extreme postures or having to work in a bent-over position (places extreme demand on the joints).

Vision care

The reduction in visual perception, particularly near vision, can make it difficult for older workers to perform tasks at a close range. Corrective lenses may help improve near vision, but they also increase glare, which poses a problem for detecting or reacting to potential harmful events, particularly in dimly lit areas.

Tips

- Improve contrast between objects by increasing lighting.
- Reduce glare by using shades and awnings for windows, diffusers for light sources, indirect lighting, or a larger number of lower power and adjustable light sources.
- Eliminate the need for workers to frequently cross from dim areas to brightly lit areas and vice versa.
- Avoid shades of blue, blue on green or blue on black in the work environment; it's difficult for older workers to differentiate between these colors.
- Place signs in places that are easily seen, and avoid distractions and cluttering.

Hearing

A gradual loss of hearing is expected as we age. This loss may be imperceptible, but it does make it more challenging for older workers to discern specific sounds, such as conversations, when they are in noisy rooms. Some older workers may have more profound hearing loss, which may place them at risk if they can not hear warning devices in the workplace.

Tips

- Minimize machine, air conditioning and other sources of background noise.
- Use sound-absorbing construction material.
- Avoid room designs that create echoes.

Falls

Falls are more common among older workers than younger workers. This phenomenon could be caused by a loss of balance with increasing age. It also could be the result of factors in the aging process, such as osteoporosis, increased reaction time and decreased flexibility, which may make an injury from a fall more likely.

Tips

- Avoid marble, polished wood and tile flooring.
- Keep walkways free of obstruction.
- Clean up spills and keep floors in good repair.
- Use absorbent material to reduce slipping.

- Avoid devices that obstruct visual fields (e.g. certain styles of respirators, hats, protective eye wear).
- Stairs
 - Use high-color contrast between risers and treads, particularly at landings.
 - Provide lighting and hand rails.
 - Keep risers low and use non-slip surfaces on treads.