

## Workplace safety is ageless



# Protecting older workers

by P. Sargeant-Matthews

The U.S. population is growing older. By the end of the year, the youngest of the baby boomers will turn 40 and the oldest will reach 58. The most recent U.S. Census reports those 50 years old and older represent approximately 28.6 percent of Ohio's population, an estimated 3.25 million people.

It naturally follows Ohio's work force would reflect this trend with an increased age of available workers. An Ohio Department of Job and Family Services report released in December 2002 estimates 60 percent of the oldest baby boomers, those 55 to 64 in 2010, are expected to be working. In some cases, people are working longer because they can; in other cases, people have delayed retirement due to financial circumstances.

Curious about the impact this trend would have on workplace safety and injury prevention, BWC commissioned a study in spring 2004 to research the types of injuries more common to older workers. The continuing study, which is being

conducted with the assistance of the University of Cincinnati, focuses on workers between 50 and 70, and compares their injuries to workers 40 and younger.

The initial results of this study and other research findings form the basis of BWC's Protecting Older Workers initiative. The initiative's goals are to help increase awareness of the workplace safety needs of older workers and highlight the benefits of a safer work environment for all workers.

### Taking the initiative

"BWC sits in a good position to provide this type of information to providers, employers and the work force," explained Joel Donchess, chief of injury management services. "We want to make sure we're taking all the appropriate steps to ensure the safety of Ohio's work force."

The bureau chose to partner with the University of Cincinnati on this project because of an existing

relationship between the two organizations. BWC also is partnering with the Ohio Department of Aging to promote the agency's Protecting Older Workers initiative. The department's mission is to serve and advocate for Ohio citizens 60 and better.

"We would like nothing better than to reach out to as many employers as possible with the good news that people are remaining in the work force longer," said Steven Proctor, spokesperson for the Ohio Department of Aging. "It's not just about attracting a larger supply of older workers; it's about retaining the experienced workers who have been working for employers for years."

Having information on the types of injuries older workers may experience and the causes for these injuries allows employers to make concrete workplace safety adjustments to protect their workers – older and younger – and their bottom line. BWC is providing as much information as possible to help employers develop those strategies.

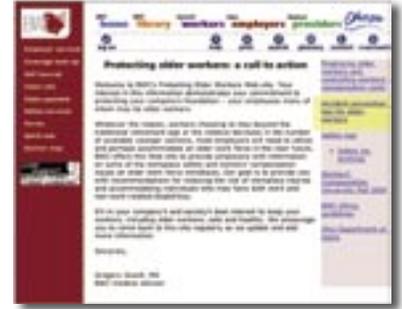
As part of its initiative, the agency has launched a Protecting Older Workers Web site accessible via [ohiobwc.com](http://ohiobwc.com). Log onto [ohiobwc.com](http://ohiobwc.com), select

Ohio employers, then click on Safety services. This site features a copy of the study written for BWC's customers, "Employing older workers and controlling workers' compensation costs." The site also includes safety tips and links to other resources, such as BWC's lifting guidelines and a link to the Ohio Department of Aging's Web site. As research continues BWC will update the site, to include the latest information.

### Carrying the message

BWC Medical Director Greg Jewell, M.D., is working with the University of Cincinnati researchers. Jewell noted the study found older workers encounter many injuries that, overall, are similar to those experienced by younger workers. However, when the injuries are ranked in order, some appear to be more common to older workers.

"In particular, we saw carpal tunnel, rotator cuff conditions of the shoulder and knee problems," Jewell said. "But for both groups, low-back conditions were the most common injuries."



*BWC's Protecting Older Workers Web site features a variety of resources, such as research papers, safety tips and links to BWC's lifting guidelines and the Ohio Department of Aging Web site.*

## Top 10 most common injuries

### All age groups

The injuries listed below were diagnosed in 36.2 percent of claims filed by all age groups in 2003.

1. Open wound, finger: This can be anything from a paper cut to a major laceration of the finger.
2. Sprain,\* lumbar region: Injury to the area in and around the five lumbar vertebrae of the spinal column.
3. Sprain,\* neck region: Injury in and around the seven cervical vertebrae of the spinal column.
4. Arm or shoulder sprain\*: Injury in and around shoulder and upper arm.
5. Lumbosacral sprain\*: Injury to the area around the five lumbar and five fused sacral vertebrae of the spinal column.
6. Thoracic sprain\*: Injury in and around the 12 thoracic vertebrae of the spinal column.
7. Knee and leg sprain\*: Injury in and around the knee and leg.
8. Ankle sprain\*: Injury in and around the ankle.
9. Knee contusion\*\*
10. Face, scalp or neck contusion\*\*

### Workers age 50 and older

The injuries listed below were diagnosed in 33.9 percent of claims filed by workers aged 50 and older in 2003.

1. Sprain,\* lumbar region: Injury to the area in and around the five lumbar vertebrae of the spinal column.
2. Open wound, finger: This can be anything from a paper cut to a major laceration of the finger.
3. Arm or shoulder sprain\*: Injury in and around shoulder and upper arm.
4. Sprain,\* neck region: Injury in and around the seven cervical vertebrae of the spinal column.
5. Sprain,\* knee and leg: Injury in and around the knee and leg.
6. Knee contusion\*\*
7. Lumbosacral sprain\*: Injury to the area around the five lumbar and five fused sacral vertebrae of the spinal column.
8. Face, scalp or neck contusion\*\*
9. Thoracic sprain\*: Injury in and around the 12 thoracic vertebrae of the spinal column.
10. Ankle sprain\*: Injury in and around the ankle.

\* A sprain is a joint injury where some of the fibers of the supporting ligament/muscle are torn. This results in pain and the person naturally limits the movement of the joint to limit the pain.

\*\* A contusion is an injury from a blow or bump to a body part resulting in possible swelling, redness or bruising of the skin, or part of the body receiving the impact.



*Younger workers will benefit well into the future from workplace safety strategies your company implements today.*

Kari Dunning, Ph.D., an epidemiologist with six years in medical research and 17 years of experience as a physical therapist, is one of the University of Cincinnati researchers. Dunning also remarked on the frequency of carpal tunnel syndrome, rotator cuff and knee injuries in older workers. “Those are costly injuries and harder to rehabilitate because older workers have physical differences compared to younger workers that increases recovery time,” she said.

As bodies age, physical abilities change, making people more susceptible to injuries. “The older workers have more injuries that can be classified as chronic conditions,” Dunning said. “These conditions are harder to rehabilitate than acute injuries.”

Changes in physical abilities can include a decrease in vision, hearing, balance, strength and flexibility. They also can include an increase in reaction time concurrent with a decreased ability to react in a quick manner. “If something gets in your way and you have to stop, a 30-year-old may take one second and a 50-year-old may take two seconds to react,” Dunning said.

However, she cautioned against generalizing the abilities of the older population because physical changes are very individualized. “For example, someone might be a very young 50 and not have a lot of physical changes, whereas someone may be an older 50 and have more changes,” Dunning said. “It depends on genetic factors, lifestyle and the physical trauma their body may have experienced.”

Jewell, who has practiced occupational medicine for more than 12 years, cautioned against saying older workers are more susceptible to particular injuries

because the agency doesn’t have evidence to support that suggestion. Instead, he maintained the agency can only state its findings of the claims allowed.

Across all age groups, the number of injured workers and the number of claims filed declined from 2000 to 2003. However, workers 50 or older as a proportion of the work force increased by 28.2 percent from 2000 to 2003. The number of claims this group of workers filed increased by slightly more than 30 percent. This trend occurred despite a 23.8 percent decline in the total number of claims filed by all populations.

According to BWC records, in 2000, 15.5 percent of workers’ compensation claims filed with the agency were filed by injured workers 50 and older. By 2003, this number had increased to 19.8 percent.

### **Injury prevention**

The purpose of the Protecting Older Workers initiative is to identify workplace safety needs of older workers, which is important on many levels. By making workplace safety accommodations, employers protect their long-term investments, and the knowledge and expertise veteran employees use to support the company.

“There are a lot of positive things about employing older workers,” Dunning said. She noted studies show older workers have less turnover, more flexible workplace attitudes, are more dependable and have more experience, which makes them better able to make decisions in the workplace. Studies also show older workers heed safety warnings more often.

Donchess agreed. “Older workers are our brain trust,” he said. “You want to keep them healthy and working. When you lose employees like that, even for a short time, you lose that knowledge base.”

There are a number of things companies can do to ensure the workplace safety of employees 50 and over. Dunning cited a sample of accidents more common among older workers and preventive measures companies could take. These examples are listed on the page 17. More details on these occurrences and tips to prevent these accidents are included in the University of Cincinnati research team’s paper, “Accident prevention tips for older workers,” which is posted on the Protecting Older Workers Web site on [ohiobwc.com](http://ohiobwc.com).

### **Down to the details**

BWC’s safety consultants have discussed the concerns cited by Dunning (see Common problems story on page 17) and other safety challenges

“If you protect older workers, you’re going to protect younger workers.”

— Chris Hamrick, BWC ergonomics technical advisor

in training sessions, educational seminars and conferences. They explain that it's not enough to identify global safety concerns, such as falls, low-back injuries and ergonomic strains. Employers must get specific by performing individual job safety analyses.

"You have to analyze the needs of the worker assigned to that job," explained Mike Ely, BWC's safety technical advisor. Ely said employers should do a step-by-step analysis of the job and the hazards

associated with that job. Based on that analysis, employers should remove the hazards or bring hazards to safe levels.

BWC's safety consultants also expressed the need to account for the long-term effects of workplace activities and exposures on all workers when evaluating safety enhancements. For example, Don Bentley, BWC's industrial hygiene technical advisor, noted older workers are more susceptible to chemical exposure.

## Common problems that cause injuries and prevention solutions



### Falls

Dunning provided several possible reasons falls are more common among older workers. It could be a loss of balance or increased reaction time that comes with increasing age. It could be due to conditions resulting from the aging process, such as decreased flexibility. In addition, osteoporosis may increase the likelihood of sustaining an injury from a fall.

### Safety Tip

To guard against falls, make sure walkways and stairways are well lit, and ensure flooring and stairs are in good condition. Install hand rails in the stairways for additional support. Dunning noted most falls occur on the top two or bottom two stairs.

"Older populations have a decreased ability to distinguish depth perception, so if the stairs are all one color, it's hard to see different steps," she explained. To give a boost to depth perception, Dunning proposed using color strips on the edge of each step to differentiate between the steps.



### Lighting

Research findings show lighting is an area of concern for older workers. Dunning suggested ensuring adequate lighting and reducing glare with diffuse or indirect lighting.

### Safety Tip

"Older workers – 55 and over – have difficulty transitioning between light and dark areas," she said. "Set up work areas where you don't have those transitions or make those transitions more gradual. Everything should be well lit, but if you need to have darker areas, the transition should be gradual so the older worker can adjust to the reduced lighting."



### Back pain

The University of Cincinnati research team's report discusses the prevalence of back injuries, which are common for younger and older workers. However, the report states that, since the older population is the fastest growing work force age group, this section of the population will represent the greatest number of individuals who suffer from low-back pain.

### Safety Tip

Proper ergonomics also plays a large part in workplace safety for older workers. It's important to follow proper lifting techniques. For example, don't lift objects above your head; lift with your legs by bending your knees. Detailed lifting guidelines are available on [ohiobwc.com](http://ohiobwc.com).



*As Ohio's work force ages, companies must increase awareness of the importance of workplace safety.*

As you get older and are exposed to chemicals over a longer period, the effects of exposure are more likely to produce an adverse effect. Therefore, many industrial hygiene concerns have to do with exposure to chemicals over years, and the long-term effect that exposure will have on an employee's body. As an example, insoluble chromium exposure from welding stainless steel or from painting operations is a known carcinogen, which may cause lung cancer in employees

from continued exposure over many years.

"Industrial hygiene is looking for the future," Bentley said. "Studies that are used to determine allowable limits of chemical exposure are based upon a working life."

Ergonomics also evaluates standards for long-term effects rather than isolating subgroups of the population. For example, when designing lifting guidelines, the guidelines are based on spine tolerance limits. Under the moderately risky category, these limits are derived from compressive force that results in disc vertebrae failure in spines of people over 60.

"We concentrate on capabilities of large groups of people," said Chris Hamrick, BWC's ergonomics technical advisor. "If you protect older workers, you're going to protect younger workers."

### **Building a good system**

On average, if employers design tasks for older workers, the task will apply for the younger worker. Job demands should not exceed worker capability, Hamrick said.

"The theme here is, by their nature — safety, industrial hygiene and ergonomics — once they are properly addressed, the needs of older workers as well as younger workers will be addressed," Ely said. "Everything we do will benefit the older worker, the same way it will benefit workers straight out of high school."

He explained safety is a management function because management makes the decisions. Management decides who gets hired and who writes the job descriptions.

"If the management system is functioning properly, the human system and mechanical system will be matched," Ely said. "It's where you have the mismatches that you'll get into problems."

By management system, Ely refers to the methods and models a company uses in its decision-making and implementation processes. A company with a well-defined management system will have its vision and goals well defined, and will have a clear understanding of how it will achieve that vision and those goals. The company will have methods in place to identify responsibilities and hold all levels of the company accountable for their responsibilities.

"Companies have to address the management system because it addresses all safety issues," Ely explained. "Focusing only on one population won't address all of the company's safety needs. Our focus is on developing the management system so they respond to the capabilities of the individual. That's the purpose of building a good system — ergonomics, industrial hygiene and safety. If those things are in place, you can deal with your employees' workplace safety."

### **BWC can help**

BWC has a long history of providing free educational programs and services to its customers. The Protecting Older Workers initiative is just one example of the assistance the agency provides.

"We're ready to share our information and hope other people can learn from it," Donchess said. "As a workers' compensation system, it's good for us and our customers to pursue this type of research."

Workplace safety protects the work force while supporting companies' bottom lines. As Donchess points out, injuries cost companies in terms of money as well as knowledge.

"Any workers' compensation claim is costly for the worker and for the employer," Donchess said. "But it's especially costly when employers lose that brain trust portion of the work force; a good, solid, productive member of your team. The bureau is responsible to protect the state insurance fund to address workplace injuries. If we can do our part and help prevent these injuries, we're doing a great service to the employer and to the worker." ❖