

ERGONOMICS: Bracing for the silver tsunami





There's a silver tsunami about to wash over the aging U.S. workforce, and the materials handling industry is directly in its path. Here's a look at our older workers and how ergonomic solutions can keep them safe and productive.

By Lorie King Rogers, Associate Editor

There's a storm warning on the horizon, known as the silver tsunami, that's calling for lots of gray... gray hair, that is. That's because the wave of Baby Boomers, about 75 million of us born between 1946 and 1964 who account for 29% of the U.S. population, are getting older. And while some are heading off to retirement, many are remaining in the workforce.

"Sixty-two is no longer the stepping off point," says Brian McNamara, president of Southworth (www.southworthproducts.com). He's right. According to the AARP, 69% of

Boomers plan to stay on the job beyond the age of 65.

Boomers are pushing off retirement for good reasons; we like our jobs, we're still healthy, and we like the social networking. In some cases, however, finances are the reason for staying because investments aren't worth what they were before the economic downturn.

Whatever the reason, this workforce trend is expected to continue. In fact, the Bureau of Labor Statistics predicts that the percentage of workers between the ages of 65 to 74

will increase by 83.4% between 2006 and 2016.

Currently, the median age of a warehouse or distribution center worker is between 47 and 50 years old. Ray Niemeyer, director of membership for the Material Handling Industry of America (MHIA, www.mhia.org), and managing executive of MHIA's Ergonomic Assist Systems and Equipment (EASE) Council, says he sees the materials handling workforce going from the 40- to 50-year-old range to the 50 to 60 range. As the workforce ages, Niemeyer says, we need to embrace, respect and set the tone that employees are valued.

Not only are older workers valued, they are in demand. Companies are facing competition to retain the workers they have, says Sean O'Farrell, business development manager at Witron (www.witron.com). "[Workers] will look beyond pay rates and benefits to see which companies will make the work

The first thing to go...

Here are a few of the most common physical conditions that change with age and some simple solutions to combat the effects in the workplace.

Eye sight: increase overall area lighting, install task lighting, provide magnifying devices, schedule frequent breaks, use bright high-contrast materials for safety signage.

Hearing: reduce background noise, enclose loud machinery, incorporate visual cues, provide protective ear equipment.

Strength/force generation/flexibility: reduce the weight of items handled, rotate worker responsibilities to avoid repetitive strain.

Mobility/balance: keep work areas free of clutter and tripping hazards.

environment better for them physically," O'Farrell says.

Therefore, companies are investing in ergonomic solutions to keep older workers satisfied, safe and productive.

These investments in the silver tsunami can be worth their weight in gold, says Dan Boos, principal of Boos Consulting Services. He explains that it costs four times as much to bring in a younger worker than it does to retain a Baby Boomer. And, the intellectual capital Boomers possess, along with company loyalty and low turnover, is invaluable.

"There are costs involved with change," agrees Ed Romaine, chief marketing officer at Sapien Automation (www.getsapient.com). "But replacing workers with the next generation of employee is another level of investment. Investing in ergonomic solutions is a better bargain. You can spend less and achieve more because the right ergonomic tools will yield a return on investment that makes it a win-win for everybody," Romaine adds.

So where should a company invest? That depends. "There's no such thing as a one size fits all workplace," says Jeff Smagacz, managing partner with the Ergonomist Risk Management Group (www.riskgroup-llc.com). "What's good for one portion of your population might not be a complete solution for your entire worker population. But generally, if you design ergonomic solutions for the broad spectrum—large males to small females—you will capture about 90% of the work-related issues faced by older workers."

Plus, Smagacz adds, the cost differential between a good ergonomic design and an excellent one is minimal.

Awareness

Excellent design begins with awareness. "Look at the overall operation and ask:

With flexible options, this workstation can be raised or lowered to provide a comfortable height while standing and an adjustable arm to position the computer screen at the optimum eye level.



What are the stressors within the process?" recommends Sapien's Romaine.

The answer depends on the task. Examine the challenges of the job and the ability of the worker. Make sure they are well matched. If there's a disconnect, then ergonomic solutions could bridge the gap.

When a company looks at lean practices throughout its organization, ergonomics has to be a big part of the overall plan, says MHIA's Niemeyer. "Ergonomic equipment like robotics, overhead handling devices, positioning equipment and handheld devices for easier manipulation all play a role in a company's success."

Implementing this type of equipment and creating an ergonomically friendly working environment should enable a person to keep pace with expectations or actually increase production and throughput. Understanding physical changes that occur as employees age also plays a role in overall success.

Sight, sound and steps

Since older workers typically have less than 20/20 vision, paperless order picking systems like pick-to-voice and pick-to-light are worth looking into, says

Witron's O'Farrell. These solutions can reduce eye strain and prevent picking errors because it can be hard to see and read a paper list accurately.

Hearing loss is about as common as diminished eyesight. Charlie Zebell, vice president of supply chain solutions for System Logistics (www.systemlogistics.com), says while paperless picking solutions can be modified to use larger screens and bigger, brighter type for better viewing, the volume and tone can also be adjusted for each worker. What's more, he says, the headset will kick out background noise and make it easier to hear and concentrate.

But there's another benefit at play here, says Zebell, "The cost of technology is going down, and companies are able to retain experienced, skilled workers who have knowledge of the customer and knowledge of the products."

Providing ergonomic solutions is key to employee retention and the creation of a worker-friendly environment.

Another important step in creating an ergonomically friendly working environment is to reduce steps. This is especially important for seniors since slips, trips and falls are the most common workplace injuries for people over 65.

"The goal is to avoid walking and searching for products," explains Sapien's Romaine. With automated solutions like horizontal carousels and vertical lift modules (VLMs), inventory is brought to the operator and delivered to them for processing at an ideal height, sometimes called the golden zone.

Romaine says some VLMs have features like tilt trays that make the rear of the tray



Colorful, bold graphics displayed on a workstation monitor make it easy for workers to see the products to be selected and how to fill an order accurately.

more accessible. This reduces the need to reach and stretch, which in turn reduces strain on the body.

Lift assist and positioning devices

Working within the so-called golden zone can also be accomplished with lift assist and positioning devices that can raise a person to the product or product to the person. Either way, these solutions raise the level of safety in the workplace.

Lift assist devices are designed to eliminate bending to pick up parts, even if they only weigh 10 pounds. "That doesn't sound heavy, but it's the repetition that's problematic," says Southworth's McNamara. "Any job that we would put under an area of concern is exacerbated by age. When we start to think about why a job would require a younger worker, it's probably improved through an assist device."

In addition to scissors lifts and dock levelers, pallet handlers are commonly used in pallet loading and off-loading and keep the work at a comfortable height. According to McNamara, "You should be able to do the whole job right at your belly button."

Overhead handling

Sometimes the job requires overhead handling, and that's where workstation cranes come into play. Over the years there have been changes in standards, says Jeff McNeil, marketing manager at Gorbelt

The Age Discrimination in Employment Act of 1967

Here's a good question: How old is considered old?

If you said 40, you're elderly, according to the government. The Age Discrimination in Employment Act of 1967 (ADEA), makes it illegal to discriminate against people 40 or older. Under the heading Congressional Statement of Findings and Purpose, it says:

"The Congress hereby finds and declares that:

(4) the existence in industries affecting commerce, of arbitrary discrimination in employment because of age, burdens commerce and the free flow of goods in commerce.

(b) It is therefore the purpose of this chapter to promote employment of older persons based on their ability rather than age; to prohibit arbitrary age discrimination in employment; to help employers and workers find ways of meeting problems arising from the impact of age on employment."

Go to www.eeoc.gov/laws/statutes/adea.cfm to read more of the ADEA.



(www.gorbel.com). “Standards are revised based on injury cost, which doesn’t directly link to age, but it could be related. We ask: Can the entire workforce perform the task safely, quickly and accurately? Then we make sure the equipment accommodates a range of ages and sizes across the board.”

“We look at general trends and design accordingly,” says McNeil. As people age they lose strength so workstation cranes have to be easy to move by hand, with minimal force so it’s possible for a 60-year-old woman to do a job just as easily as a young man.

“There’s a lot of technology at work here, but the interface between human and machine is simple,” says McNeil. “Customers are not interested in anything complex.”

Packaging

Customer feedback is often the driver behind change. “As a direct response to end user feedback, the industry is seeing smaller boxes made of corrugated plastic that are lighter and easier to carry with built-in handles and grips,” says Norm Kukuk, vice president of marketing for Orbis (www.orbiscorporation.com).

“As an important component in the design process, ergonomics is a key consideration to ‘design in’ any viable reusable packaging solution. Materials handling workers often have the final say as to whether or not a solution will work in a given supply chain. This is even more evident today in business as companies move toward greater employee empowerment,” Kukuk adds.

Lift trucks

In warehouses and DCs, more care and consideration is going into the comfort of employees who drive lift trucks for many hours each shift.

“Ergonomics has always played an important role in the lift truck industry,” says Keith Allmandinger, senior manager of marketing for Komatsu Forklift

(www.komatsu.com).

“For example, full suspension seats were once an expensive option, but now they’re standard on most lift truck models. These seats are more comfortable, provide a better ride and create less shock to the driver’s body.”

Some companies are trying to increase visibility and provide a greater field of view by reorganizing vehicle controls. Others have added speed limiters, lowered the step height, and added an auxiliary handrails. These changes improve ergonomics for all ages, but older workers are sharing the benefits. □



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