

# Adapting the Office to an Aging Workforce

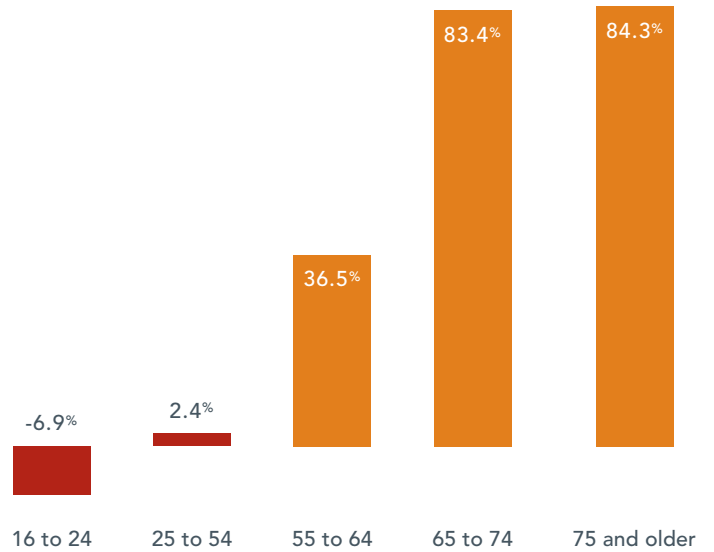
More older adults hold jobs now than ever before. By 2020 workers over age 54 are projected to increase by nearly 40%, a consequence of large numbers of Baby Boomers having arrived in this age bracket and their current tendency to continue working beyond the typical retirement age. These older workers have valuable experience that contributes to an organization's productivity. They are also subject to natural age-related conditions that compromise peak performance. Attention to ergonomic and human factors principles in office furniture and work practices can help offset aging's negative effects and enhance older workers' ability to effectively contribute.

## Age Wave, Followed by a Labor Shortage

In the wake of the population wave now swelling the ranks of workers age 50+ is a decline in the 35-44 year old group, and very low growth in workers under age 35.

Long term, this labor gap may create a serious problem for a slowly growing workforce. In the meantime, aging Baby Boomers offer a temporary bridge as many of them opt to postpone retirement and hang on to their jobs in the face of an uncertain economic climate. It is clear that a large proportion of older workers will be a fact of life in the office for some time to come, at least until 2020 and beyond when the tail of the Baby Boom generation retires.

Projected percentage change in labor force by age, 2006-2016



Source: [www.bls.gov](http://www.bls.gov)

The Baby Boom advances toward retirement.

### The Plus Side of an Older Workforce

Older workers who have stayed with the same organization for a length of time bring stability and institutional memory to an enterprise. This promotes efficiency. Less time is wasted “reinventing the wheel” because older workers know from experience how to do a wide range of tasks. In fact, older workers often are the transmitters of knowledge to new hires; it’s one way new workers learn how to do their jobs.

At professional and managerial levels, senior people often become mentors, voluntarily developing promising young talent. Throughout the organization, at all job levels, older workers are motivated, have low rates of absenteeism, and tend to be skilled at what they do. According to a 2005 study by Towers Perrin for the AARP, in overall value to the organization these advantages contradict widely held management assumptions that older workers’ generally higher wages and benefits make them more expensive.

Value added by experienced workers may not yet be fully recognized among decision-makers, but has potential to give organizations a leg up in coping with the coming labor shortage if steps are taken to adjust conditions in the workplace to take advantage of it. Aligning tasks with older workers’ strengths creates a natural division of labor that encourages productivity. Training programs allow older workers to upgrade their skills, adapt to new technology, and “stay relevant.” Flexible hours and gradual step-down rather than abrupt retirement can extend the contribution of experienced workers and create a more efficient transition for the organization.

### The Down Side and What Can Be Done About It

Despite the value of knowledge and experience, there is no denying age-related functional limitations. Age affects physical and cognitive abilities in a variety of ways. These changes have an impact on quality of work, productivity, and safety, and are considerations every employer must deal with.

Fortunately, a variety of steps can be taken to assist older workers in everyday office tasks and prevent strain or injury. These considerations incorporate sound ergonomics and human factors methods, and the principles of universal design, which seeks solutions allowing for special needs and at the same time are helpful to anyone, regardless of age or physical limitations.



## How Age Affects the Musculoskeletal System

- **Muscles and Tendons.** Studies indicate that by age 40, people lose 5% of the strength they had at age 20. By age 55, the loss has grown to 20%. Also, as people age, muscle tissue injured by overexertion regenerates more slowly. Similarly, there is a weakening of tendon strength over time.
- **Bones and Cartilage.** Bones become more porous with age, which makes them more prone to fractures after falls. Spinal disc degeneration is prevalent enough in older populations to be considered a normal consequence of aging.
- **Musculoskeletal Disorders (“MSDs”).** Common MSDs involve back pain, hand pain, and shoulder/arm pain. 62% of men and women between ages 51 and 61 report one or more MSD. MSDs are the most common cause of disability among workers in their 50s and 60s. In one study, reports of back pain were 50% higher among workers 35-64 years old than among those 18-34 years old.



## Ways to Combat Musculoskeletal Disorders

While work-related MSDs are often difficult to separate from those caused by activities outside the office, employers should be proactive in making sure tasks neither cause MSDs nor make them worse. These steps will assist workers of all ages:

1. **Provide ergonomically designed seating.** Effective lumbar support is an essential feature in an office chair. Armrests are doubly important for the older worker not only for support of forearms during keyboard work, but also as an assist in rising from the chair. Easily operated controls encourage workers to adjust fit and support to individual needs.
2. **Mount shelving at an appropriate height.** Shelving that is too high or too low compromises sound lifting mechanics and increases the chance of injury. Positioning high-reach shelves a little lower and low-reach shelves a little higher can reduce risk.
3. **Educate employees in the basics of ergonomically sound work activity.** Knowledge is a useful tool in helping workers avoid common MSDs such as carpal tunnel syndrome. Claims can decrease by 60% when ergonomic education is provided with adjustable furniture.
4. **Encourage breaks in work routine.** Short stretch breaks once or twice an hour disrupt the repetitive arm/wrist/finger motions of typing and mousing, thus reducing the chance of MSDs.
5. **Promote exercise.** Exercise stimulates growth of muscle tissue and bone density. Some companies provide exercise facilities; others will compensate for some or all of the cost of fitness center memberships.



### Other Age-Related Changes

Problems with balance, slower reaction time, and changes in gait can affect older workers. Examining the workplace for obstacles at floor level and making changes as appropriate can help reduce the likelihood of tripping or falling. Assist features mandated for workers with disabilities may sometimes also benefit older members of the workforce.

### How Age Affects Hearing, Eyesight, and Cognition

- **Hearing.** Hearing loss occurs at a rate of 2–3.5% per year throughout life. Thus, a 50-year-old may miss what a 25-year-old hears clearly. Also, an older worker is less able to tune out background noise.
- **Vision.** As people age, their eyes change. Loss of ability to focus due to decreasing lens elasticity is called presbyopia and affects most people in their 40s or 50s. Other age-related changes occur in field of view, depth perception, contrast, motion, and color differentiation. The amount of light needed to see increases, as does the time to adjust to glare.
- **Mental Processes.** With age, learning new skills and new information becomes more difficult for most people. (“Fluid intelligence,” which affects response to new situations, declines in older people, while “crystallized intelligence,” or acquired learning, remains available to them.) Multi-tasking is more difficult for older people.

### Ways to Compensate for Age-related Sensory Loss

Accommodating age-related sensory limitations requires a multiplex strategy that may include provision for individually adjustable task lighting, reducing the pace of presentation in training situations, using larger type in instructional materials, and employing sound-masking techniques to dampen background noise. While especially helpful for older workers, such steps are likely to benefit all workers.



### Conclusion

The matured Baby Boom generation, still actively employed, brings to the workforce more older people than ever before. Their presence, in record numbers, calls attention to special needs. Acknowledging both sensory and musculoskeletal differences in older workers means adapting the workplace to offer them as much comfort and safety as possible. It also means encouraging ergonomically sound ways of working. Most of these adjustments help younger workers as well, who will continue to benefit from them as their generations mature.

## References

*Meeting the Challenges of an Aging Workforce.* Michael Silverstein, M.D., M.P.H., *American Journal of Industrial Medicine*, 2008.

*Will You Still Need Me When I'm 64? Designing the Age-Friendly Workplace.* Michael Silverstein, M.D., M.P.H., *Occupational Hazards*, December 2007.

*The Business Case for Workers Age 50+: Planning for Tomorrow's Talent Needs in Today's Competitive Environment.* A Report for AARP Prepared by Towers Perrin, December 2005.

*Older Workers: Are There More Older People in the Workplace?* Bureau of Labor Statistics, U.S. Department of Labor, July 2008. [http://www.bls.gov/spotlight/2008/older\\_workers/](http://www.bls.gov/spotlight/2008/older_workers/).

*Times, They are a Changin': Addressing Changing Populations in the Workplace.* Unpublished white paper by Drew Bossen. Atlas Ergonomics, Grandhaven, Michigan, 2005.

## Ergonomics at Allsteel

Our ergonomics team studies workers: who they are, the way they work, and what they need to be comfortable and healthy. These insights are built into every product we make. Considering the impact of demographic patterns like the aging of the workforce is an integral part of the process.

### For more information

[www.allsteeloffice.com/ergo](http://www.allsteeloffice.com/ergo)  
or email [ergonomics@allsteeloffice.com](mailto:ergonomics@allsteeloffice.com).

### About the Authors

Dr. Scott Openshaw, CPE, Ph.D., headed the Ergonomics Group at Allsteel. With an academic background in human biology as well as biomedical and industrial engineering, Scott applies human factors and ergonomics principles to product design. Scott has taught rehabilitation engineering at the university level and holds a doctoral degree in industrial engineering from the University of Iowa. He is a member of the Human Factors and Ergonomics Society, the Institute of Industrial Engineers, and is a Certified Professional Ergonomist, granted by the Board of Certification in Professional Ergonomics.

Drew Bossen, P.T., M.B.A., is founder of Atlas Ergonomics, an ergonomics consultancy with expertise in multidisciplinary programs for minimizing injuries in office settings, healthcare facilities, the industrial workplace, and transportation fleets. Drew is a member of the Human Factors and Ergonomics Society and the American Physical Therapy Association, where he serves on the organization's Occupational Health Executive Committee, among other leadership roles.

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Muscatine, Iowa 52761-5257  
[allsteeloffice.com](http://allsteeloffice.com)

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