Designing for an Aging Workforce

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Overview

- Myths and facts about aging
- Age-related changes to the body and mind
- Safety and health concerns
- Designing a safe workplace
- Q&A
Myths and Facts About the Aging Workforce
The aging workforce will only be an issue for the next few years.

MYTH
Washington population percent and labor force participation rate, ages 65-74

There are plenty of younger people entering the workforce to replace all of the older workers as they retire.
WA Adult Population Projection

Industries projecting labor shortages

- Utilities
- Transportation
- Healthcare
- Construction
- Agriculture
- Others?
Older workers are injured more often than younger ones.
National Rates, Nonfatal Occupational Injuries and Illnesses Treated in U.S. Hospital Emergency Departments, 1999

Sprains and Strains - Musculoskeletal Disorders

Incidence Rate by Age Group

Source: BLS Data, 2006
Myth or Fact?

- Older workers will be off work longer if they do get injured.

FACT
Median days away from work, nonfatal occupational injuries and illnesses by age group, 2012

- 65 and over
- 55 - 64
- 45 - 54
- 35 - 44
- 25 - 34
- 20 - 24
- 16 - 19
- 14 - 15
Bottom Line

- Number of older workers increases through 2020 - holding until 2030 - then gradually decreases
- Older workers have:
  - Fewer claims
  - More time loss per claim
How Aging Affects the Body and Mind
How we change with age

Things we have some control over

- Strength
- Endurance
- Flexibility
- Joint range of motion (e.g. reach)
- Balance
- Reaction time
- Manual dexterity
- Learning and memory
How we change with age

Things we have less control over

- Vision
- Light sensitivity
- Hearing
- Temperature sensitivity
- Sleep disorders
- Healing time
- Chronic conditions (e.g. arthritis)
Aging brings many physical and cognitive changes
More variability among older workers than younger ones
Most older workers able to compensate for changes and perform at same level
Jobs with high physical demands, rapid information processing may require changes
Designing an age-friendly workplace
Are we designing for:

Older workers?

OR

The aging workforce?
What should be the focus?

- Reduce physical demands
- Prevent slips, trips and falls
Compensable Claims by Injury Event,
WA State Fund and Self-Insured, 2007-2011

- Falls from elevation: 7%
- Falls: same level: 13%
- Other: 15%
- Other non-impact injuries: 7%
- Struck by / against vehicles: 3%
- Non-impact sprains and strains: 39%
One of every six claims is a non-impact injury of the back.
Reduce physical demands
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Think about a “zero lift” policy
Reduce physical demands

Use mechanical assists
Reduce physical demands

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Reduce physical demands

Position work/loads optimally
Reduce physical demands

Reduce reaches – even with light loads

How much can you safely lift?
Easy calculator for analyzing lifting operations

START
Reduce physical demands

Organize work with good work/rest cycles
Help with reduced flexibility

Consider reach zones
Help with reduced flexibility
Swivel seat for forklifts

Help with reduced flexibility
Prevent slips, trips and falls
Increased risk for falls

- Combination of:
  - A. Vision changes
  - B. Slower reaction time
  - C. Balance issues
  - D. Loss of leg strength

- Older workers have more serious injuries when they fall
Balance and Reaction Time

- Avoid uneven surfaces...repair and maintain floors
- Use slip resistant materials on floors
- Provide good lighting on stairs, in lobbies, etc.
- Provide handrails
• Find alternatives to working on ladders
Vision and lighting

Improve quantity and quality of light
Vision and lighting

- Eliminate glare
- Provide more individual control over lighting
- Add color contrast
Vision and lighting

- Eliminate the need to adapt to bright light from dark and vice versa
- Reduce visual “clutter” – keep visual targets clean and clear
Bottom Line

- Workplace design should focus on:
  A. Reducing physical demands
  B. Preventing slips, trips and falls
- Fixing one can help with the other
- Wellness programs also important
The brain is only about 2% of a person's body mass but requires about 20% of its oxygen & calories.