MINIMIZING INCIDENTS AN AGING WORKFORCE

Pamela Ferrante, CSP, CHMM
J&C Safety Consultants
www.jcsafety.com
TODAY’S PRESENTATION

- Let’s Define the Issue
- Normal Aging Processes
- The Impact of Aging in the Work Environment
- Strategies for the Workplace
What Do the Numbers Say?

- Between 2000 and 2020, the number of people in the 55 to 64 and the 65+ age brackets will increase by nearly 40%.

- The fastest growing age bracket is those 85 and older.
What Do the Numbers Say?

By 2005 there will be 58 million workers in this country. Median age = 40.5 (highest ever)

The number of workers 45 and older has doubled since 1950.
What Do the Numbers Say?

United States Workforce Aged 55+

- 18.2 million in 2000;
- 25.2 million in 2008;
- 31.9 million in 2025.

38% increase over the past 10 years and 75% increase in the past 25 years.
What Do the Numbers Say?

The older worker age group is the fastest growing group in the workforce; expected to increase annually by 3.8%.
What Do the Numbers Say?

ARE WE TALKING ABOUT YOU?

- You can join the AARP at age 55.
- WHO and the National Advisory Council on Aging uses age 45.
- The American Age Discrimination Act uses 40 as an eligibility marker.
Oldest by Industry

- **Construction** - ~39 years old
- **Electric Power Industry** - ~44 years old
- **Ford Motor Company** – 45 years old
- **Miners** – 46 years old
- **Healthcare** –
  - **Direct care staff** – 40 years old
  - **Nurses** – 48 years old (50 in 4 more years)
Why Now?

- Expanding economy
- Declining birthrate
- People living longer
- Social Security eligibility age rising
- Lack of retirement planning
- Baby boomers
- “Sandwich” generation
The Normal Aging Process

Physical

✓ Eyesight
✓ Hearing
✓ Sense of touch
✓ Manual dexterity
✓ Muscular strength
✓ Chronic medical conditions
The Normal Aging Process

Cognitive
✓ Short-term and long-term memory
✓ Decision-making
✓ Autonomic attention responses
✓ Ability to learn new skills
✓ Reaction times
Visual Changes

1. Loss of elasticity of lens or lens yellows; more light required to see.
2. Lens hardens, ciliary muscles get weaker - eyes can’t change shape to focus as well or as quickly.
Visual Changes

- Additional light needed to see creates more glare - also harder to recover from glare.
- Night driving is much more difficult.
Visual Changes

3. Your “near point” gets further away (the closest an object can be and still in focus - AKA presbyopia)

- Age 20 – 4”
- Age 30 – 5.5”
- Age 40 – 8.5”
- Age 100 – 24”
Visual Changes

4. Distance acuity/motion perception reduced - ability to determine the details of a moving target - age 45.

5. Contrast sensitivity reduced - ability to recognize faces under low contrast conditions. Distance and depth perception reduced.
Visual Changes

6. Phototrophic acuity decreased - ability to transition from light to dark, and vice versa is harder.

7. Slower rate of scanning - difficult to detect, locate and identify objects - especially if visual field cluttered/contains distractions.
Auditory Changes

- Presbycusis begins between age 35-40
- Results in difficulty:
  - tuning out background noises;
  - detecting simple, low intensity sound;
  - locating the source of the sound;
  - discriminating sounds when multiple noise sources are occurring.
Auditory Changes

- Auditory tasks/stimuli are given lower priority.
- Increase in incidence of vertigo.
Sense of Touch

- Nerve receptors in your fingertips decline
- Up to ¼ of older adults lose their sense of touch altogether.
Manual Dexterity

- Develop a more “conservative reach” (elbow closer to the torso, limited elevation of shoulder).
- Grasping objects becomes harder.
- Fine motor skills decline.
Muscular Strength

Basic strength peaks at 30; declines thereafter. Decline is more rapid after 60, regardless of our overall physical condition.
Other Physical Capabilities

- Muscle mass and elasticity
- Bone mass and degeneration of the spinal structures
- Control of posture stability
- Balance and coordination
- Ability to recover balance
- Speed of movement
- Ability to regulate body temperature
Cognitive Changes

- Fluid intelligence is impaired (short term memory).
- Ability to retrieve and transfer information is reduced (long term memory).
Cognitive Changes

- Older adults make decisions more slowly than younger ones, but the quality of the decisions is not affected with age.
- Causes a problem when “automatic attention responses” (AAR) are required for a task.
Cognitive Changes

- Ability to “multi task” decreases, worse if tasks need to be prioritized, tasks are unfamiliar, or time is short.
- Ability to learn new material or skills slows.
- Response time slows, especially as the task gets more complex.
Miscellaneous Issues

- Polypharmacy – 10 to 30% of ER visits by older adults are due to adverse drug reactions
- Increase in depression
- Loss of spouse or siblings
- Increase in obesity of general population
What Does it Mean to Me?

How do all of these changes translate into problems in the workplace?
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FALLS

- Adults over age 64 have a 3x greater risk of falling (Department of Labor).
- Average lost work days for a fall-related injury:
  - >55 - 11 days
  - <55 - 6 days
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Fatal Falls

15 to 44 - >15 feet
45+ - >7 feet

*14% of fatalities among older workers are from falls (9% for younger age groups)
Fleet Safety

- Leading cause of fatalities for workers >55 is roadway MVAs (22%)
- Non-roadway MVAs accounted for another 12%
- Opposite for general public
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- More likely to occur at an intersection – turning left
- Merging or changing lanes on highway
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Possible Reasons Why

1. Glare/vision issues
2. Slower reaction times
3. Decrease in cognitive functioning
4. Decreasing muscle strength and range of motion
5. Chronic medical problems
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Older workers who must drive for work can’t self-select driving times and often are rushing to meet deadlines.
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Ergonomics Related Injuries

37% of all work-related disabilities among older workers are CTDs.
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Hearing related disabilities are the third most common disability among older adults; behind arthritis and hypertension.
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*Psychosocial Issues*

- Hiring freezes/lay offs = more overtime and longer shifts.
- Shift work has a cumulative fatigue effect; less tolerated by older workers.
- Decreased alertness becomes more prevalent.
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Psychosocial Issues

• $4 billion per year spent due to worker absenteeism - dealing with personal problems among older workers;

• $4.9 billion to replace employees who resign for work/family issues.

Source: AARP
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A Crucial Distinction

• Total injury *rates* are actually lower among older workers; although older workers are more likely to die or take longer to recuperate.

• Some good hypotheses as to why, but nothing proven as of yet.
Strategies and Solutions

So What Can We Do?
Strategies and Solutions

Visual Changes

1. Raise the level of illumination.
2. Consistent, even light levels.
3. Gradual changes in light levels.
4. Eliminate glare.
Visual Changes

5. Increase color contrast.
6. Improve visibility of stairs.
7. Proper set-up of computer work stations.
8. Consult with a lighting/noise reduction expert
Table lamps should be tall enough for the bottom of the lampshade to fall at the eye level of the person seated next to it.
Designing Color Changes

1. Use pastels on walls and large areas.
2. Green/blue walls for tasks requiring high concentration.
3. Provide visual interest in color.
4. Critical machine parts in bright or contrasting colors (no more than 5 accent colors).
Strategies and Solutions

**Auditory Changes**

1. Reduce overall level of noise and background noise with sound dampening products.
2. Assure that alarms/warning devices have both auditory and visual alarms.
3. Implement a Hearing Conservation Program.
Strategies and Solutions

Manual Dexterity

- Substitute levers or push buttons for knobs.
- Assure that tasks have a comfortable range of motion – review control panels.
Strategies and Solutions

**Strategies for Muscular Strength**

Provide opportunities for strength training – (on site gyms, fitness classes, morning stretches).

Encourage employees to participate in fitness programs off work.
Strategies and Solutions

Strategies for Muscular Strength

Take a look at tasks requiring lifting; use mechanical means where possible.
Strategies and Solutions

Don’t Overlook

• Review work/break schedule; revise to reduce fatigue – more breaks.
• Provide opportunities for napping.
 Strategies and Solutions

**Body Temp. Regulation**
- Review PPE Hazard Assessments for proper selection and sufficient supply - focus on hands and body.

**Sense of Touch**
- Install thermal sensors
- Provide hand protection
Strategies and Solutions

Ergonomic Issues

• Weak abdominal muscles/lack of regular exercise = spinal instability and back pain.
• Walking/weight bearing exercises are crucial as we age – provide opportunities (time and space) at workplace.
Strategies and Solutions

Fall Protection

- Housekeeping, housekeeping, and more housekeeping!!
- Color contrast on ramps, surfaces, and stairs
- Handrails on all stairways
- Establish a balance exercise program.
Fleet Safety

- Evaluate delivery schedules/routes
- Regular driving refresher training classes
- Regular medical evaluations for drivers
Strategies and Solutions

Cognitive Changes

- Minimize the complexity of tasks.
- Consider automating certain processes.
- Eliminate clutter on computer screens and work areas.
Cognitive Changes

- Lengthen time requirements between steps in a task.
- Reduce need for multi-tasking.
- Increase decision making time.
Cognitive Changes

- Consider reaction time when assigning workers to tasks.
- Provide opportunities for practice and time to develop familiarity.
Strategies and Solutions

- Older adults learn differently, respond positively to opportunities to practice.
- Use frequent, hands on refreshers (especially for emergency responses/AAR tasks).
Effective training:

- relates to past learning experiences,
- moves at an acceptable pace,
- involves learning smaller pieces of information at a time.
Psychosocial Issues

- Develop caregiving resources referral list.
- Provide retirement planning resources.
- Provide opportunities for older workers to transition into retirement – part time, flex time, bridge employment.
- Expand FMLA benefits.
Psychosocial Issues

- Provide opportunities for workers to take responsibility for their health – wellness programs, fitness training, weight management, etc.
- Brown bag seminars on “senior” issues – i.e. medication use, depression, coping with loss, disease management.
MINIMIZING INCIDENTS
IN AN AGING WORKFORCE

Thanks for your attention!!