Ergonomics Methods to Reduce Injury Risk Among Obese and Aging Employees

W. Gary Allread, PhD, CPE
Institute for Ergonomics
The Ohio State University

Vicki J. Missar, CPE
Aon Risk Solutions
Webinar Objective

- To highlight how existing ergonomics research and knowledge can be used to address issues related to the obese or aging workforce

AEC 2013: Pre-Conference Workshop Description

- Many companies struggle with creating workplaces that keep all employees safe, including those who are overweight or working into their later years. This workshop will provide both short- and long-term strategies for addressing these issues in office and production environments. It will include demonstrations, case studies, and brainstorming sessions that focus on workplace design considerations and modifications that accommodate these employees. Participants will also join in discussions on how to alter existing ergonomics assessment tools to account for the increasingly diverse workforce.
The Changing U.S. Workforce – WEIGHT

- The percent of the population considered obese (Body Mass Index of $\geq 30$) has risen dramatically in the past 25 years.

1985

- No Data
- <10%
- 10%–14%
- 15%–19%
- 20%–24%
- 25%–29%
- $\geq 30$

2010

- No Data
- <10%
- 10%–14%
- 15%–19%
- 20%–24%
- 25%–29%
- $\geq 30$

Institute for Ergonomics, The Ohio State University
614-292-4565
www.ergonomics.osu.edu
The Changing U.S. Workforce – AGE

- The number of workers 55 years or older has risen, while other age groups have declined or stayed the same.
<table>
<thead>
<tr>
<th>An obese employee is more likely to have…</th>
<th>An older employee is more likely to have…</th>
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<tbody>
<tr>
<td>▪ Increased abdominal depth, waist circumference</td>
<td>▪ Decreased strength</td>
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<tr>
<td>▪ Elevated heart rate</td>
<td>▪ Reduced fitness level and aerobic capacity</td>
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<tr>
<td>▪ Reduced lung function</td>
<td>▪ Poorer visual and auditory acuity</td>
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<tr>
<td>▪ Slower reaction time</td>
<td>▪ Slower cognitive speed and function</td>
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<tr>
<td>▪ Decreased joint range of motion</td>
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Ergonomics Strategies to Address These Issues

- Long-term
  - Develop a healthier work culture
    - Provide better-quality food in company cafeterias and vending machines and at meetings and other events
    - Promote health and wellness programs
      - Provide on-site physical activities centers
      - Offer “de-stressing” activities
      - Train workforce on importance of fitness and proper nutrition
  - Help older workers adapt to new technologies and provide them more-flexible work schedules
Ergonomics Strategies to Address These Issues

- Short-term (primary focus of workshop)
  - Examples:
    - Modify existing anthropometric (body size) guidelines to account for current worker sizes and shapes
    - Provide adjustable equipment to account for the physically diverse working population
Ergonomics Strategies to Address These Issues

- Short-term (primary focus of workshop)
  - Examples:
    - Use relevant research to adjust ergonomics guidelines
    - Consider how to adjust commonly used ergonomics assessment tools to account for age and weight differences