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Bending Over Backward

Why Ergonomics Are Important in the Workplace

Cindy Pauley, All-Safe Manager

Cindy Pauley



- ▶ All-Safe Manager for AgriSphere, LLC
- ▶ Certified Occupational Safety Specialist (COSS)
- ▶ Certified Occupational Hearing Conservationist (COHC)
- ▶ 11+ years of Safety experience in the following:
 - ▶ Chemical Industry
 - ▶ General Industry / Manufacturing
 - ▶ Oil and Gas
 - ▶ Agriculture – *NEW!*
- ▶ 9 years in Emergency Services
- ▶ 25 years as Disaster Action Team Member

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Who is AgriSphere, LLC



AgriSphere, LLC



- ▶ Professional Consulting
- ▶ Customized Virtual Client Portals
- ▶ Cloud-based Solutions and Content
- ▶ Advanced Training and Records Management





Objectives

- ▶ History of Ergonomics in the Workplace
- ▶ The Importance of Ergonomics
- ▶ Ergonomic Risk Factors
- ▶ Musculoskeletal Disorders
- ▶ Ergonomic Assessments and Solutions
- ▶ Training and Recordkeeping Requirements



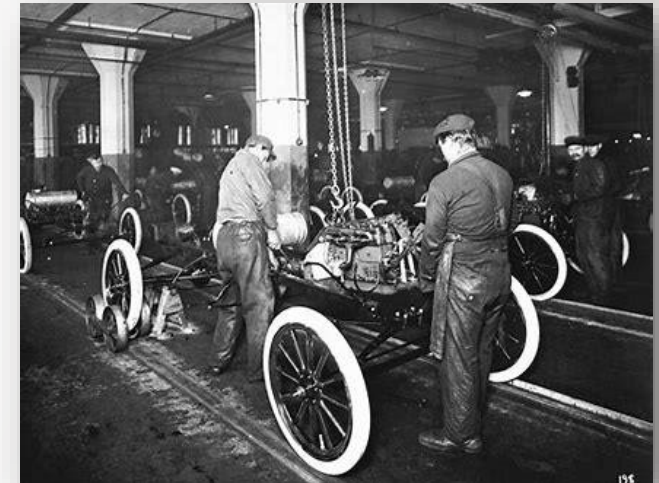
The History of Ergonomics



Henry Ford, 1863-1947

- ❑ 'The work must be brought to the man waist-high. No worker should ever have to stoop to attach a wheel, bolt, screw or anything else to the moving chassis.'

- Burlingame R: *Henry Ford: A great Life in Brief*, p. 75, New York: Alfred A. Knopf, 1966



The Importance of Ergonomics



- ▶ Direct and Indirect Costs
- ▶ Compliance

STAGGERING STATS

- ▶ 80% of adults experience lower back pain over the course of their lifetime.
- ▶ 1 million back injuries are reported each year. 24% accounting for days away from work in the U.S.
- ▶ 1 in 5 workplace injuries is a back injury; 80% of which are associated with manual lifting.
- ▶ 1/3 of these back injuries could have been prevented with proper ergonomic solutions.



Understanding Ergonomics



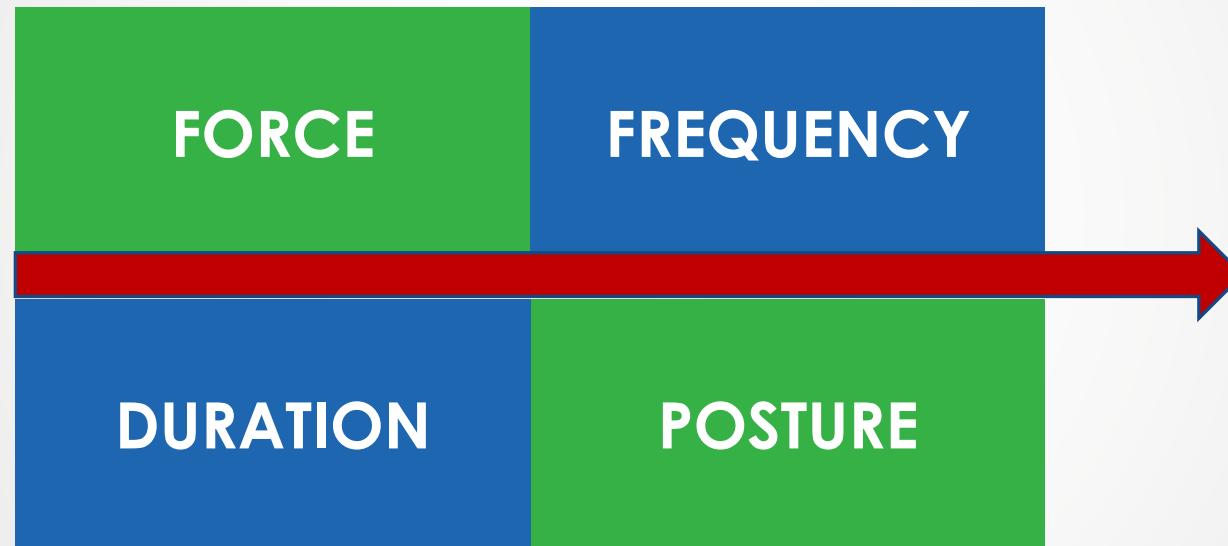
- ▶ What are Ergonomics?
- ▶ What it is NOT!
- ▶ Affected Industries
- ▶ An Effective Ergonomics Program



Ergonomic Risk Factors



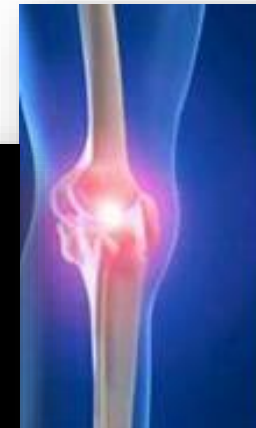
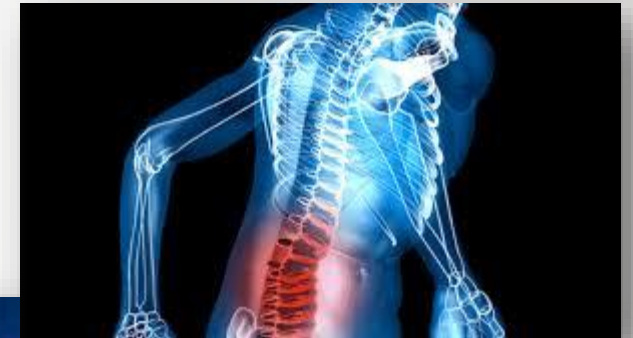
➔ The 'Big Four'



Musculoskeletal Disorders



- Muscles, Tendons, Nerves, etc.
- Primary Ergonomic Hazard
- Difficult to Assess
- Costly – Directly and Indirectly
- Often Unreported



Ergonomic Risks



SUSTAINED OR REPEATED EXERTIONS



Ergonomic Risks



STATIC EXERTIONS



Ergonomic Risks



FORCEFUL EXERTIONS



Ergonomic Risks



POSTURE



Ergonomic Risks



VIBRATION









Ergonomic Assessments



- Ergonomics Team
- Use of an Evaluation Form



Caution Zone Checklist <small>Use one sheet for each position evaluated.</small>			
Movements or postures that are a regular and foreseeable part of the job, occurring more than one day per week, and more frequently than one week per year.	If done in this job position ✓ the box	Job Position evaluated: Date:	No. of employees in these jobs?
Awkward Posture		Comments/Observations	
 <p>1. Working with the hand(s) above the head, or the elbow(s) above the shoulders more than 2 hours total per day.</p>	<input type="checkbox"/>		
 <p>2. Working with the neck or back bent more than 30 degrees (without support and without the ability to vary posture) more than 2 hours total per day.</p>	<input type="checkbox"/>		
 <p>3. Squatting more than 2 hours total per day.</p>	<input type="checkbox"/>		
 <p>4. Kneeling more than 2 hours total per day.</p>	<input type="checkbox"/>		
High Hand Force		Comments/Observations	
 <p>5. Pinching an unsupported object(s) weighing 2 or more pounds per hand, or pinching with a force of 4 or more pounds per hand, more than 2 hours total per day (comparable to pinching half a ream of paper).</p>	<input type="checkbox"/>		
 <p>6. Gripping an unsupported object(s) weighing 10 or more pounds per hand, or gripping with a force of 10 or more pounds per hand, more than 2 hours total per day (comparable to clamping light duty automotive jumper cables onto a battery).</p>	<input type="checkbox"/>		



Ergonomic Solutions



- ▶ Training!
 - ▶ Hazards, Worker Positioning, Proper Lifting, Neutral Positions
- ▶ Adjusting Workstations
- ▶ Monitoring Neutral Positions
- ▶ Proper Lighting
- ▶ Worker Rotation
- ▶ Automation



Silence Doesn't Equal Safe



WARNING!!!

Just because a worker
doesn't complain, doesn't
mean there is not an issue!



Training and Recordkeeping



➤ Training Requirements



➤ Recordkeeping Requirements





Summary

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- ▶ The Importance of Ergonomics
- ▶ Ergonomic Risk Factors
- ▶ Musculoskeletal Disorders
- ▶ Ergonomic Assessments and Solutions
- ▶ Training and Recordkeeping Requirements





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- Professional Consulting Services
- Safety Programs
[program development, auditing, training, technical tools]
- Maintenance Programs
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Thank You!