

The Aging Workforce:

Keeping Your Employees Charged
at Work

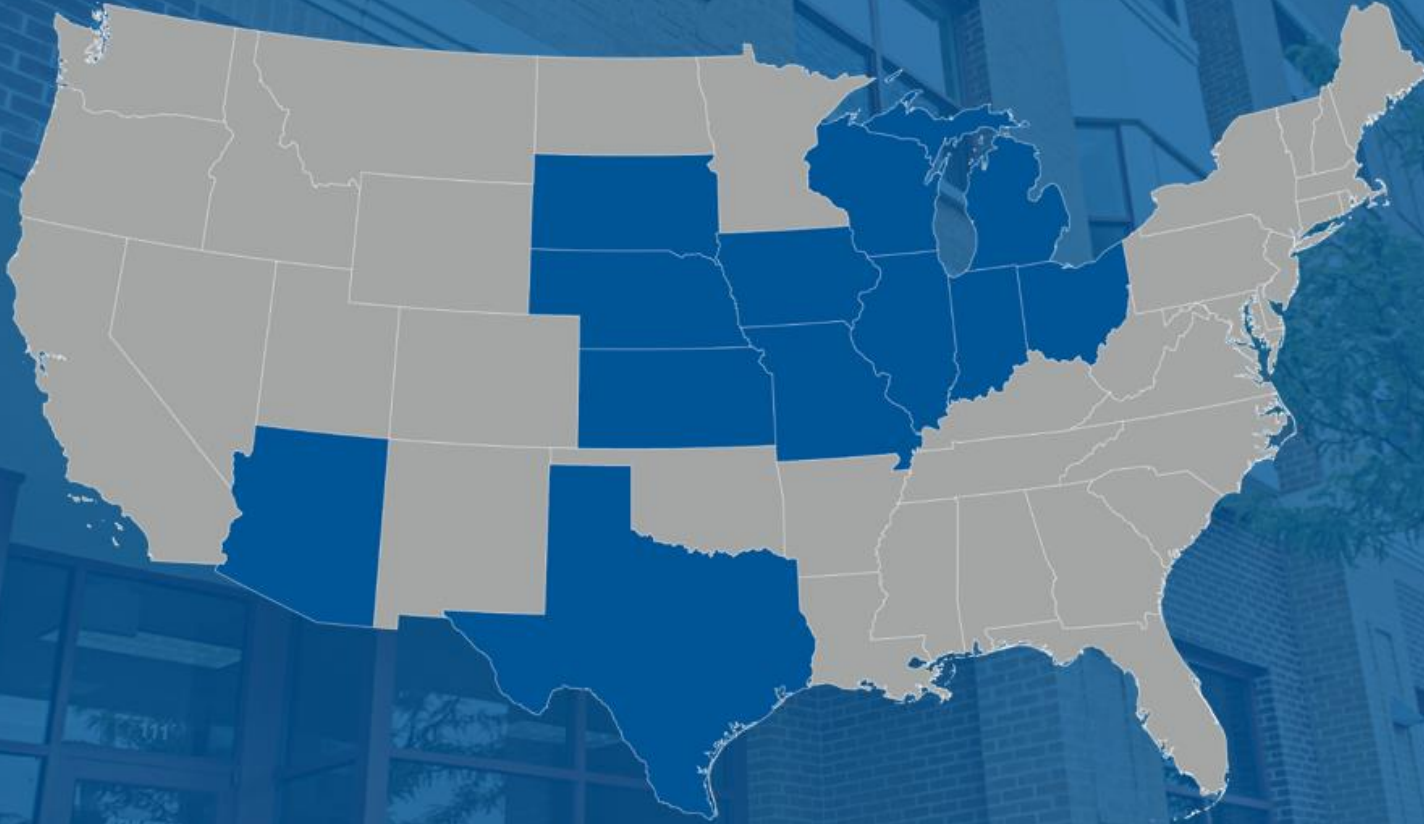
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Employers Understand the Value of Workforce Health and Injury Prevention

Highlight Text Here

Objective of Presentation

- Understand Aging and Shifting Employer Expectations
- Increase employers' knowledge about programs designed to keep employees safe while working
- ACT-Implement



Don't lose productivity as a result of preventable injuries. Stay powered up by keeping employees healthy and injury free with these services.



**What is facing all
employers?**

The Aging Work Force

- Facts
 - 2008 -28 million workers over age 55,
 - 2016-40 million+ workers over age of 55—43% increase
 - By 2020, an estimated 25% of labor force will be 55 and older and 17% will be 65 and older
 - The average age of a high-skilled manufacturing worker is 56
 - Low Back injuries account for 24% of all MS injuries involving days away from work
 - Rotator cuff involvement increases after age of 30
 - Severity of injury increases with age

The Aging Worker

Yes! it is happening to You and Me

Physical Changes

-Strength and flexibility decreases

Average population: strength appears to decrease

5% by age 40

20% by age 55

40% by age 75

-Aging associated with reduction in force, endurance, power and recovery from injury

-Older muscles have reduced ability to regenerate after overexertion

-to make up for muscle mass lost during each day of bed rest, older people may need to exercise for up to 2 weeks

-balance is impacted



The Aging Worker

Yes! it is happening to You and Me

Physiological Changes

-blood pressure rises

-faster rate of fatigue

-slower healing time

-number of cells for healing act more slowly and decrease in overall number.



The Aging Worker

Yes! it is happening to You and Me

Vision

- Acuity declines 26% by age 60
 - Speed & accommodation decline after age 40
 - Time to react to glare increases 50%
 - Near point 4" at age 20, 8.5" at age 40
 - More light is required
 - 2x by age 40
 - 3-4x by age 60
 - changes in color perception
- Due to retina and lens changes



Psychosocial:

-Difficulty remembering, concentrating, learning new materials



-disengagement from work due to lack of concentration

Hearing:

-changes in hearing due to exposure to loud noises as well as normal process of aging



-hearing high pitch sounds may be more difficult

-Presbycusis-normal words are harder to understand

Keep Listening: it can get worse

Mouth and Nose

- nose tends to lengthen and enlarge and the top tends to droop
- less saliva is produced-resulting in dry mouth



More Facts that impact workers

- American obesity rate
 - More than one-third (36.5%) of U.S. adults are obese⁴
- Diabetes
 - Nationwide, diabetes rates have nearly doubled in the past 20 years — from 5.5 percent (1994) to 9.3 percent in 2012.³
- Rotator cuff tears peak at age 40 and older⁴
- Rapidly increasing prevalence of Chronic Low Back Pain⁴

Sources: 1:BLS, 3:ADA, 4:CDC

Work Shift Sleep Disorder

- Increases stress
- May cause drowsiness during the drive to work and while at work
- Challenges concentration
- Increase sick days: Colds, flu
 - Body makes less melatonin
 - Controls waking and sleeping cycles
 - Responsible for contributing to healthy immune system

Benefits of working with the Aging Workforce

- Low turnover rate
- Commitment to quality
- Good attendance and punctuality
- Few on-the-job accidents
- High motivation and engagement
- Strong work ethic and experience
- Loyalty and reliability
- Availability for various schedules
- Diversity of thought and experiences



So Now What?

*Do we address the
Work or the Worker?*

Addressing the Work

Ergonomic Risk Analysis

Start
Here



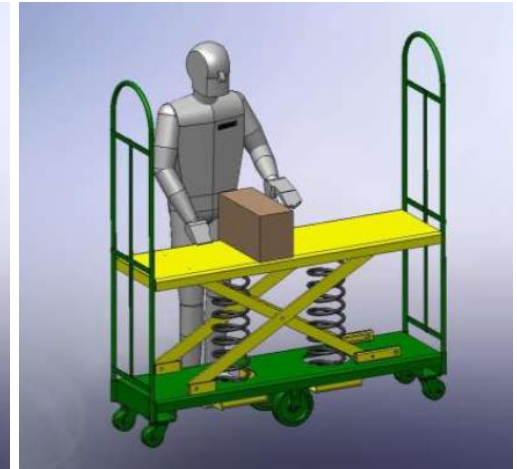
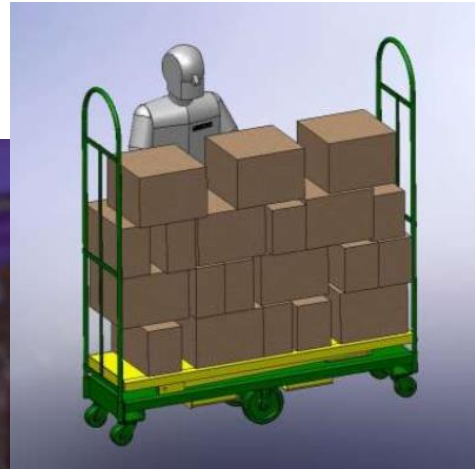
Identify risks that are draining employee's energy

- Identifies and quantifies ergonomic risk factors associated with job tasks, which have the potential to cause musculoskeletal injuries.

Uses common assessment tools (NIOSH Equation, Strain Index, RULA, REBA, WISHA)



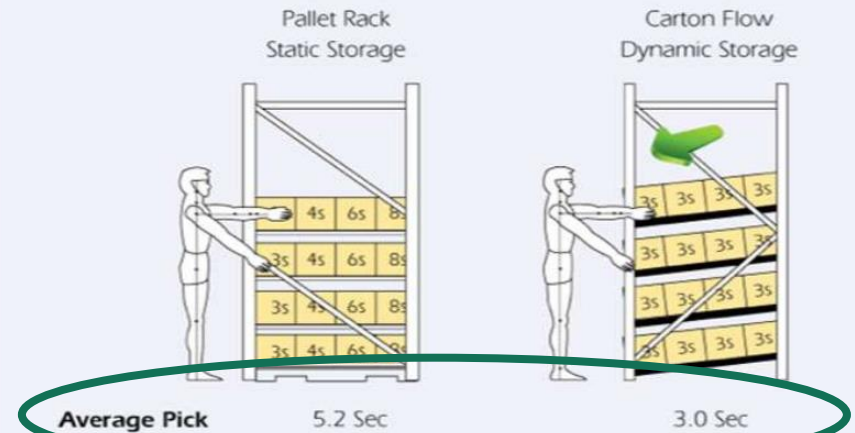
Engineering Controls



Reduce risk and improve productivity



Pick Rates

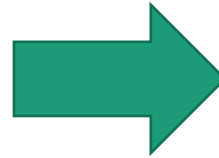


Common Injury: Herniated Disc

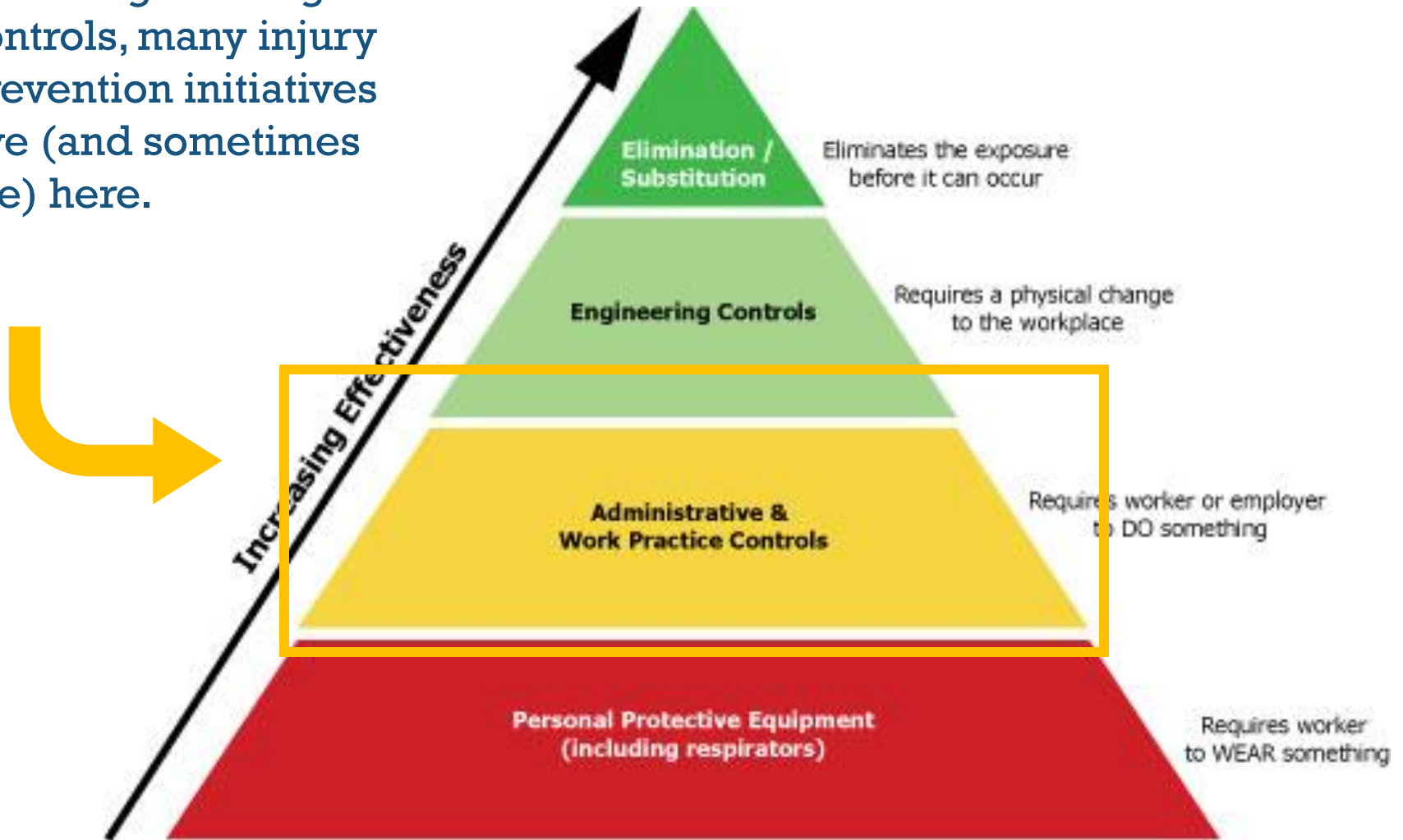
- LOD 34 days
- Medical costs - ~\$27,000

Engineering Control: Pallet lift table

- Cost - \$1,000



Due to initial cost of some engineering controls, many injury prevention initiatives live (and sometimes die) here.



Addressing the Worker? Why wouldn't we?



Improving Musculoskeletal Health

- Win/Win
- Group Health benefits as well as decrease work comp claims
- Look at the issue globally vs through a microscope
- Work with movement experts to help reduce MSDs at the workplace
- Proactively identify employees who need intervention
- Seek out employee vs waiting for employee to reach out

Top Ten Reasons to Visit a Physician

- Skin Disorders
- **Joint Disorders**
- **Back Problems**
- Cholesterol
- Upper Respiratory
- Anxiety/bipolar/depression
- **Chronic neurological disorders**
- High Blood Pressure
- **Headaches and Migraines**
- Diabetes

Financial Impact of WRMSDs

An iceberg floating in the ocean. The tip of the iceberg is visible above the water line, while the much larger, jagged base is submerged below the surface. The sky is blue with light clouds, and the water is a deep blue.

- MSDs are the #1 cost in Healthcare today (660 B Annually)
- Account for at least 34% of costs
- Examples of the DIRECT cost of an WMSD
 - Carpal Tunnel Syndrome – \$28,647
 - Sprain – \$28,338
 - Strain – \$32,319
 - Hernia – \$23,083
 - Inflammation – \$32,080
- The INDIRECT costs are often 3-4x the direct cost of a WMSD – these include lost time, absenteeism, staffing accommodations, employee replacement and retraining, EMR, etc.



Employers need to adapt to the changing environment-Cannot close your eyes to the issues

- Multi-tiered approach
 - Engineering
 - **Behavior Modification-Addresses the Worker-Teach the worker**
- **Critical to get upper management support and buy in from all levels**

This cannot be management's view of ergonomics

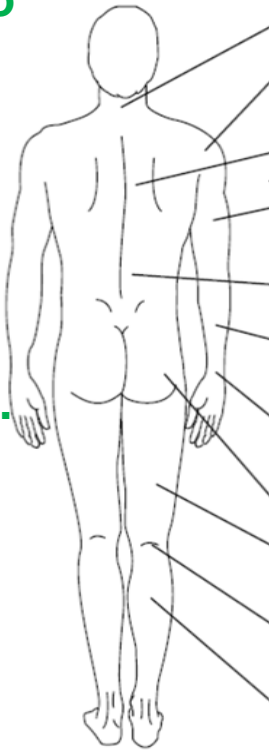


Solution:

*Work place
performance
optimization*

Employee surveys using real time data to drive decision making. Deploy resources where they are needed.

The diagram below shows the approximate position of the body parts referred to in the questionnaire. Please answer by marking the appropriate box.



© Cornell University, 1994

	During the last work <u>week</u> how often did you experience ache, pain, discomfort in:					If you experienced ache, pain, discomfort, how uncomfortable was this?			If you experienced ache, pain, discomfort, did this interfere with your ability to work?		
	Never	1-2 times last week	3-4 times last week	Once every day	Several times every day	Slightly uncomfortable	Moderately uncomfortable	Very uncomfortable	Not at all	Slightly interfered	Substantially interfered
Neck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Upper Back	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Lower Back	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forearm (Right) (Left)	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Wrist (Right) (Left)	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Hip/Buttocks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thigh (Right) (Left)	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Knee (Right) (Left)	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Lower Leg (Right) (Left)	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

Employer Considerations for the Aging Workforce

- Increase rest breaks
- Incorporate stretch breaks
- Water breaks/bottles
- Enhance lighting
- Signs should be bigger
- Incorporate balance challenges vs single stretch programs
- Rotate Work
- Assess if aging workers should clock in for 1st shift vs 3rd shift
- Encourage proactive communication to employer

Employer Based On-Site Injury Prevention Services

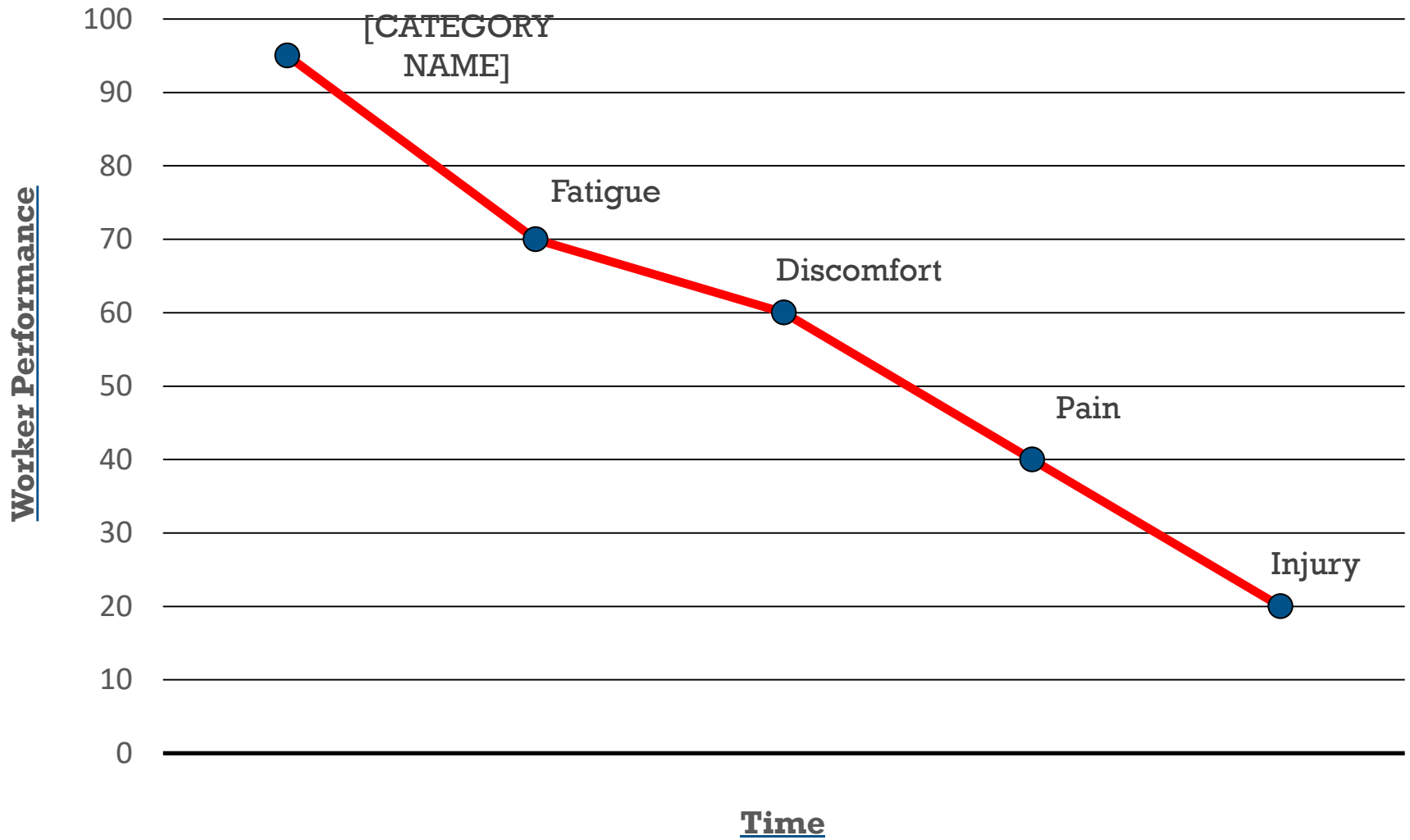
Employee Education

- Reduces severity and frequency of injury
- Improves employee morale and productivity.

Example: Successful program resulted in a 55% reduction in ergonomic injuries and 85% reduction in lost work days within two years.

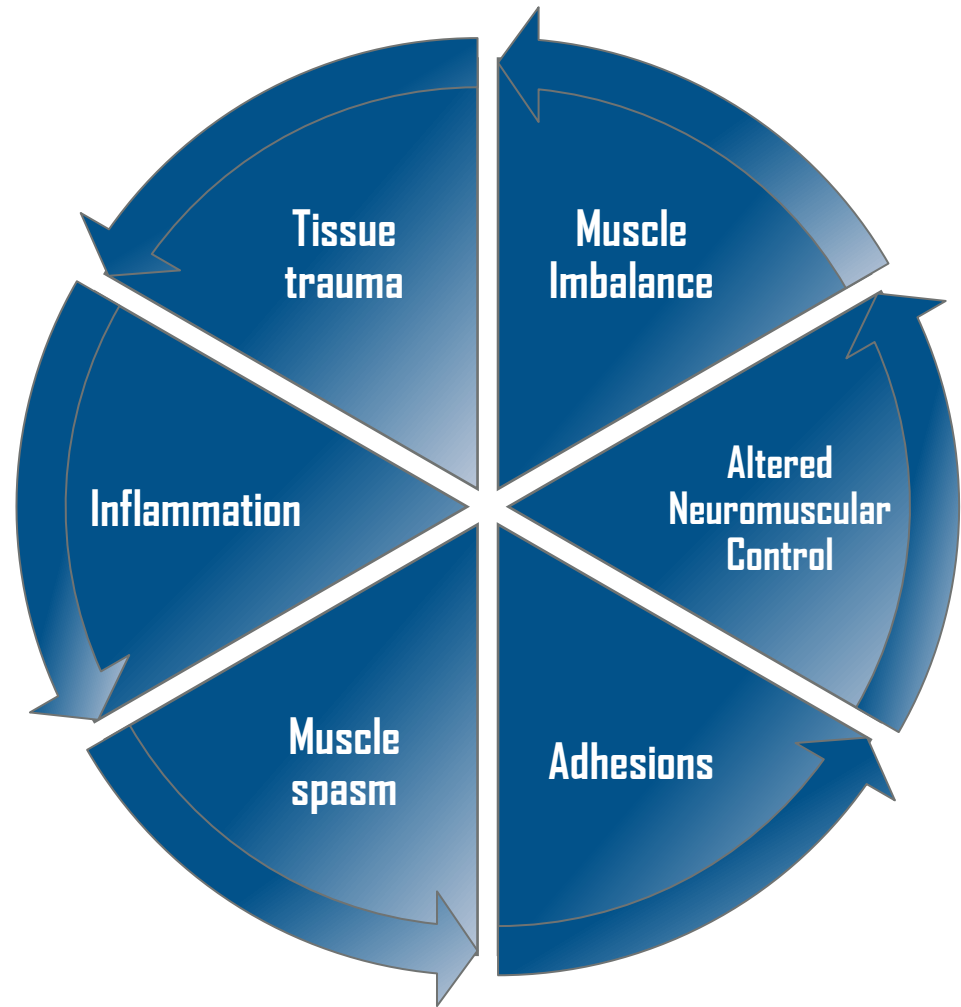


Progression of Injury



Goal is to break injury cycle

The Cumulative Injury Cycle



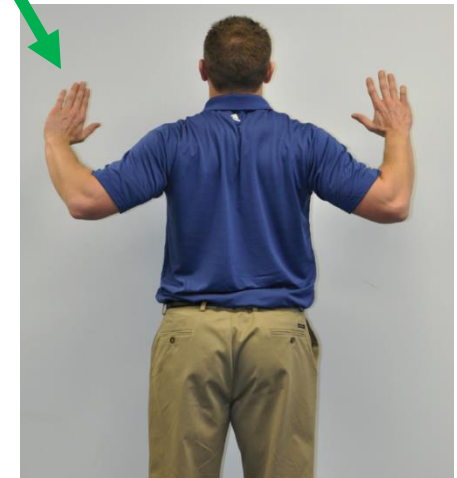
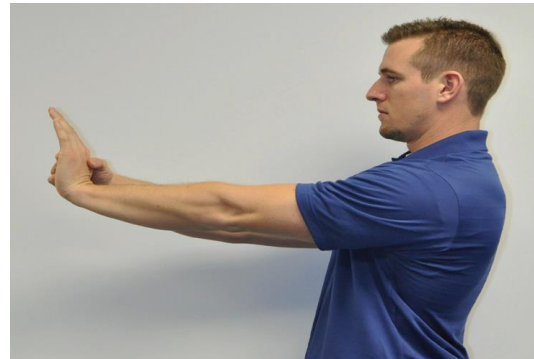
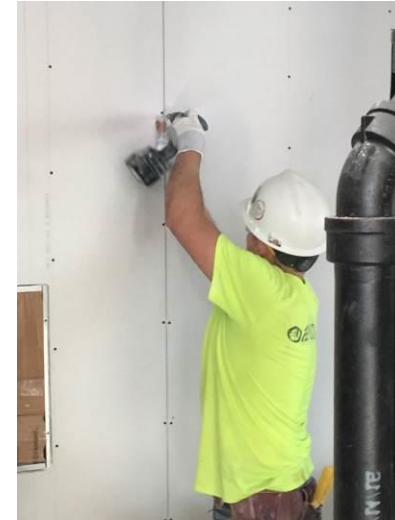
Stretch and Flex (dynamic warm up)

- Implementation Guidelines
 - Train the Trainer
 - Each trainer receives a self guided book following comprehensive training
 - Book contains 2 comprehensive programs
 - Can alter programs every other week
 - Individualized Programs performed independently throughout the day
 - Reversal of Posture Exercises
 - Goal is to minimize the effects of awkward postures
 - Teach concepts in group setting and should be emphasized by leadership to perform at work and at home
 - Employer must create culture for “mini” stretch breaks



Reversal of Posture – Micro Breaks

- Micro break routine - performed throughout the day, between tasks
- Used as recovery from awkward body postures/positions
- Helps reduce accumulated trauma and improve recovery time between tasks
- Each stretch can be done in as little as 5 seconds

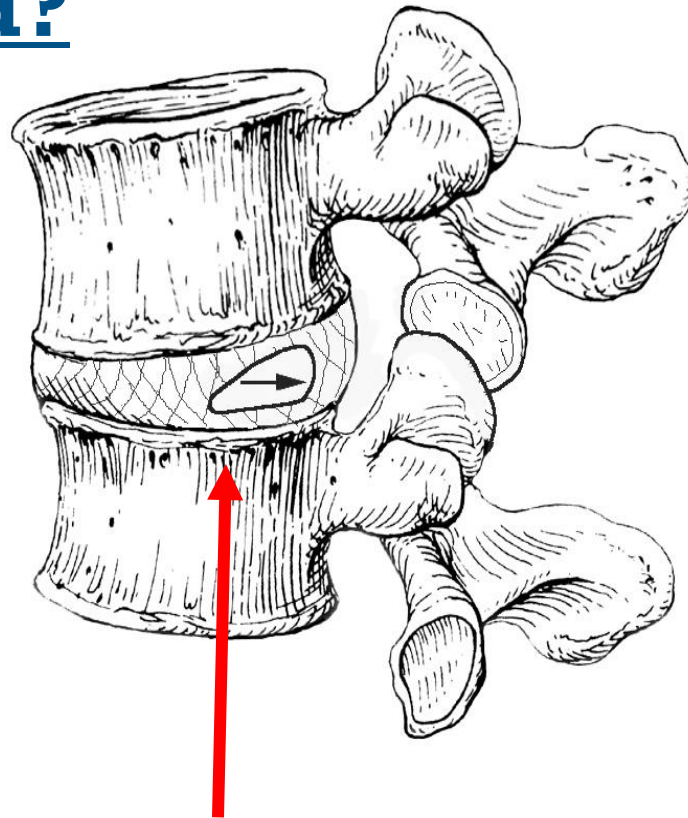


Reversal of Posture Exercises - Why?

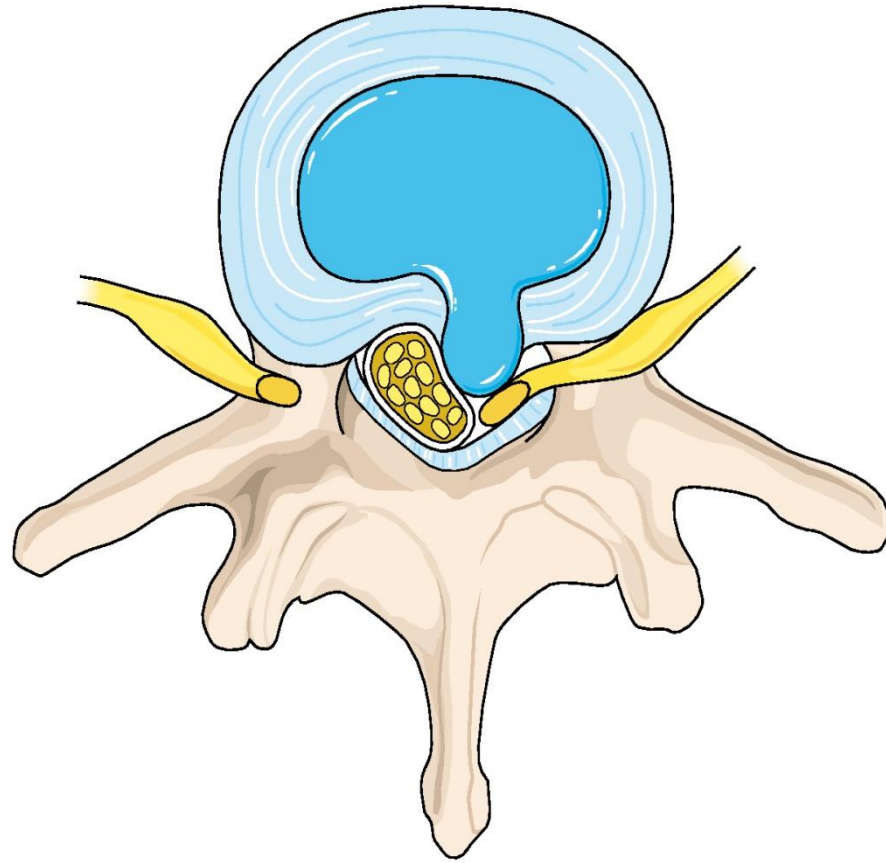
- Reduce micro-trauma
- Improve circulation
- Decreases fatigue
- Increased productivity
- Take care of your working body
- IT FEELS GOOD AND IS GOOD FOR YOU!!!



What happens to your body as you bend forward?

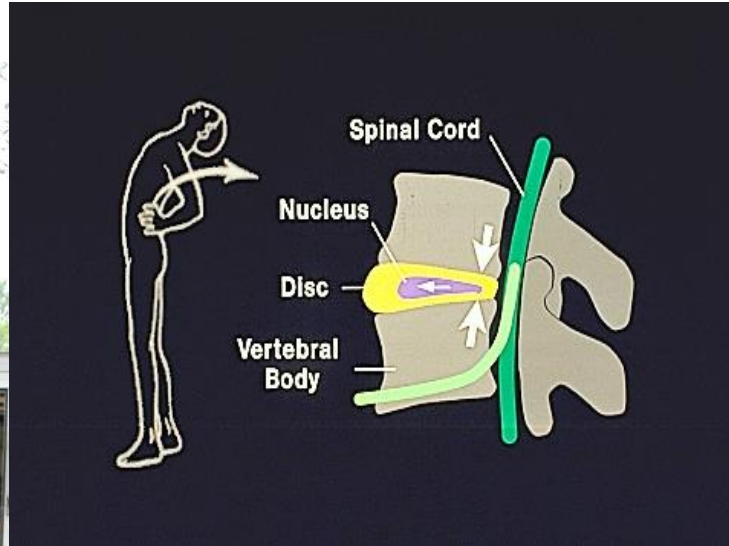


Discs are “pushed” out the back side of the vertebrae



Back

Quick Fix



Compensate for the awkward posture by encouraging the reverse posture

Reversal of Posture Exercises



CHIN TUCK

Stand straight with head level. Place the web of your hand on your chin, gently pushing your head backwards. Attempt to make a "double chin."

Hold for 10 seconds.



NECK SIDE-BEND

Place one hand on shoulder to stabilize it. Drop ear toward opposite shoulder.

Hold position for 5 seconds and repeat on opposite side.



OVERHEAD REACH

Lift arms overhead. Slowly pull your shoulder blades down and back, as if to put your elbows into your back pockets.

Hold for 5 seconds.



SHRUG-BREATH

Inhale, cross arms, clench fists and shrug shoulders up toward the ceiling. Exhale slowly while pushing thumbs back and squeezing shoulder blades together.

Hold at the end for 5 seconds.



FOREARM STRETCH 1

Start with arm straight out at chest level, fingertips up. Use the opposite hand to grab the palm of your outstretched hand, pulling it back toward you.

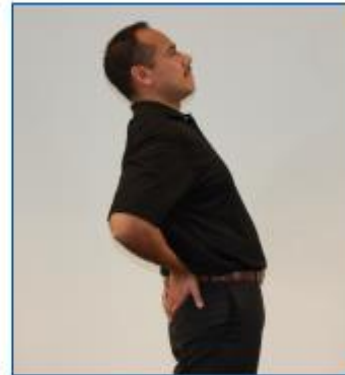
Hold for 5 seconds and repeat on the opposite side.



FOREARM STRETCH 2

Start with arm straight out at chest level, fingertips down. Use opposite hand to pull your palm down.

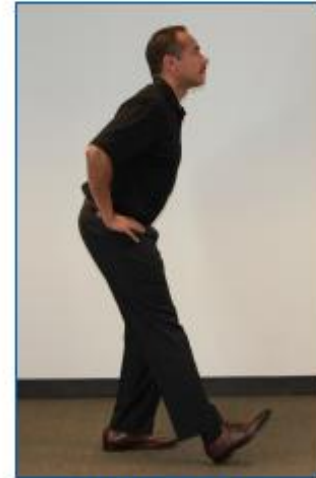
Hold for 5 seconds and repeat on the opposite side.



BACKWARD BEND

Place both hands on your hips and lean back gently, allowing your back to arch.

Hold for 10 seconds.



HAMSTRING FLEXIBILITY

Place heel on floor with your toes pointing at the ceiling. Keep your head and chest up, hips back and slightly lean forward.

Hold for 5 seconds and repeat for opposite leg.

GENERAL RULES

1. If you are currently being treated for an injury, please check with your physician first.
2. Perform at minimum 3 times per day. Suggestion: at the beginning of the work shift, at breaks, and at the end of the shift.
3. Each Reversal of Posture position should be held for 5-10 seconds.
4. Remember to perform Reversal of Posture positions slowly.
5. The "holding time" is as important as the motion.



To schedule Work Comp Patients or Services, including FCEs and Work Conditioning

Call - 888-8-WORK4U | Email - Work4U@athletico.com

Visit - www.athletico.com/Work4U

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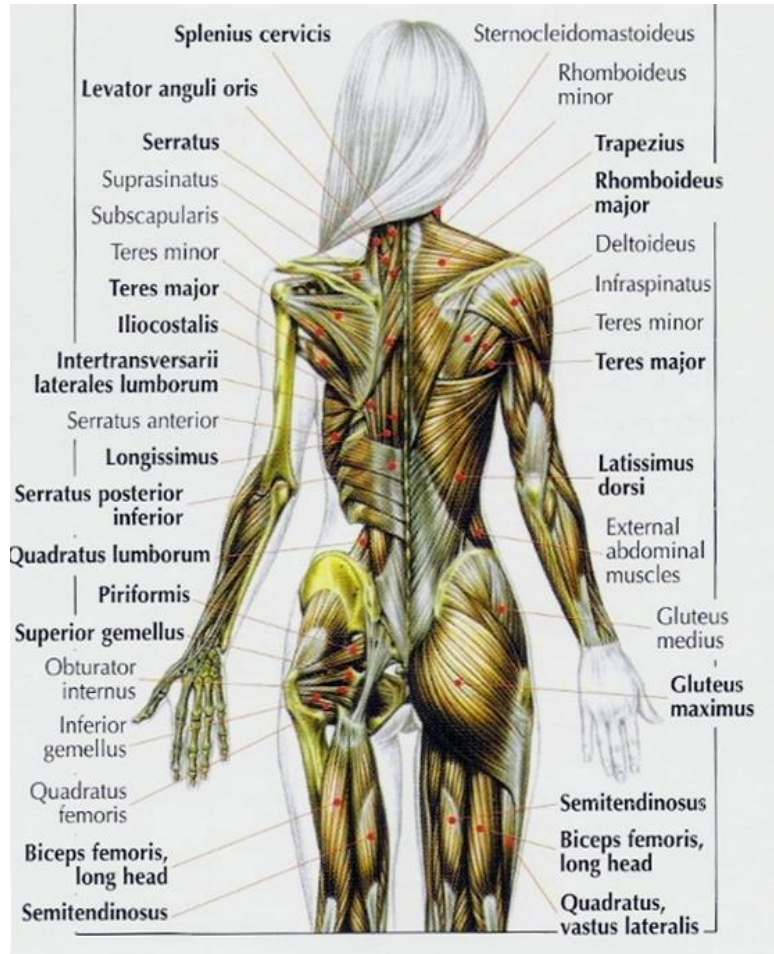


Training:

Safe Lifting Mechanics

- Hands on-interactive class
- Focuses on using correct body mechanics
- Practice with own equipment
- Participants become “coaches”
- Choose to lift correctly

Lifting Principle – PRODUCE FORCE WITH THE LEGS!



Lifting Principle:

- Keep back straight
- Lead with your head and chest

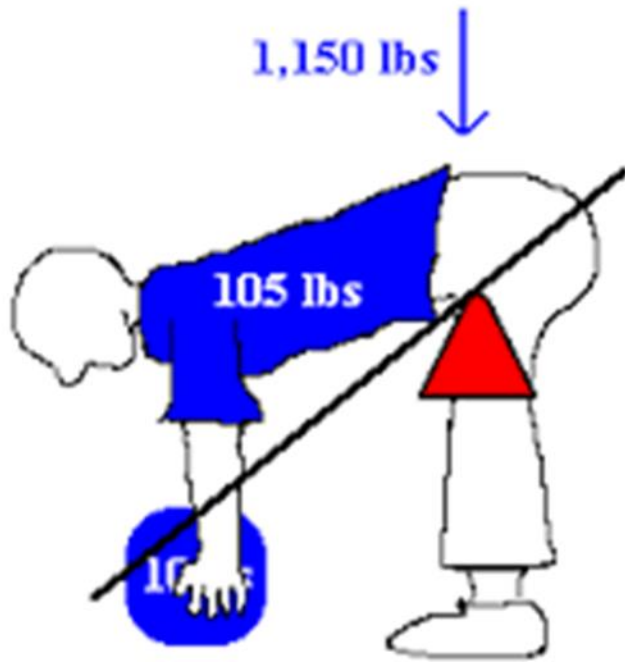
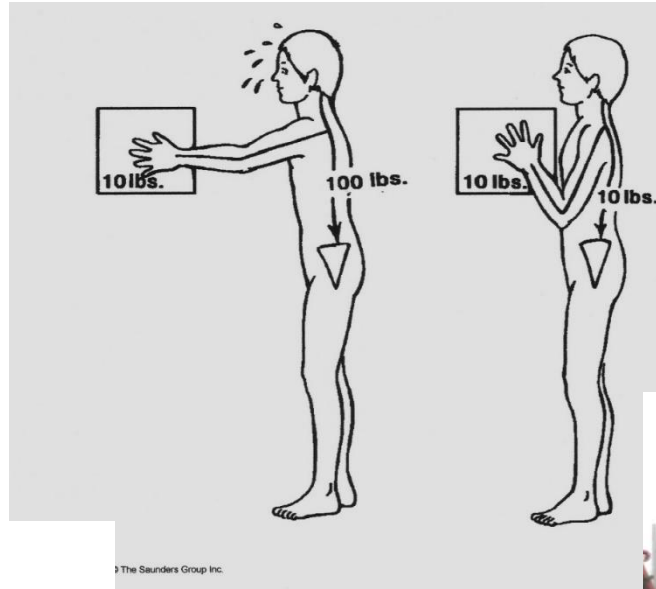
Avoid lifting using a “C” Spine



When lifting, pushing, or pulling, keep the natural curves of your back. Keep your head up.



Lifting Principle : Use the Power Zone Keep the load CLOSE TO THE BODY



Lifting principle : DON'T LIFT AND TWIST



**Move your feet in
the direction you
are moving the
object**

Nose and Toes in same direction

Lifting principle: USE THE ABDOMINAL MUSCLES

Tighten your abdominals and glut muscles when performing a heavy exertion to help protect your spine



Do not hold your breath!!!



The Power Zone



The Healthy Shoulder Program

Fact: Shoulder rotator cuff injuries occur more to dominant arm, increase with age, increase with working in awkward postures and when performing overhead work

Solutions:

Decrease overhead work

Exercise to keep rotator cuff muscles balanced and “rejuvenated”





- **Balance the shoulder muscles**
- **Work on endurance vs strength**
- **Promote good posture**
- **Evaluate the task and adjust your body to promote proper positioning while performing task**

1

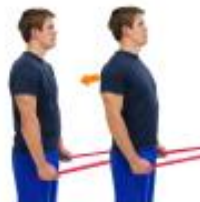


Prayer stretch

Place hands on object and stretch back as shown. Also walk hands to either side to stretch as shown.

Repeat 2 Times
Hold 5 Seconds
Complete 2 Sets

5



ELASTIC BAND SCAPULAR RETRACTIONS WITH MINI SHOULDER EXTENSIONS

While holding an elastic band with both arms in front of you with your elbows straight, squeeze your shoulder blades together as you pull the band back. Be sure your shoulders do not raise up.

Repeat 10 Times
Hold 1 Second
Complete 2 Sets

2



ELASTIC BAND SHOULDER EXTERNAL ROTATION

While holding an elastic band at your side with your elbow bent, start with your hand near your stomach and then pull the band away. Keep your elbow at your side the entire time. Squeeze shoulder blades as you pull into external rotation

Repeat 10 Times
Complete 2 Sets

6



ELASTIC BAND EXTENSION BILATERAL SHOULDER

While holding an elastic band with both arms in front of you with your elbows straight, pull the band downwards and back towards your side.

Repeat 10 Times
Hold 1 Second
Complete 2 Sets

3



SHOULDER FLEXION WITH THERABAND

While standing with back to the door, holding Theraband at hand level, raise arm in front of you. Keep elbow straight through entire movement. Only raise arm to shoulder level. Remember to keep shoulder blades down and back

Repeat 10 Times
Complete 2 Sets

7



ELASTIC BAND ROWS

Holding elastic band with both hands, draw back the band as you bend your elbows. Keep your elbows near the side of your body.

Repeat 10 Times
Hold 1 Second
Complete 2 Sets

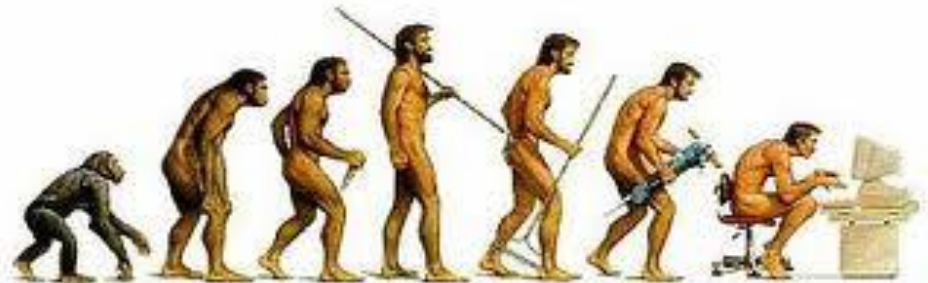
Computer Work Station Evaluation/Education

Education is not only for material handlers

- Lunch and Learns work well for large setting
- Individualized assessments are available

Program addresses:

- Working Positions/Postures
- Chairs
- Keyboard/Input Device
- Monitors
- Desk Surface
- Accessories
- General Concepts
- Stretching on the job-Reversal of Posture Exercises



Industrial Wellness Specialist

Think Differently: Your workers are Industrial Athletes

Provide your workers the same intervention strategies used by the “big leagues”

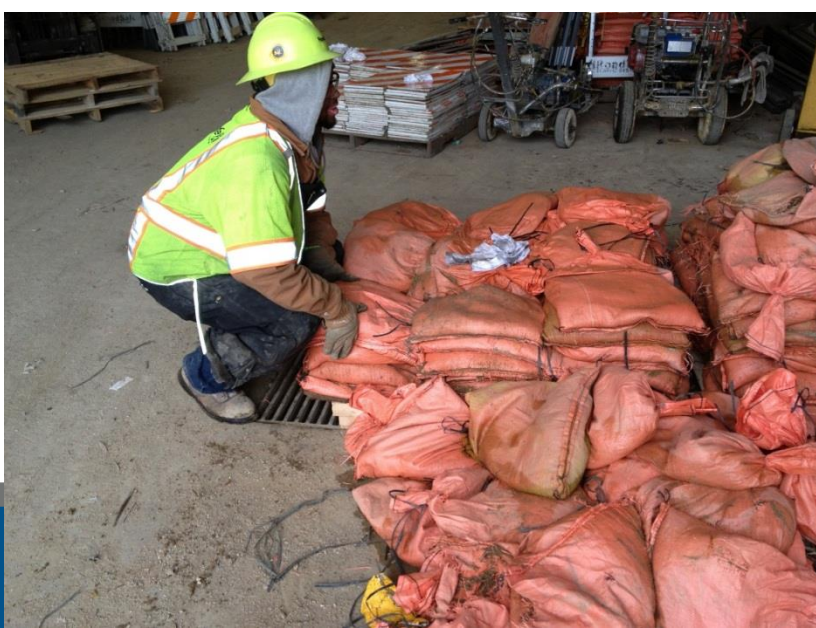
Industrial Wellness Specialist program brings the sports medicine methodology to the workplace.

- What isn't known about athletic trainers is the prevention work they provide in every other phase of the athlete's life. Athletic trainers work diligently to ensure a player is ready for the next practice and the next game.
- By applying these same principles to the workforce, we ensure every employee is able to lead a healthy and effective life on the job.
- We're building Industrial Athletes.

<http://www.denverpost.com/2016/12/28/denver-fire-department-rehab/>



The Industrial Athlete



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Workers Are Industrial Athletes



Industrial Wellness Specialist:

- On site for specified hours/week
- “Wellness” Assessments , injury prevention, ergonomics, job site evaluations, initial injury triage if on site at time of injury
- Emergency/first aid medical care
- Health promotion, general wellness and fitness, internal case management, and healthy living counseling.

Examples of Success

The NATA conducted a national survey of industrial companies that utilize the services of an athletic trainer.

Results of the study showed:

100% of the companies reported the athletic trainer provides a favorable return-on-investment (ROI).

- 30% indicated the ROI was at least \$7/employee per \$1 invested
- 83% indicated the ROI was more than \$3/employee per \$1 invested
- 94% of companies indicated the severity of injuries had decreased by at least 25%

On-Site Job Coaching RTW Consultation

Purpose:

- Safely return previously injured employee to work
- Reduce the risk of re-injury
- Teach/reinforce principles (body mechanics, lifting) taught in therapy and work conditioning in the client's actual work environment
- Empower and increase confidence of the employee as they return to work; encourage self-management of condition-
Eases transition to RTW



Steps to a Successful Program

- Culture
- Upper Management Support/Participation
- Leadership in the field-(Identify champions)
- Build upon success. Keep up the energy, focus and commitment to program
- Live Safety daily.
 - Incorporate into Tail Gate Talks
 - Reminders sent out to the field
- Incentives:
 - Catch someone doing something right
 - Designate “make something safe today”



Eliminating injuries

- Ergonomics
- Education
- Exercise
- Exposure reduction
- Enforcement
- Early symptom reporting
- **Self Responsibility**
- **Culture**



www.ergoweb.com



Conclusion:



Don't lose productivity as a result of preventable injuries. Stay powered up by keeping employees healthy and injury free with these services.

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