The Value of Stretching in the Workplace

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Objectives

• What is an MSD?
• Benefits of Stretching
• Stretching Programs: Research
• General Guidelines for workplace stretching programs
• Getting Started

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What is a Musculoskeletal Disorder (MSD)?

- A **MSD** is an injury that affects:
  - Bones
  - Muscles, tendons, ligaments
  - Blood vessels
  - Nerves
  - Joints
MSD’s

- The most common cause of severe long term pain and disability
- Affect both men and women
- Account for 50% of lost time claims
Warning Signs of MSD’s

- Pain
- Weakness
- Numbness/tingling/burning
- Fatigue
- Stiffness
Muscle Strains and Sprains

• Prevention is the Key
Important Benefits of Stretching

• Increases blood flow and brings oxygen and nutrition to the area and aids in healing

• Blood flow warms up the tissue and prepares it for activity
Important Benefits of Stretching

- Reduces muscle tension
- Increases motion
- Develops body awareness
- Prepares you for strenuous activity
- Feels good
Los Angeles firefighters were evaluated to explore the relationship between fitness measures, occupational injuries, and claim costs.

Firefighters were placed into one of three fitness categories using a scoring system for flexibility, strength, exercise diastolic blood pressure, heart rated, and physical work capacity.
Results

• The most fit were found to be substantially more flexible than the least fit group.

• An association was found between flexibility, fitness, and work injury.

• Firefighters with either greater flexibility, strength, or work capacity had much lower back and total injury costs.
What does this mean for business costs?

- Total back injury costs were almost 6 times greater for those with the least flexibility verses the most flexible firefighters.

- $50,086 verses $8,831
Workplace Stretching Programs

- **Stretches in computer work:**
  - Of 19 computer users who completed a computer-based stretch break, 53% reported fewer symptoms and 100% reported they found stretching to be helpful.
  - 63% reported the program helped increase their productivity.

- **Stretches in manufacturing:**
  - Statistically significant increase in flexibility measurements for all body regions tested after 2 months of stretching.
  - Participants’ perception of physical conditioning, self-worth, attractiveness, and strength also increased significantly.
Flexibility Program in Municipal Firefighters

• Evaluated the incidence, cost, and severity of joint injuries in stretchers versus non-stretchers.

• After 6 months, participants were significantly more flexible.
Two Year Follow Up

- Incidence of injuries:
  - 48 injuries among stretchers
  - 52 injuries among non-stretchers

- Total dollars spent due to injuries (medical and time loss):
  - $85,372 for stretchers
  - $235,131 for non-stretchers

- Time lost dollars spent due to injuries:
  - $45,597 for stretchers
  - $147,581 for non-stretchers
Who Should Stretch?

• Everyone!

Note: If you have had recent surgery you should consult your physician before beginning a stretching program.

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• Preliminary aerobic warm-up for 5 minutes prior to stretching

• Stretching programs should be designed by job description to focus on the body region most at risk for injury.

• Use static and/or contract-relax stretches
Workplace Stretching Programs – General Guidelines

• Perform stretches correctly:
  - Hold stretch for 15-30 seconds
  - 3-4 repetitions per muscle group
  - Stretch bilaterally (both sides)
  - Intensity should be to a position of mild discomfort

• Trained instructors should lead and monitor classes, compliance should also be monitored.

• Stretch at appropriate times throughout the day/shift – will vary based on job description
Company commitment to work time and program overhead costs is important.
• Now we will go through some stretches that you can do on the job that will help you improve your flexibility….
• Neck Stretches
• Lateral Neck Stretch
• Arm circles
• Forearm/wrist
• Chest stretch
• Triceps Stretch
• Cat Stretch
Stretching

- Shoulder Opener
• Spinal Circles
• Lateral Stretch with Legs Crossed
Stretching

- Forward Fold
- Option – legs crossed
• Quad Stretch
• Calf and Ankle Stretch
• Trunk twist
Overall fitness

- Stretching is only one component of injury prevention.

- “Fitness for most physical activities requires a combination of endurance, strength and flexibility, musculoskeletal timing and coordination.”
Questions

• Seidl, J; Munson, L. Worker Exercise/Stretching Programs, Injury Prevention and Management of the On-the-Job Athlete for Optimal Outcomes. 2015 Work Specialty Rehabilitation Program Conference

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