



August 20 - 23, 2019
PARIS LAS VEGAS HOTEL

Understanding Total Worker Health

WS3 – Tuesday, August 20, 2019

Drew Bossen, PT, MBA

Tony Silva, CPE

Kris Corbett, Wellness Specialist

#ErgoExpo

www.ErgoExpo.com

Today's Agenda...

- **Intro**
 - Who we are...
 - What we do...
- **Total Worker Health**
 - Wellness...
 - Ergonomics...
 - Injury Prevention...
- **Overriding Themes For You To Consider**
 - Where do you and your organization fit into this model and these actions...
 - How can these considerations add value to your organization...





NATIONAL
ERGONOMICS
Conference
ErgoExpo
August 20 - 23, 2019

#ErgoExpo

www.ErgoExpo.com



Nationwide Network of Service Providers
15,000 + cities covered



August 20 - 23, 2019

#ErgoExpo

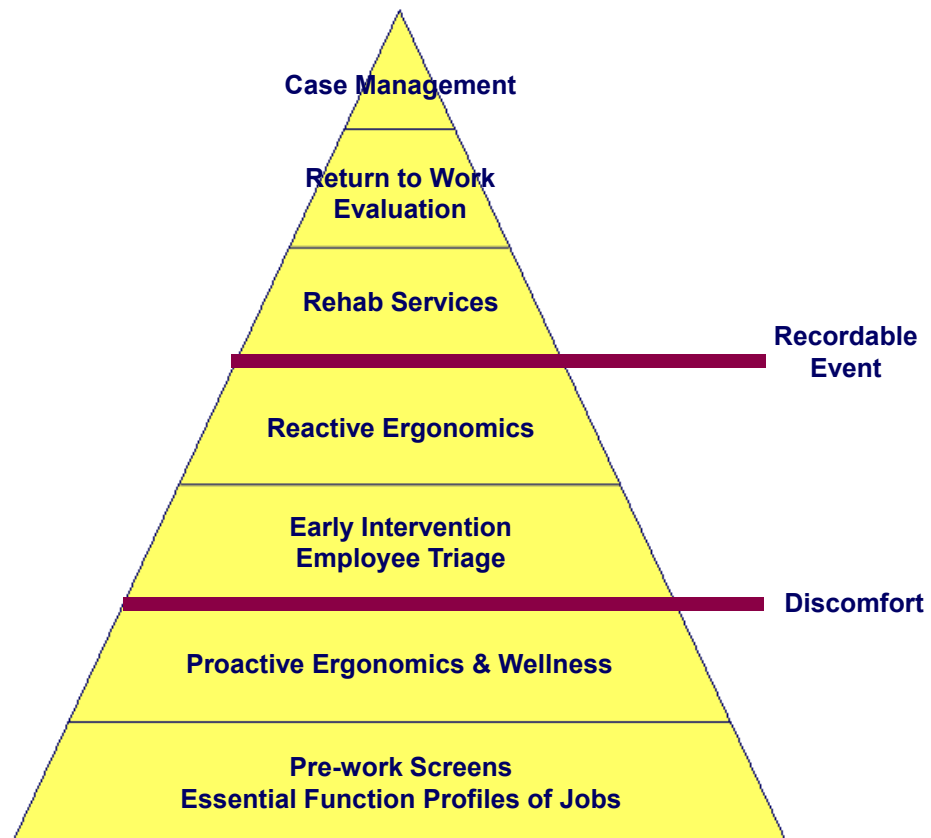
www.ErgoExpo.com

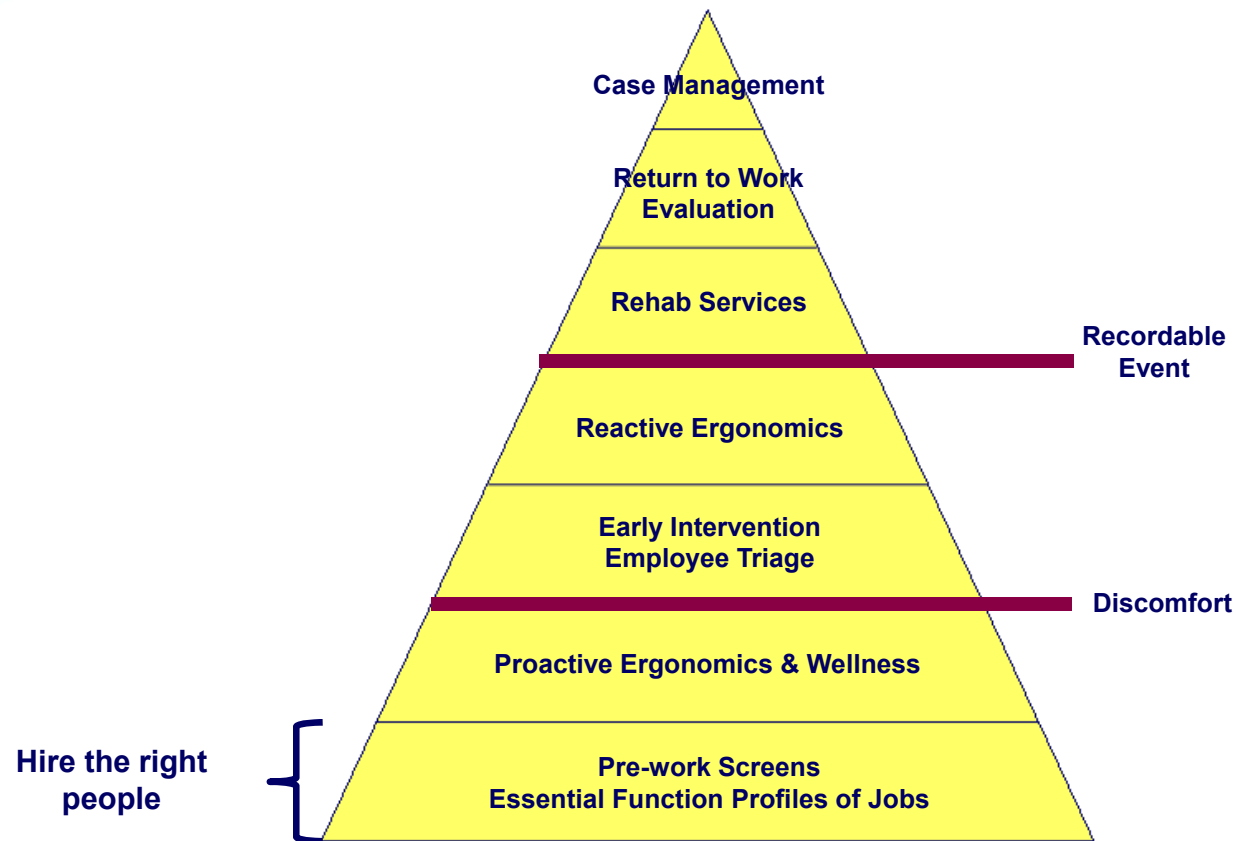


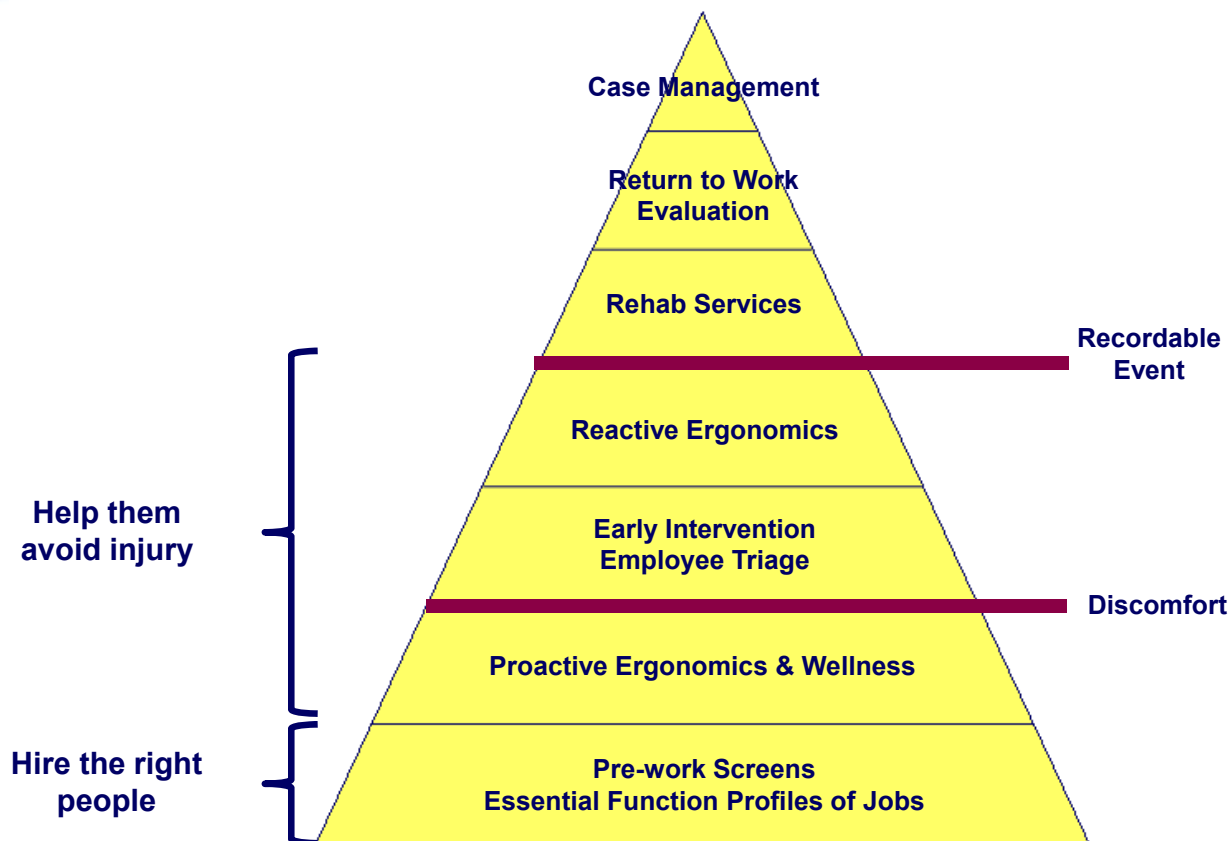
#ErgoExpo

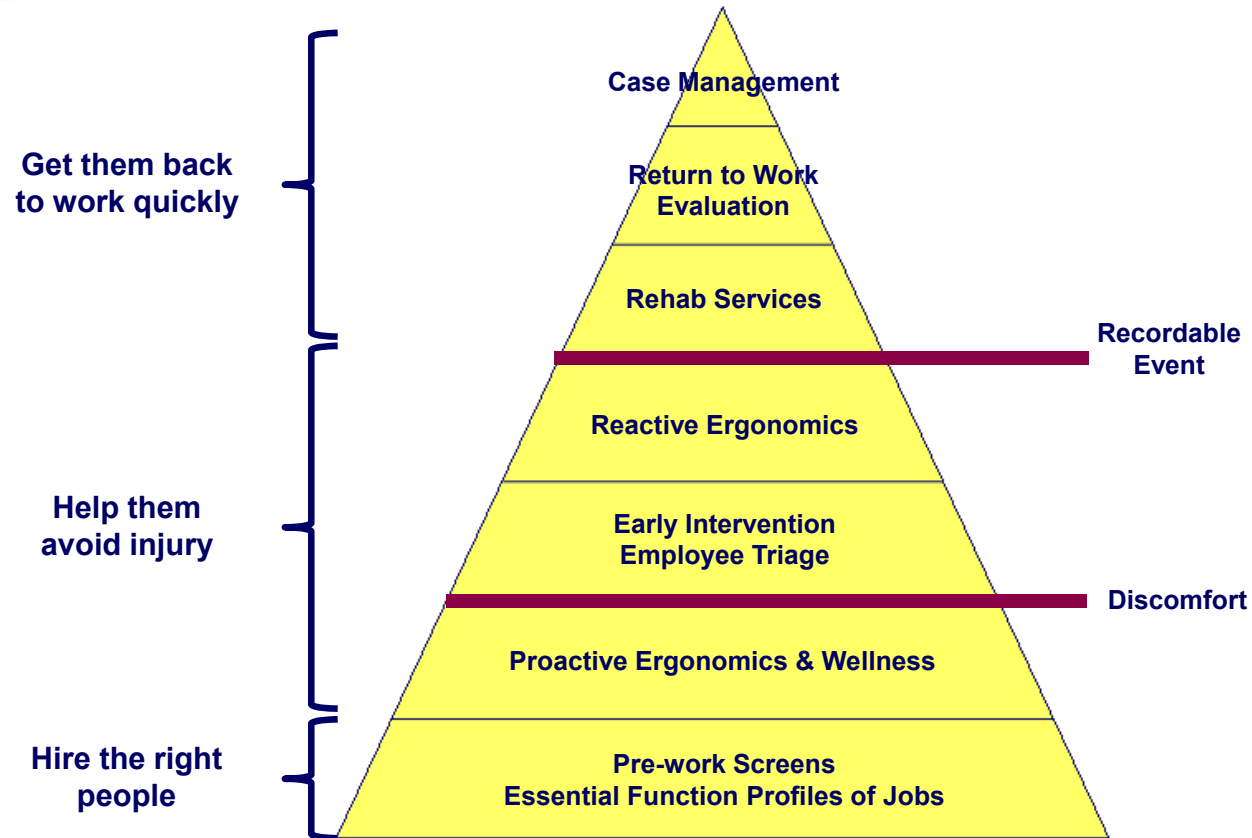
www.ErgoExpo.com

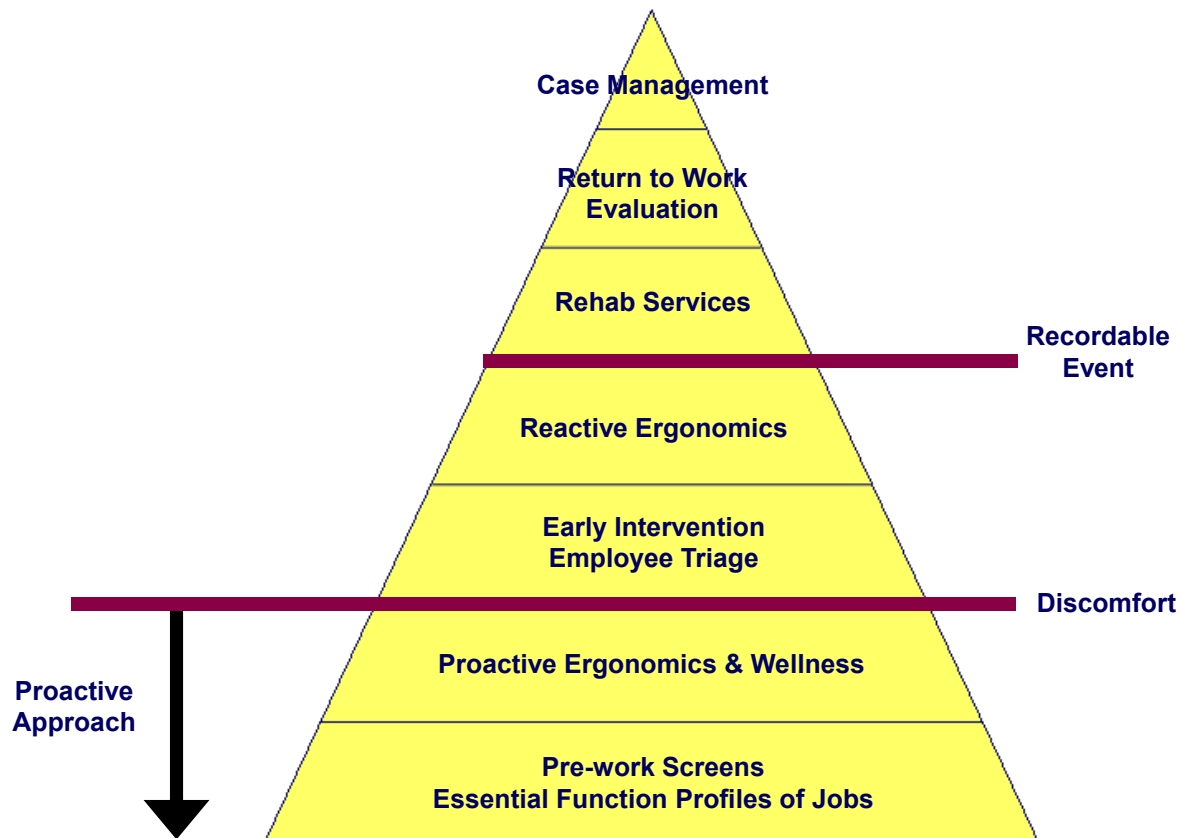
Total Worker Health

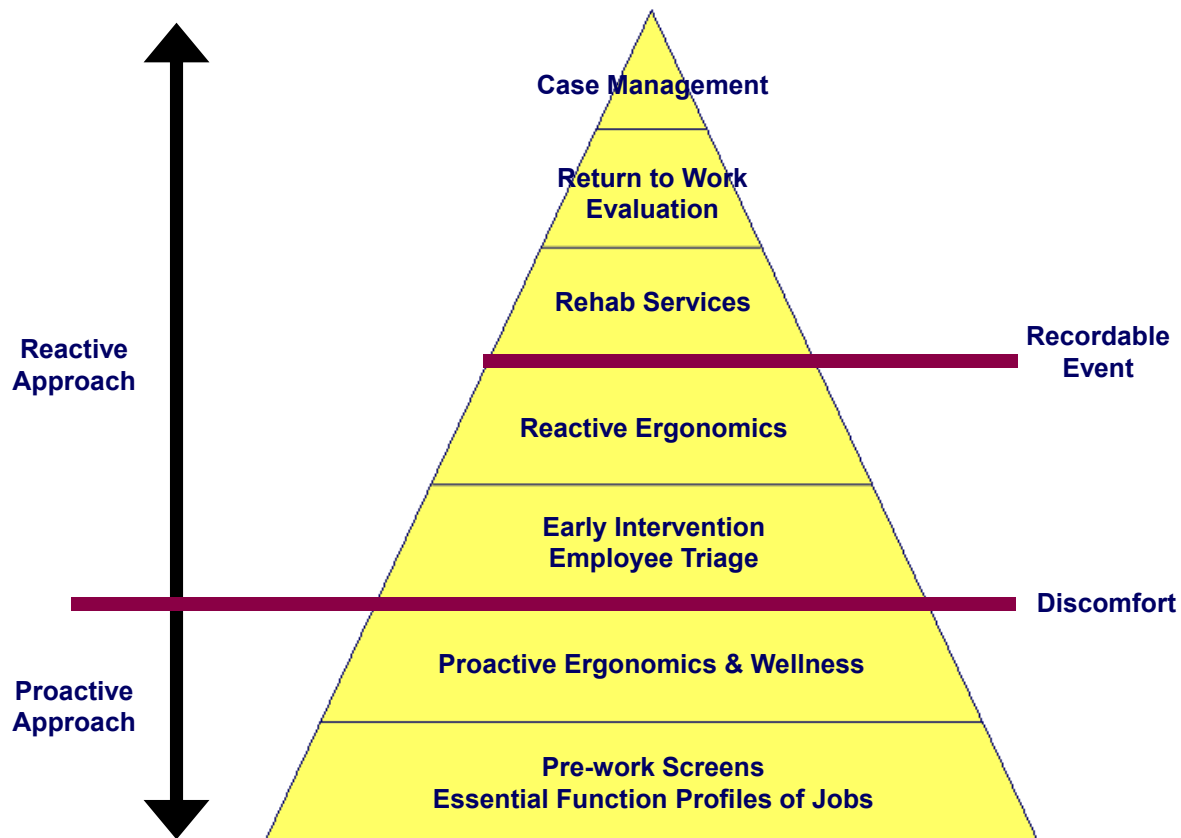


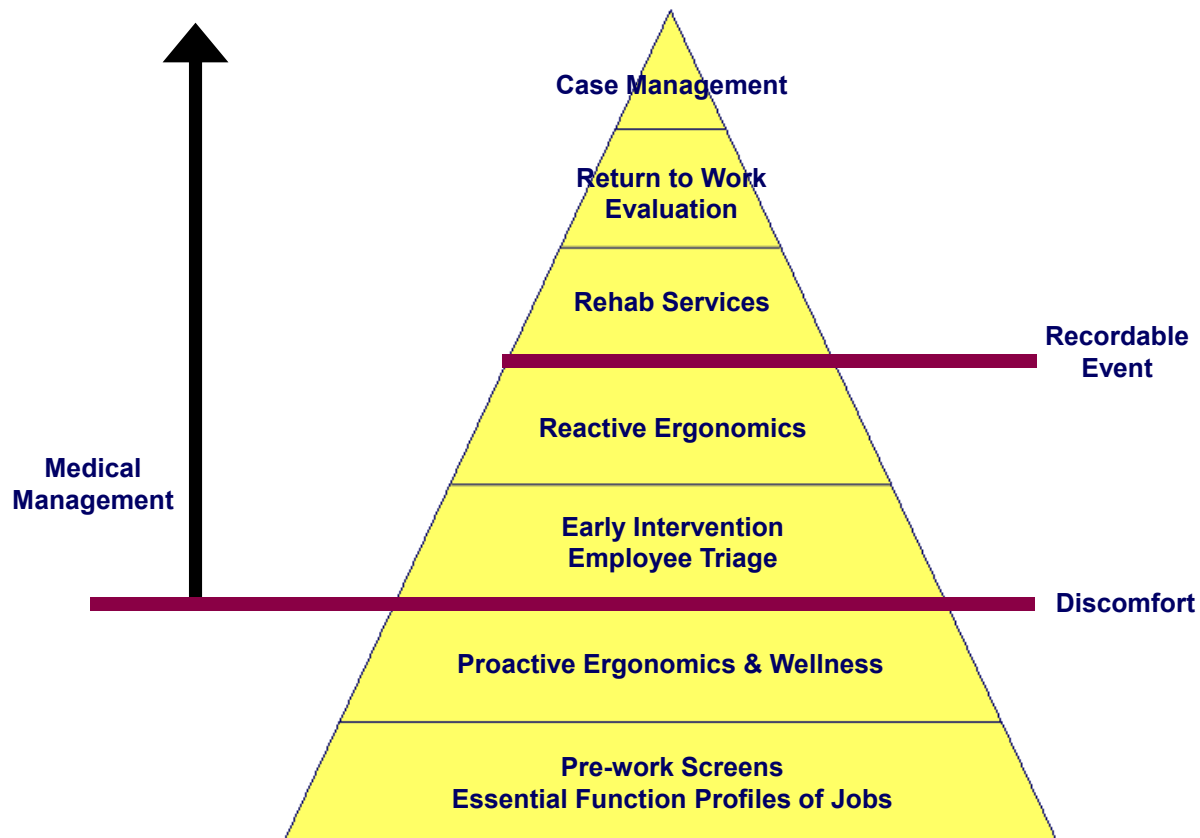


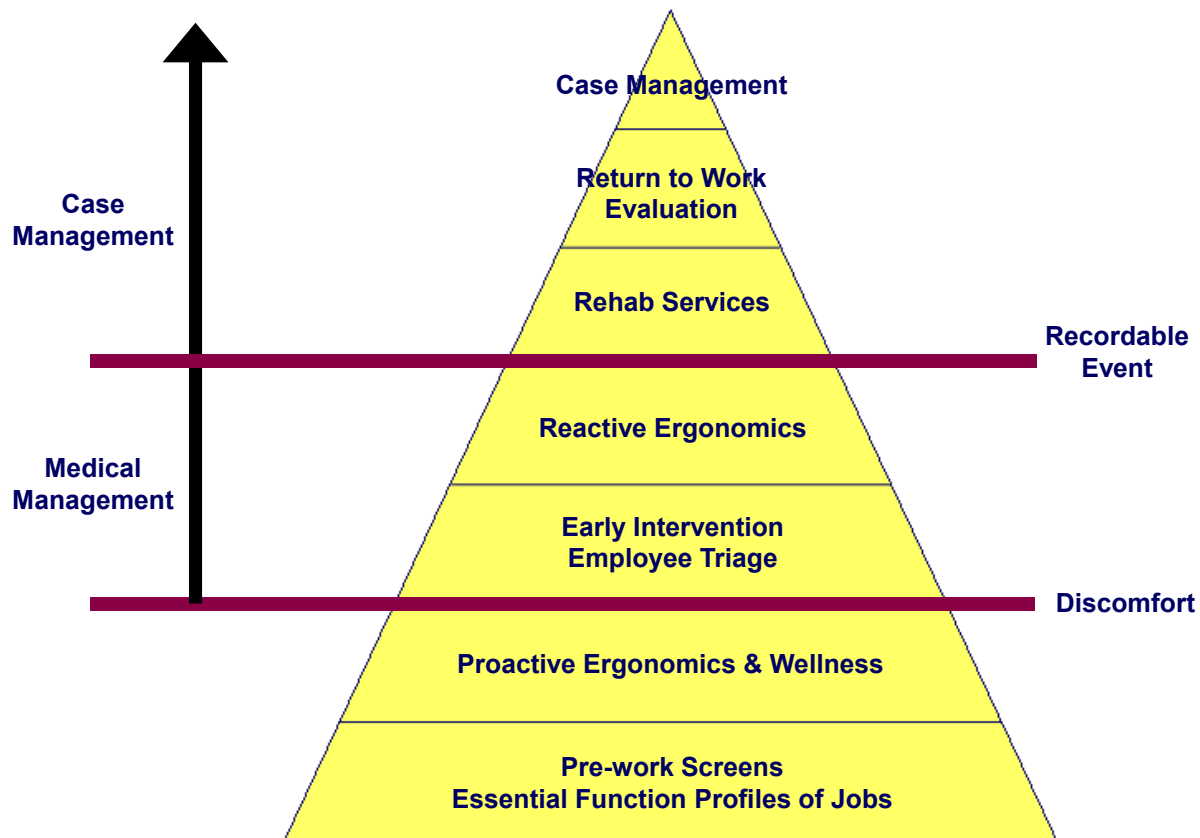


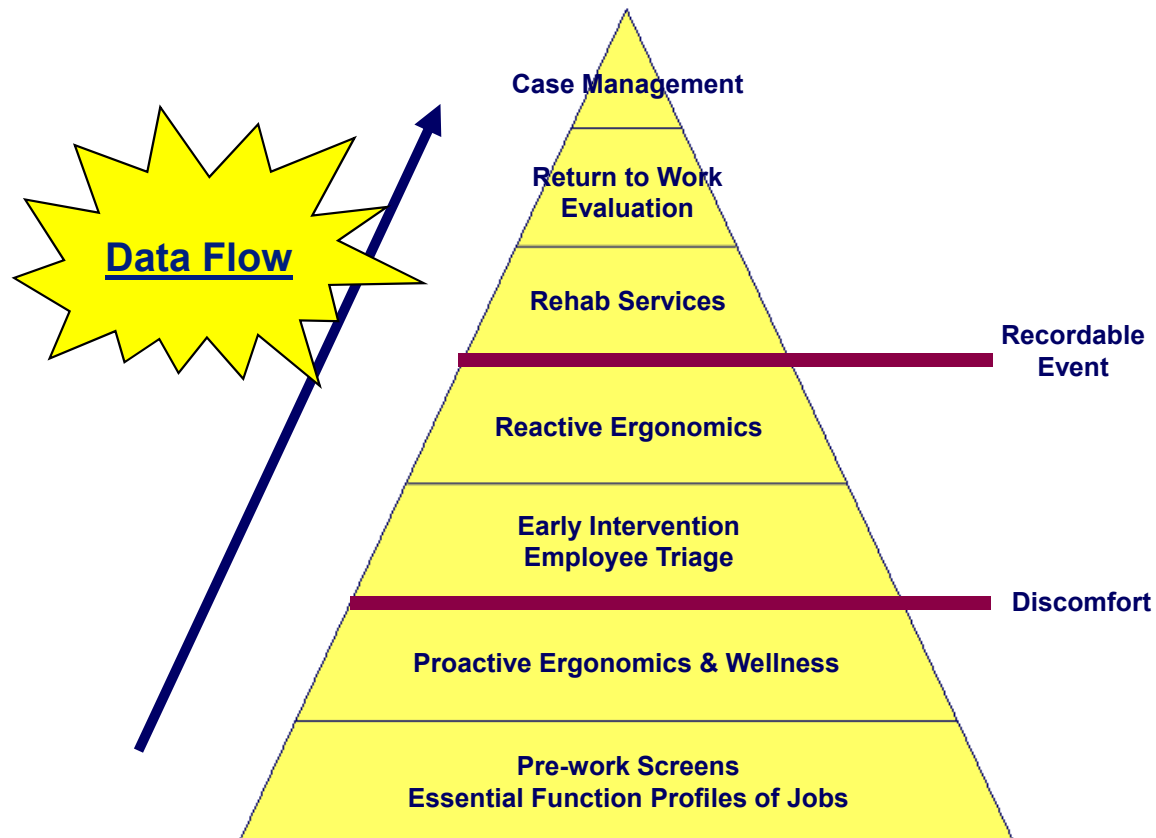








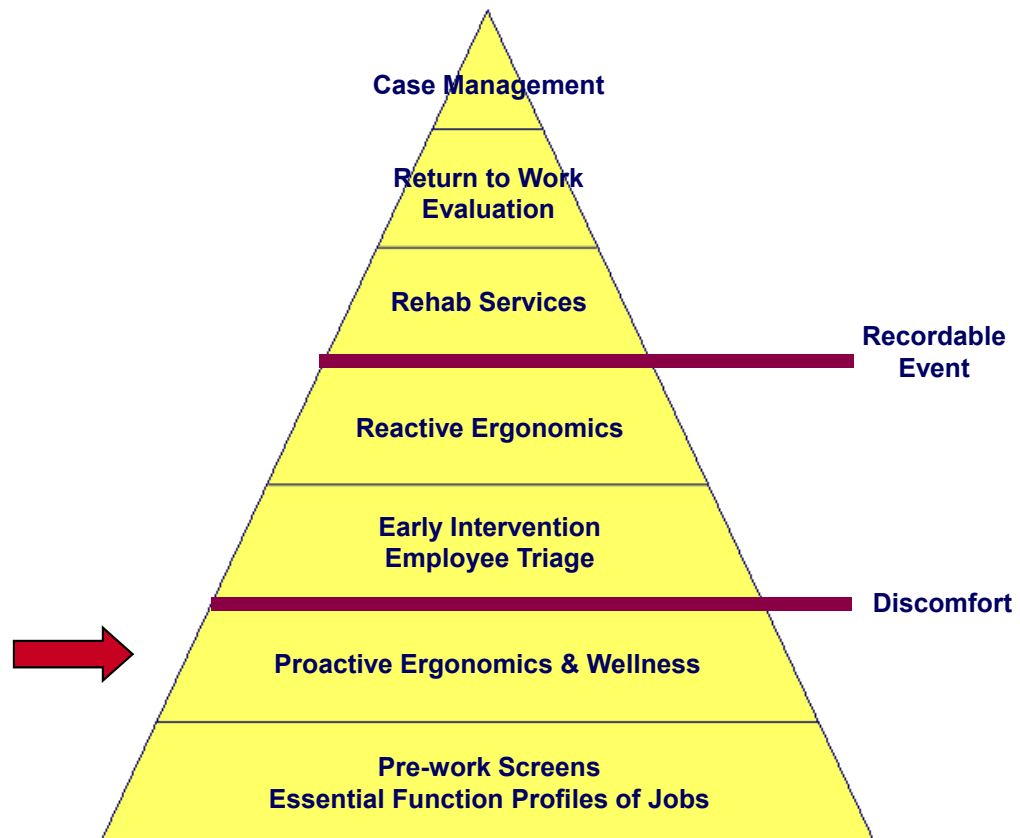




- **Kris Corbett, BS, CSCS**

Kris has over 25 years of experience working in wellness, safety and injury prevention creating innovative and effective products and services for companies looking to achieve sustainable results. Her knowledge and experience is in Manufacturing and Construction.



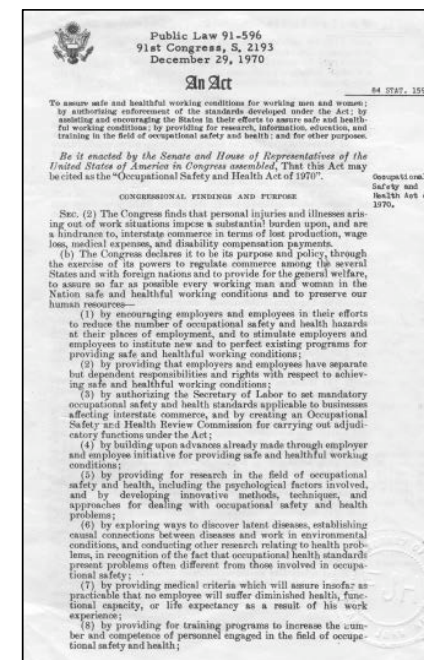




NIOSH: Total Worker Health™

NIOSH is dedicated to preserving and enhancing the TOTAL HEALTH OF WORKERS

OSHA Act of 1970. SEC. (2) (b) . . . to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and *to preserve our human resources . . .*



August 20 - 23, 2019

#ErgoExpo

www.ErgoExpo.com

Federal Government & Worker Health

Occupational Safety and Health
Standards-Setting & Enforcement

Department of Labor (DOL)



MSHA



OSHA



Research and Authoritative Recommendations

Department of Health and
Human Services (HHS)



Centers for Disease Control
and Prevention (CDC)



August 20 - 23, 2019

What is Total Worker Health™ ?

Policies, programs, & practices that integrate protection from work-related safety & health hazards with promotion of injury & illness prevention efforts to advance worker well-being

**Keep Workers
Safe**



**Invest More in
Worker Health**



**Create Worker
Wellbeing**

NIOSH - Approach

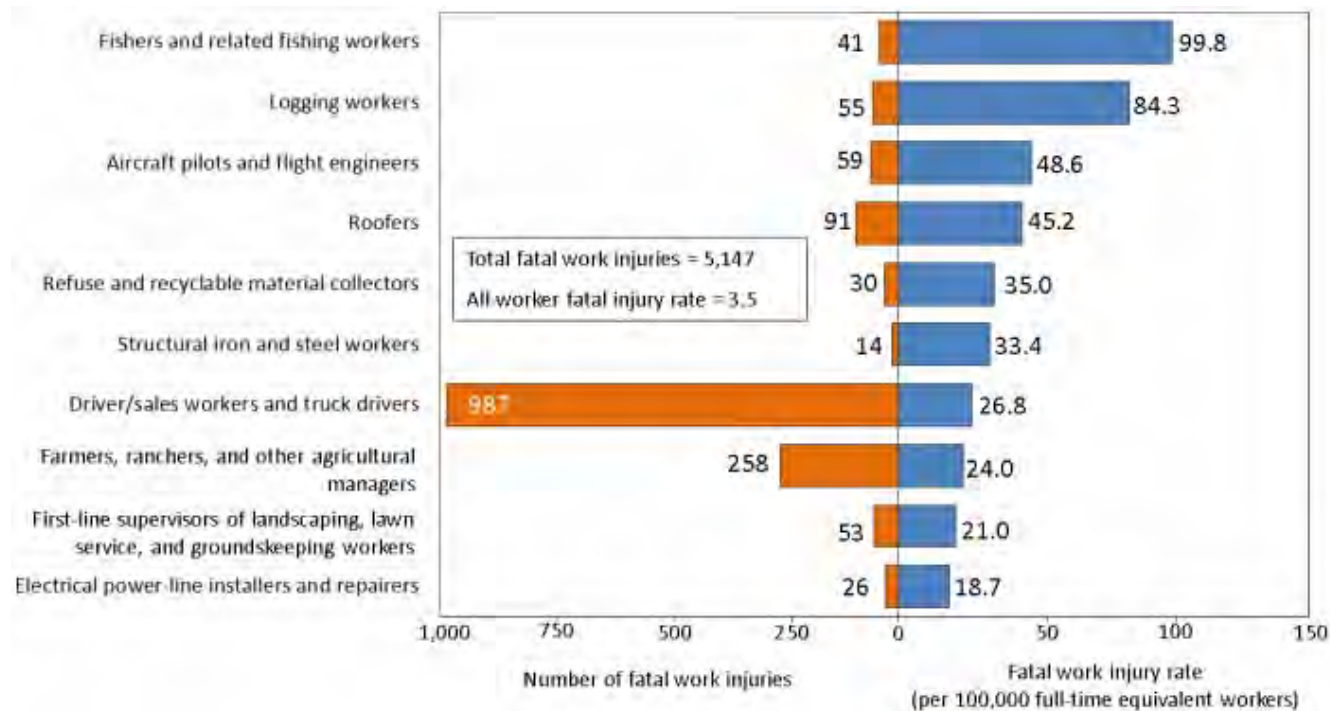
What's impacting workers' health & safety?



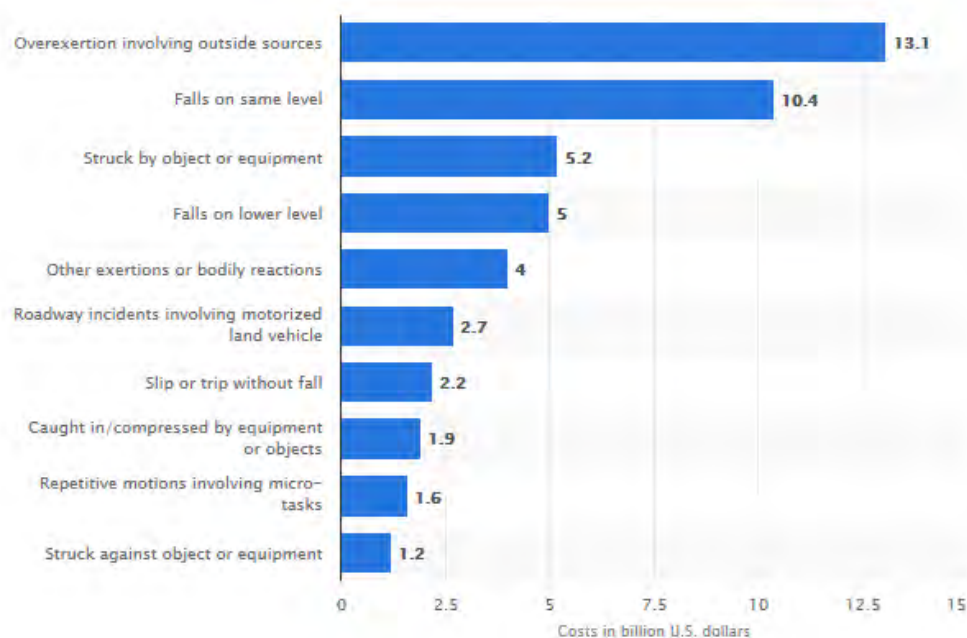
OSHA: Fatal Four



Occupations with high fatal work injury rates



Top 10 most disabling work injuries & direct costs (billions)



© Statista 2019

[About this statistic](#)

Source: Liberty Mutual Research Institute for Safety

MINDFUL SAFETY MOMENT



Stop
Take a breath
Observe your surroundings
Proceed with awareness

safety check

What am I about to do?

What tools do I need?

How could I get hurt?

What will I do to protect myself and others?

Be MINDFUL before you act





US Burden of work-related illness, injury and death

\$250,000,000,000 Annual cost of work-related illness, injury and fatality.



August 20 - 23, 2019

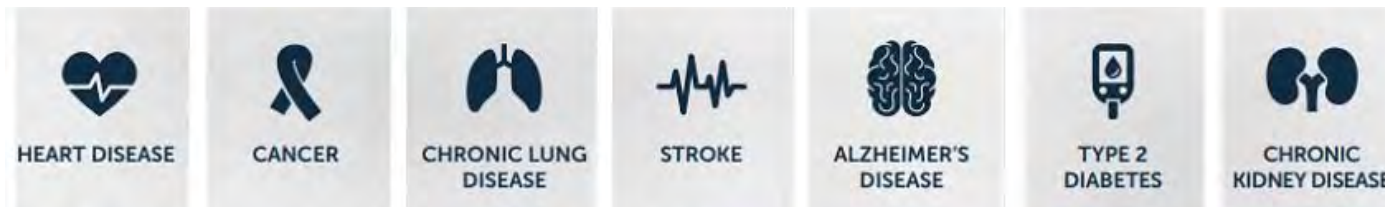
What's impacting workers' health & safety?



Chronic Disease

The leading cause of death and disability and leading drivers of the **Nations 3.3 Trillion in annual healthcare costs.**

- 6 in 10 adults in the US have a chronic disease
- 4 in 10 adults in the US have two or more chronic diseases



Chronic Disease

The leading cause of death and disability and leading drivers of the Nations 3.3 Trillion in annual healthcare costs.

1. Heart Disease & Stroke
2. Diabetes
3. Cancer
4. Obesity

Heart Disease and Stroke

- 1 IN 3 DEATHS or more than 859,000 people each year.
- \$214 BILLION in health care system costs.
- \$137 BILLION in lost productivity on the job from premature death.



Diabetes

- More than 30 million people in the United States have diabetes
 - 1 in 4 of them don't know they have it.
- More than 84 million US adults—1 in 3—have prediabetes
 - 90% of them don't know they have it.
- In 2017, the total estimated cost of diagnosed diabetes was \$327 billion



Cancer

- Cancer is the second leading cause of death in the United States, but many kinds of cancer can be prevented or caught early.
- Leading risk factors for preventable cancers are smoking, getting too much UV radiation from the sun or tanning beds, being overweight or having obesity, and drinking too much alcohol.
- The cost of cancer care is expected to reach almost \$174 billion by 2020.



Obesity (disease/risk factor)

Obesity is common, serious and costly

- The prevalence of obesity was 39.8% and affected about 93.3 million of US adults in 2015~2016
- The estimated annual medical cost of obesity in the United States was \$147 billion in 2018 US dollars; the medical cost for people who have obesity was \$1,429 higher than those of normal weight.





ORIGINAL ARTICLE

Contribution of health status and prevalent chronic disease to individual risk for workplace injury in the manufacturing environment

Jessica Kubo,¹ Benjamin A Goldstein,¹ Linda F Cantley,² Baylah Tessier-Sherman,² Deron Galusha,² Martin D Slade,² Isabella M Chu,³ Mark R Cullen³

¹Quantitative Sciences Unit, Stanford University School of Medicine, Stanford, California, USA

²Yale Occupational & Environmental Medicine, Yale School of Medicine, New Haven, Connecticut, USA

³General Medical Disciplines, Stanford University School of Medicine, Stanford, California, USA

Correspondence to
Dr Mark Cullen, General Medical Disciplines, Stanford University School of Medicine, 1265 Welch Road, MSOB X-338, Stanford, CA 94305-5411, USA; mrcullen@stanford.edu

Received 7 June 2013
Revised 6 September 2013
Accepted 13 September 2013
Published Online First
16 October 2013

- After adjusting for potential confounders, presence of these diseases was significantly associated with increased hazard of injury: heart disease (HR 1.23), diabetes (HR 1.17), depression (HR 1.25) and asthma (HR 1.14).
- Our results suggest that chronic heart disease, diabetes and depression confer an increased risk for acute occupational injury. Employees may benefit from strategies to reduce chronic

experience on the job as a covariate.

Results One-third of employees had at least one of the diseases during the study period. After adjusting for potential confounders, presence of these diseases was associated with increased hazard of injury: heart disease (HR 1.23, 95% CI 1.11 to 1.36), diabetes (HR 1.17, 95% CI 1.08 to 1.27), depression (HR 1.25, 95% CI

associated with increased hazard of injury: heart disease (HR 1.23), diabetes (HR 1.17), depression (HR 1.25) and asthma (HR 1.14).
► Our results suggest that chronic heart disease, diabetes and depression confer an increased risk for acute occupational injury. Employees may benefit from strategies to reduce chronic

re is scant
c disease on

risk of injury
y, diabetes

of ischaemic
etes,
cupational
ng workers for
and 2007.

ounders,
significantly

NIOSH - Approach

How do we make an impact on TWH



Deadly Threats – Health Risk Behaviors



Poor Nutrition



Inactivity



Smoking

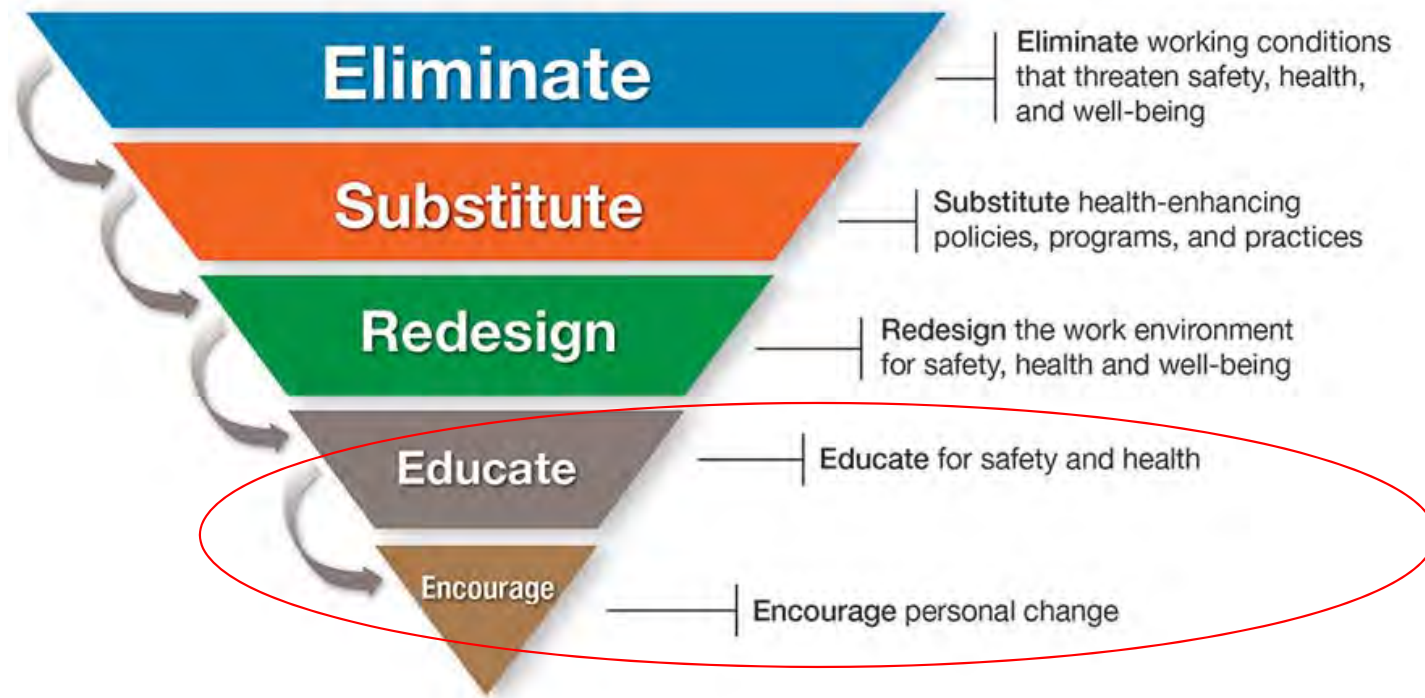


Alcohol and Drugs



Stress and Depression

Hierarchy of Controls: TWH



Workplace Wellness TWH Solutions

Break down the silo's

- Safety policies and procedures
- Wellness policies and procedures

Individually focused behavioral change programs is not enough

- Fitness Center
- Wellness Portals



Research: Why most programs fail?

- **Lack of Consistency**
- **Employer focused (reduce costs, increased productivity) .**
- **Individually focused programs are not enough**
- **Engage/Coach for behavioral change**



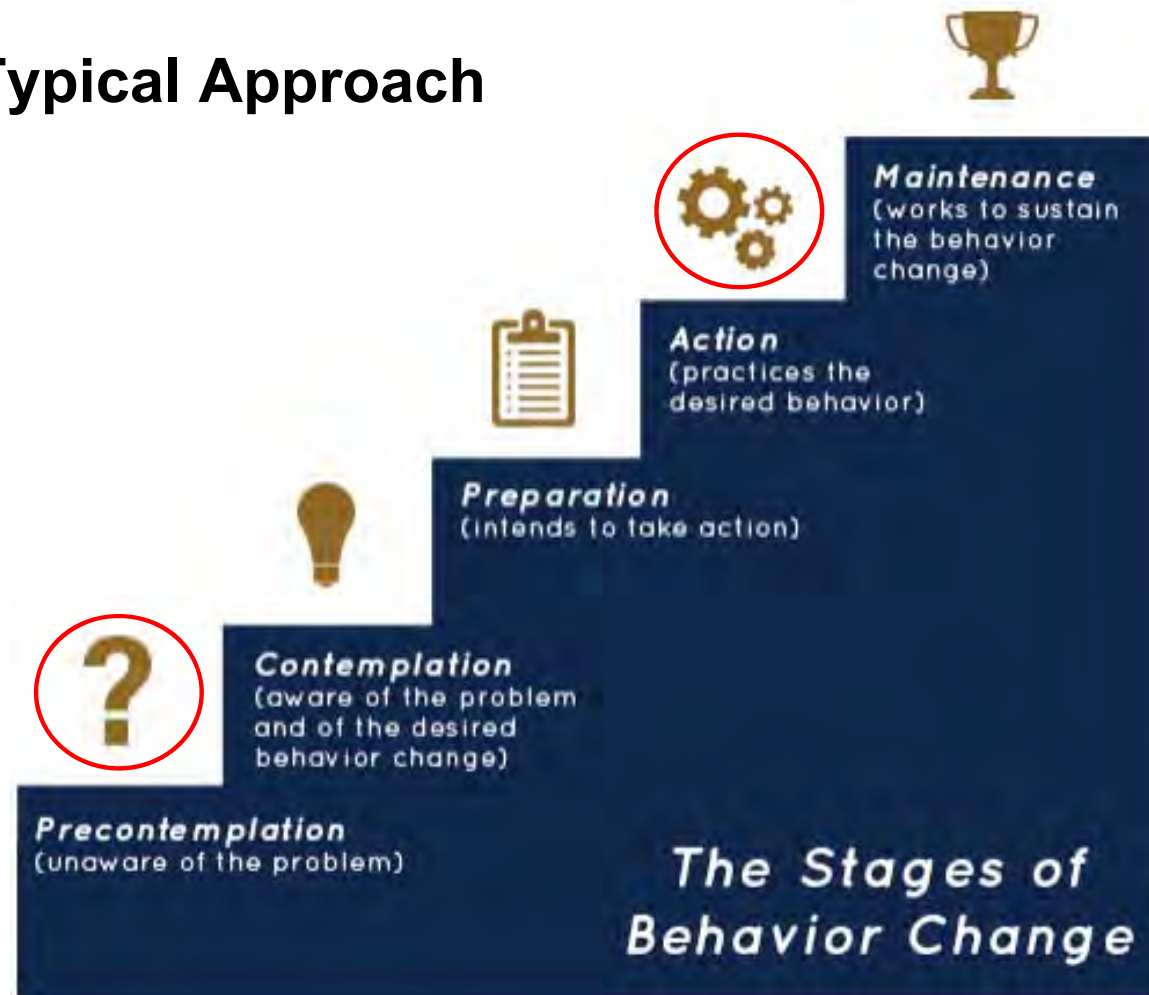
How do we change habits/behaviors



Typical Approach

Training/Education:

- Expert approach
- Gives facts/research
- Action based
- Employer focused



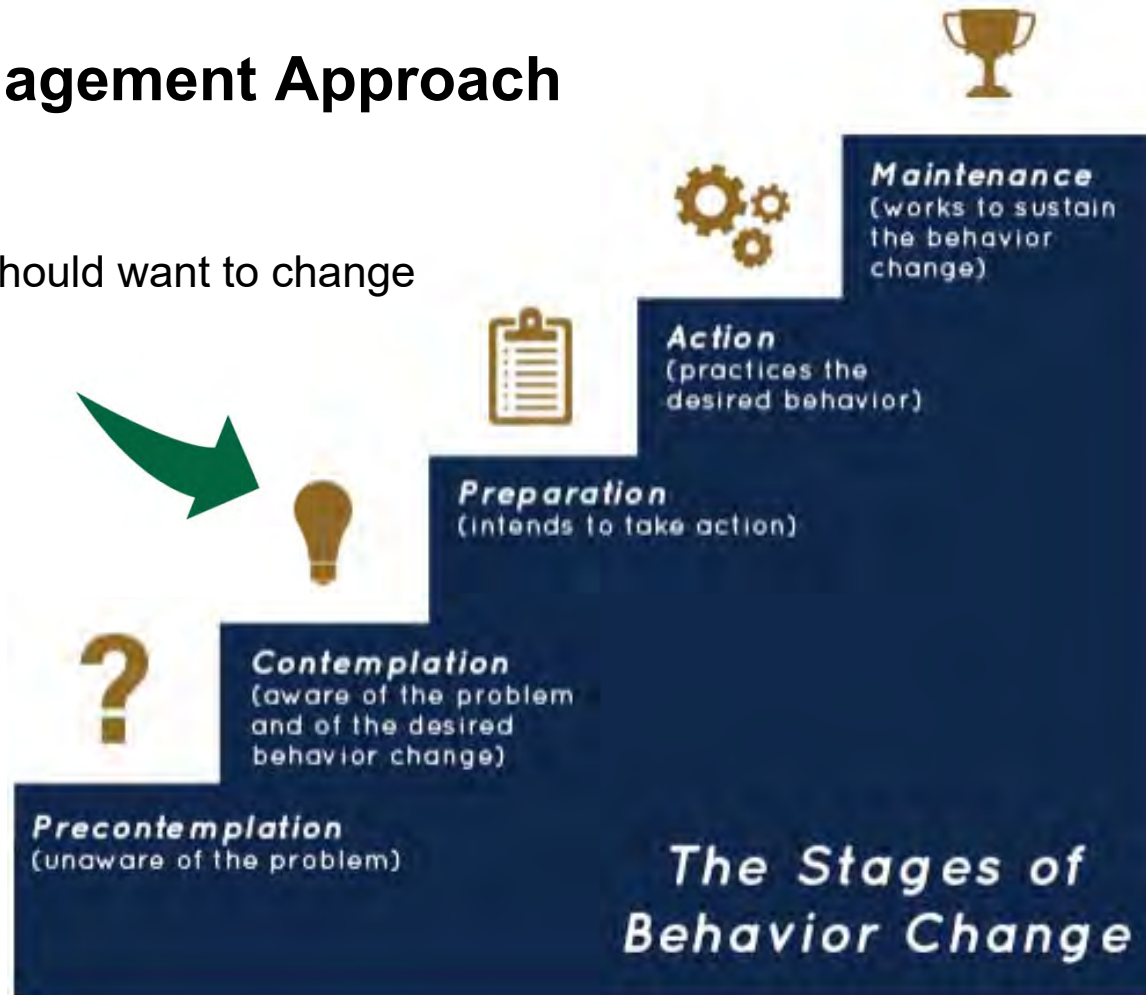
Engagement Approach

Engagement:

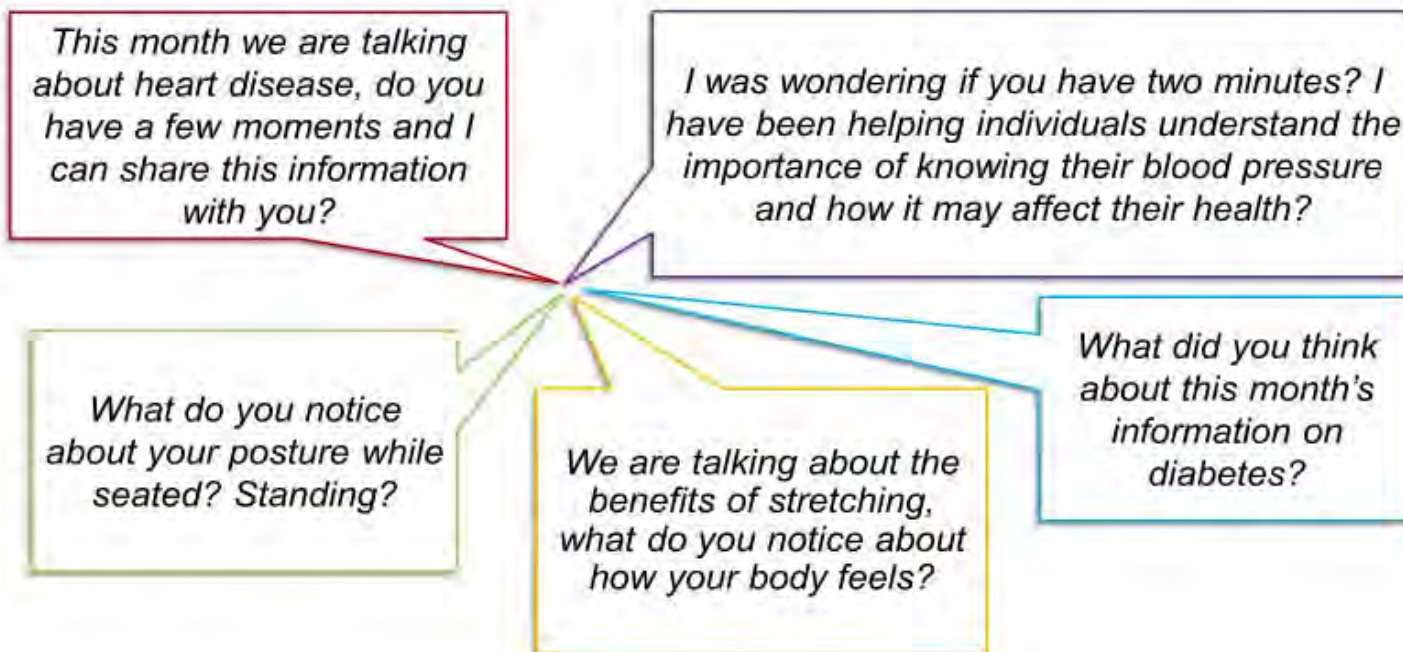
- Educate on why they should want to change
- Personal Connection

Training/Education:

- Expert Approach
- Gives Facts/research



Engagement Coaching



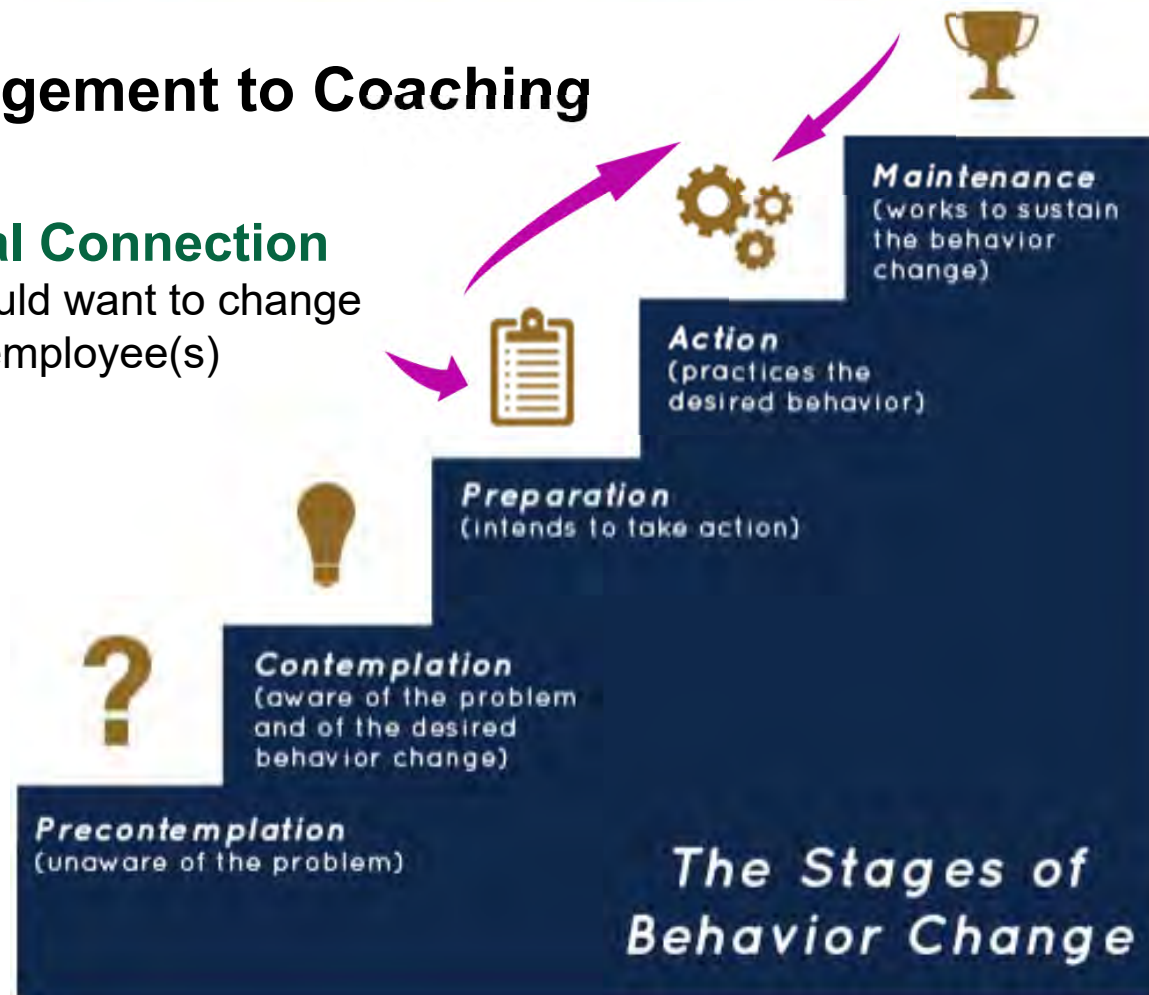
Engagement to Coaching

Engagement: Personal Connection

- Educate on why they should want to change
- What is important to the employee(s)

Personal Coaching

- Coach Approach
- Preparation
- Ready to take action



Keys to Success

Engaging employees

- Implement employee-centered vs expert-centered approach.
- Give employees a voice
- Help employees explore personal meaning and value

Build into culture

- Break down the silos
- Wellbeing vs Wellness

Atlas Total Worker Health Examples



DESCRIPTION OF CATEGORIES

PHYSICAL ACTIVITY:

What do you do to stay physically fit? Consider aerobics, strength training, sports, and recreational activity. How fit are you?

FLEXIBILITY:

What do you do to maintain flexibility? Consider stretching, yoga, sports, and variety in movement throughout the day. How flexible are you?

BODY POSTURE:

How healthy is your posture? Consider how often you are mindful of your posture, how often you practice proper body mechanics, and the degree to which your posture affects your back health.

FUNCTIONALITY:

Can you do the things you like to do? Consider the degree to which your back health is interfering with your daily activities. Consider the degree of your pain. In what ways would your life be different if your back was more healthy?

UNDERSTANDING YOUR WHEEL

CONSIDER THE FOLLOWING QUESTIONS:

- How are the imbalances depicted in the wheel affecting your back health?
- How are the imbalances affecting other areas of your life?
- Which area is most important to you? Why?
- Changes in which area(s) do you feel would most impact your back health and your life in a positive way?
- What changes are you interested in making right now or in the near future?



Atlas Total Worker Health Examples





Do any of the scenarios below sound like something you have ever done?

- ☐ Driven down the highway and missed your exit
- ☐ Forgotten your password to a security site
- ☐ Opened a fresh bag of chips to find it empty minutes later
- ☐ Stayed up all night thinking about tomorrow's to-do's
- ☐ Felt so stressed that you could feel your muscles tense
- ☐ Felt like you were trying to do too many things at once

Over time, situations like these can affect your health. Read on to learn more about the benefits of mindful living.



Mindful

Mind Full?




WHAT DOES MINDFULNESS HAVE TO DO WITH HEALTH?


Living Without Mindfulness May:

- Increase your stress levels
- Cause physical symptoms, like headache, nausea, muscle tension, and weakness
- Cause you to ignore pain signals
- Cause you to be less focused and more prone to injury
- Cause you to be less aware of your body's abilities and limitations
- Cause you to miss important information or instructions
- Make it harder to break unhealthy habits
- Increase the likelihood that you will choose unhealthy habits

Living With Mindfulness May:


- Help you recognize and manage stress symptoms
- Help you avoid or manage unpleasant and harmful physical symptoms
- Help you recognize and address pain signals
- Help you focus and complete tasks on time and without mistakes
- Improve your mind-body connection and increase your coordination and physical performance
- Help you consider all options and make informed decisions
- Make it easier for you to break unhealthy habits
- Help you respond rather than react to better manage your health habits





MINDFULNESS IS...

1. Connecting the **mind and body** simultaneously
2. **Paying attention** in the present moment
3. **Decreasing brain clutter** and chatter
4. Engaging one's **senses**
5. A **non-judgemental** perspective
6. Completing tasks with a **specific purpose and focus**
7. **Responding** to events and circumstances rather than reacting to them
8. An observation and **awareness** of one's own thoughts, feelings, and surroundings



MATCH THE EXAMPLES BELOW TO THE CORRECT NUMBERED DEFINITION ABOVE

1. I notice that when I'm stressed I find myself mindlessly rummaging through the refrigerator or cabinets. I'm not even hungry. I'm just bored. I've learned that no matter what, I need to take a step back and be more aware of my feelings and how I'm reacting to my situation or surroundings. _____
2. Trust me, there have been times I have lost count of how many chips or cookies I've eaten. I used to beat myself up for that, but I see where all that self-criticism only leads to guilt and more over-eating. Now, I try to forgive myself and move on. _____
3. Sometimes I get discouraged that the weight loss comes so slowly. I feel like I'll never reach my goal, but I try to focus on the fact that right now I feel much better, even though I'm not at my target weight yet. _____
4. I am "in the zone" when I'm hiking - the sound of the leaves crunching under my feet, the smell of the pines, the cool breeze when I get to the top of the hill - it all helps me feel relaxed and refreshed. _____
5. Sometimes I find myself eating lunch at my desk while catching up on emails. I find that when I do that, I don't enjoy my lunch and I don't really get any work done. So, I have to ask myself, what's my purpose? _____
6. I've learned to put my to-do list aside and walk with my co-workers at break time, because walking actually relieves my back and shoulder strain. Also, I feel more energized and alert when I get back to my work. _____
7. The other day I found out that my son failed an exam. My first reaction would have been to raise my voice and let my anger out. I'm glad I thought about it first and decided to talk with his teacher. I learned that this was an oral exam and he was too nervous to participate. Now, the teacher is helping him with public speaking. _____
8. My kids rush to greet me as soon as I walk in the door from work. Sometimes I don't even know what they've said to me, because I haven't put my work day worries aside. My family is my priority. I have to learn to quiet my thoughts when I'm with them. _____

What is Mindfulness?

The awareness that emerges through paying attention on purpose in the present moment.



What is Mindlessness?

Habitual, automatic, repetitive behaviour generally brought on by multi-tasking, familiarity or impulse



What can occur with Mindlessness?



Highway Hypnosis?



Mindless Eating?

Boredom

Distraction

Emotional



Multi-tasking?

Steals Time

Mental Health

Quality

Accuracy



Stress?



Risk of Injury ?



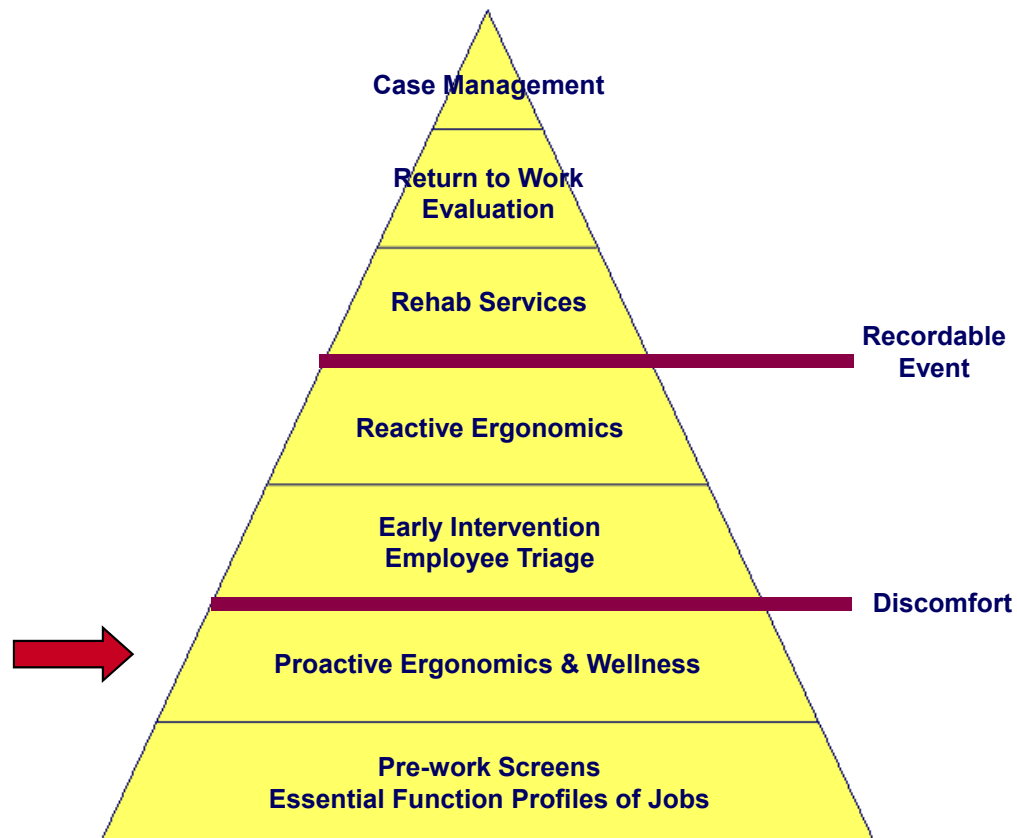
Atlas Total Worker Health Examples

Month	Quarterly Theme	Educational Interactions	Coach Events Ideas	Fitness Center/Special Event	Safety/Ergo Coaching Presentations
January	Heart Health Nutrition	New Year Resolutions	Hydration Stations Know Your Numbers Activity Health Vending Promotion	Fitness Center Promotion New Year Challenge Massage(Monthly)	Your Work Readiness Plan
February		Wellness Score Card – Health Assessment Tool			Mindful Movement Overview <ul style="list-style-type: none"> Tunnel of Movement Task Specific Training Postures, Body Mechanics, Ergonomics and injury prevention
March		National Nutrition Month			
April	Spring Into Fitness	Interval Training	Check My Form: Exercise Game	Fitness Center Recognition Program Launched (See examples on page 2)	Mindful Movement "Foot/Ankle"
May		How are you doing? Exercise	Know Your Max Heart Rate		
June		Injury Prevention Newsletter – Muscle Matters	Exercise Promotion		Mindful Movement "Back"
July	Sleep Mindfulness	Worker Fatigue/Sleep	Sleep Family Health Fair	Stretching Class Mindful Meditation Yoga Promo Massage(Monthly)	Mindful Movement "Hand/ Wrist"
August		Mindfulness & Health			
September		Mindfulness and Energy			Mindful Movement "Neck/Shoulders"
October	Stress Less	Wellness Score Card – Stress	Maintain Don't Gain – Weight Loss Program	Stress Less Holiday Recipe Exchange Massage (Monthly)	Mindful Movement Review "Putting it all together"
November		6 Pillars of Managing Change			
December		Stress Relief Tips			

- **Tony Silva, CPE, BSC**

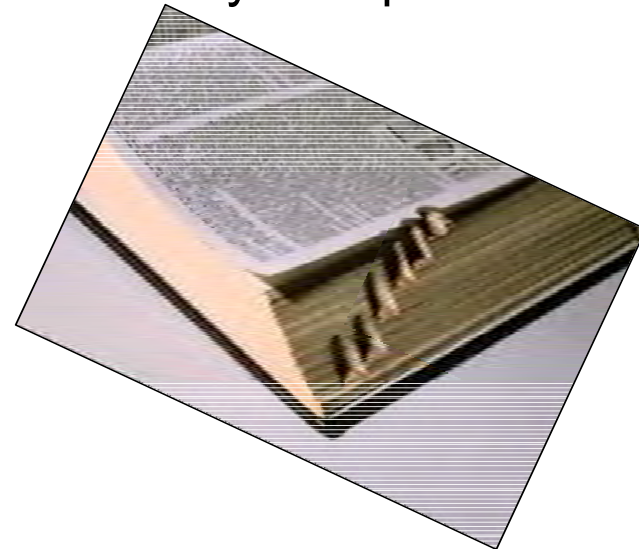
A Certified Professional Ergonomist with 15+ years of experience helping companies achieve bottom-line results through improved ergonomics. Tony's knowledge and experience is in ergonomics program development, communication and implementation, with specialization in the integration of ergonomics into existing business practices such as Lean Manufacturing and Six Sigma.





Definition of Ergonomics...

- Ergonomics is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance.
- International Ergonomics Association



Fitting the task to the person

- ✓ Keep people safe, comfortable, and productive while they perform tasks at work and home.



What is Total Worker Health® ?

Policies, programs, & practices that integrate protection from work-related safety & health hazards with promotion of injury & illness prevention efforts to advance worker well-being

**Keep Workers
Safe**



**Invest More in
Worker Health**



**Create Worker
Wellbeing**

Optimize Human Performance...





- Hours per game vs. hours per shift
- Games per week vs. shifts per week
- Weeks per year
- Years in a career

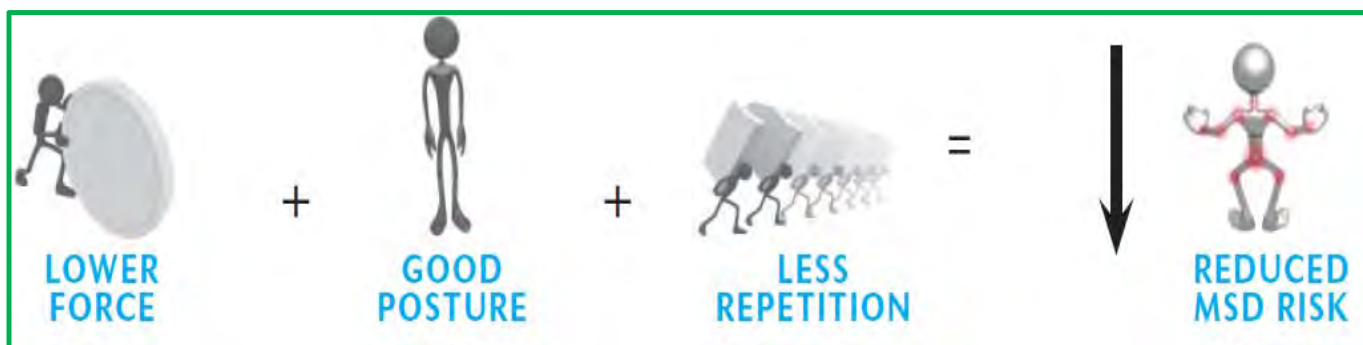
Industrial Athlete...



Primary Ergonomics Hazards...

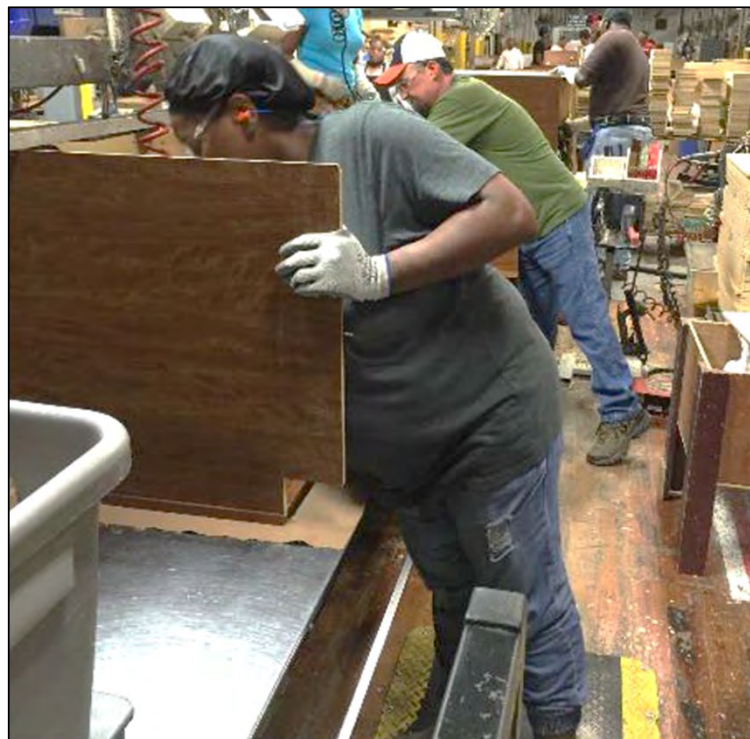


Primary Ergonomics Hazards...



Productivity and Quality Improvement...

Where
ergonomics
and Lean
Manufacturing
meet...



8 Kinds of Waste & Ergo...

- The 8 Wastes
 - Overproduction, Inventory, Transportation, Over Processing, Rework, Motion, Waiting, Underutilizing People

8 Kinds of Waste & Ergo...

- The 8 Wastes
 - Overproduction, Inventory, Transportation, Over Processing, Rework, Motion, Waiting, Underutilizing People
- Biggest one for Ergonomics is Wasted Motion
 - Wasted motion impacts productivity

8 Kinds of Waste & Ergo...

- The 8 Wastes
 - Overproduction, Inventory, Transportation, Over Processing, Rework, Motion, Waiting, Underutilizing People
- Biggest one for Ergonomics is Wasted Motion
 - Wasted motion impacts productivity
- In Ergonomics we work to reduce:
 - **Reaching**
 - **Bending**
 - **Walking**
















Proven Methodology...

- Recognize
- Evaluate
- Control

- Quickly find and fix obvious ergonomic hazards
- Use tools that are easy to apply in the field and on the shop floor
 - Observation Forms
 - Toolbox talks
 - Washington States Caution and Hazard Zone checklists


Behavior Observation Form...

 Ergonomics Observation Form											
<input checked="" type="checkbox"/> Check the "Good" and "Bad" that is observed while performing the job/ task. Reinforce the "Good" behaviors and provide coaching/recommendations for the "Bad".		Name: _____ Observer: _____		Department: _____ Job/Task: _____		Date: _____ # of employees who perform this job/task: _____					
Postures											
GOOD		BAD		EXAMPLES				Observation/Recommendation			
Back	<input type="checkbox"/> Back straight <input type="checkbox"/> Maintain lumbar curve <input type="checkbox"/> Pivot at the hips <input type="checkbox"/> Move feet (don't twist)	<input type="checkbox"/> Back bent forward <input type="checkbox"/> Back bent backward <input type="checkbox"/> Back sideways or twisted									
	Shoulder	<input type="checkbox"/> Hand(s) below the shoulder <input type="checkbox"/> Elbow(s) close to the body									
		Neck	<input type="checkbox"/> Neck bent forward <input type="checkbox"/> Neck bent backward								

SAFETY TALK – Lifting (One Hand)


How to use the Safety Talk:
The Safety Talk is designed to help drive a conversation and engage all associates in a discussion. Prepare yourself by thoroughly reviewing the safety talk prior to meeting with your team members. Be familiar with all of the “Good” and “Bad” items, the “Questions to Engage Discussion” and the “Red Dot Walk Engagement”. Add any of your own examples that you believe could benefit your team.

GOOD - Partial Squat Lift - Use for small light objects with handles close to knee height



1. Stand with the object close to your side.
2. Place your feet shoulder width apart, with one foot slightly ahead of the other.
3. Place one hand on a fixed surface (such as a table or stool) or on your thigh.
4. Keep your back straight, push your buttocks out and slowly lower yourself down to reach the object's handles.
5. Prepare for the lift: grasp the object and look forward.
6. For support as you lift, push down on the fixed surface (or on your thigh).
7. Lift upwards following your head and shoulders. Lift by extending your legs with your back straight, your buttocks out, and breathe out as you lift.





GOOD - Golfers Lift - Use for small light objects in deep bins and to pick small objects off the floor. Recommended for people with knee problems who cannot do a deep squat.



1. Place hand near the edge of a fixed surface (such as the edge of a table or bin). This hand will support your upper body during the lift.
2. Keep your back straight and raise one leg straight out behind you as you lean down to pick up the object. The weight of your leg will counterbalance the weight of your upper body.
3. Grasp the object firmly.
4. Prepare for the lift: look forward. Keep your leg raised as you initiate the lift.
5. To lift, push down on the fixed surface as you lower your leg. Keep your back straight and breathe out as you lift.

- Should include questions to engage discussion
- E.g., provide a work example of a one-handed lift

WISHA Caution Zone Checklist...

Caution Zone Checklist Use one sheet for each position evaluated.			
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>1 / 5. Pinching an unsupported</p>			

- Does the tool validly predict the risk of MSD injury?
- Does the tool apply in my work environment e.g., long cycle jobs
- Which jobs pose the greatest risk?
- How much is too much?
- How can I show improvements were made?
- How can I document our efforts? (OSHA)



Ergonomics Risk Assessment...

- Right tool for the job
- AIHA Ergo Assessment Toolkit
- https://www.aiha.org/get-involved/VolunteerGroups/Documents/ERGOVG-Toolkit_rev2011.pdf
- Flowchart to help select the right tool



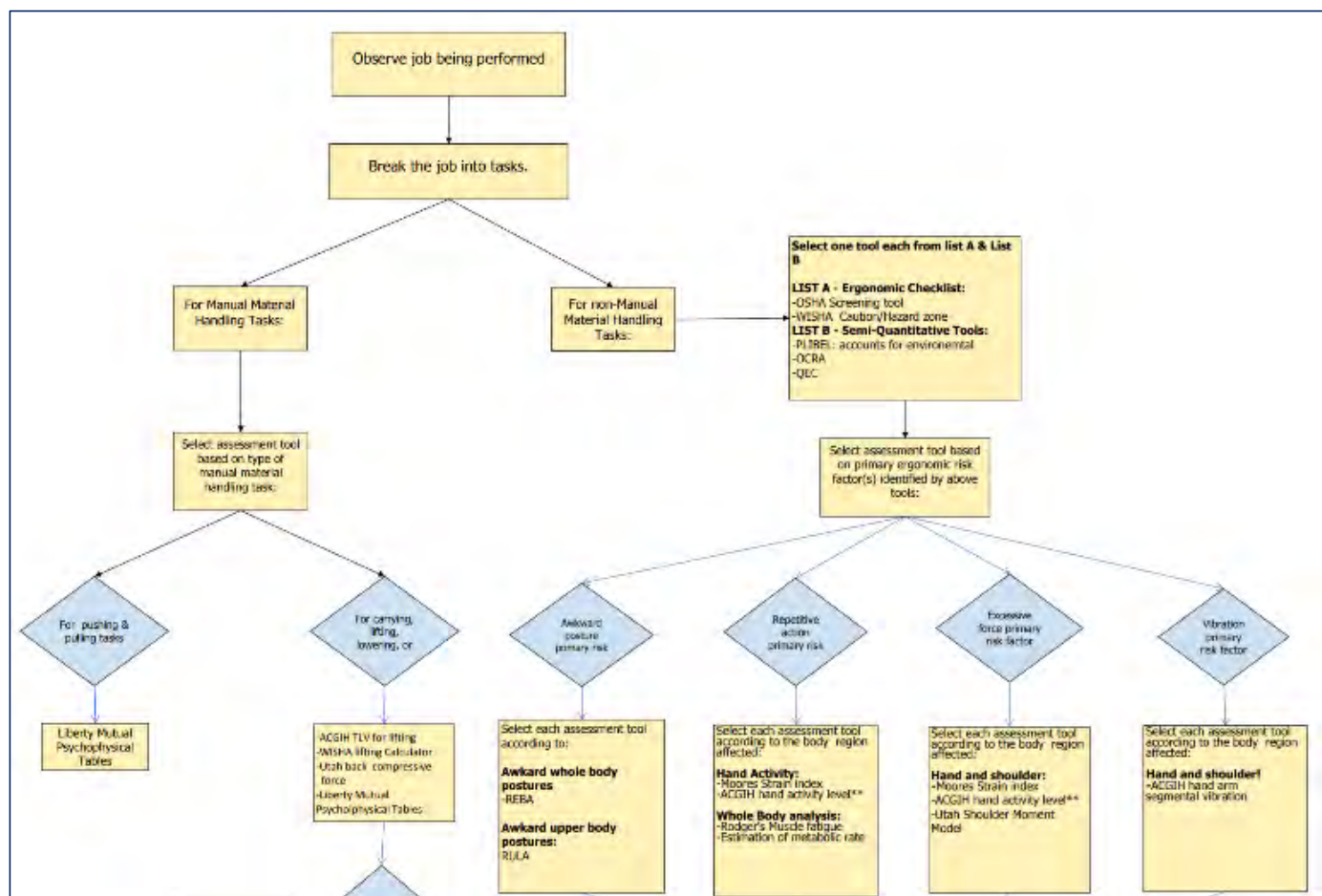


AIHA ERGONOMIC COMMITTEE

Ergonomic Assessment Toolkit



**American
Industrial
Hygiene
Association**

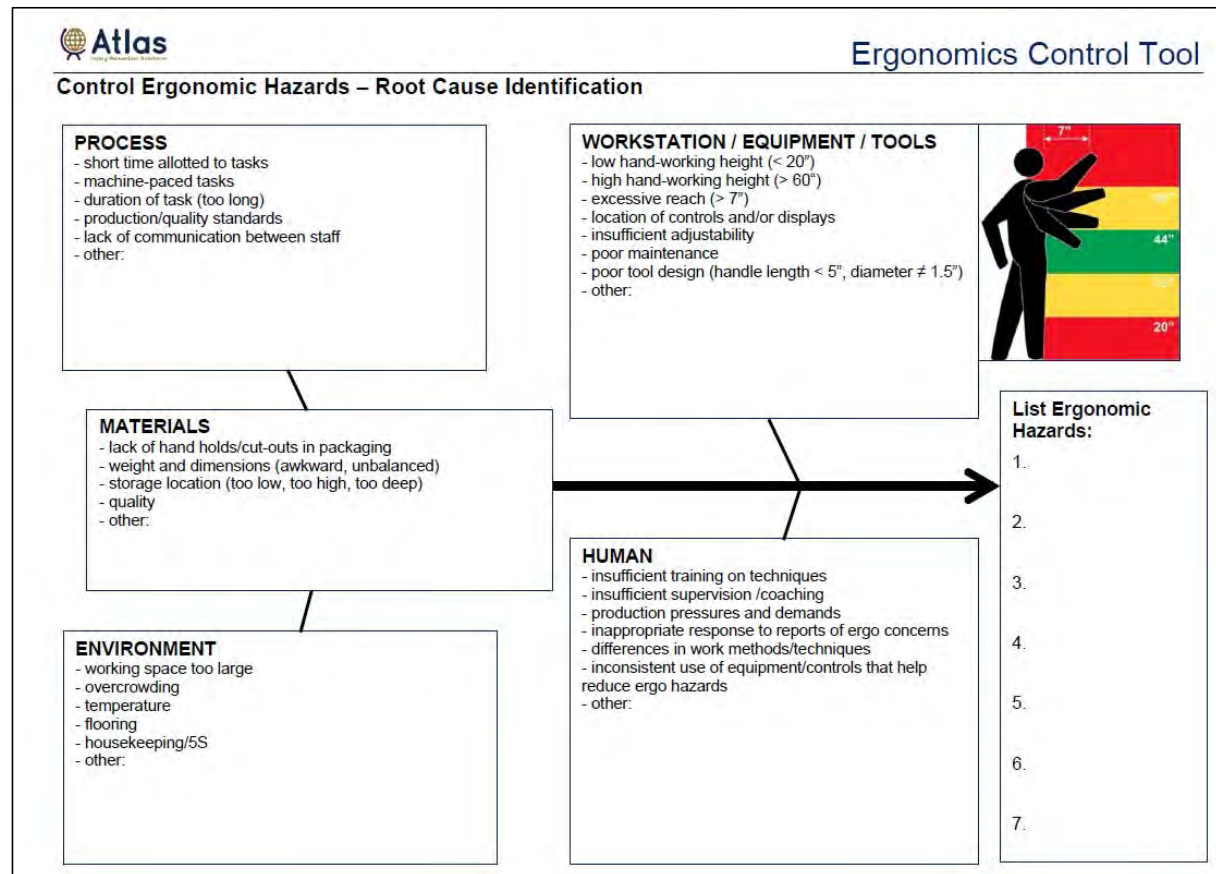


- Root cause identification
- Recommendation development
- Cost justification

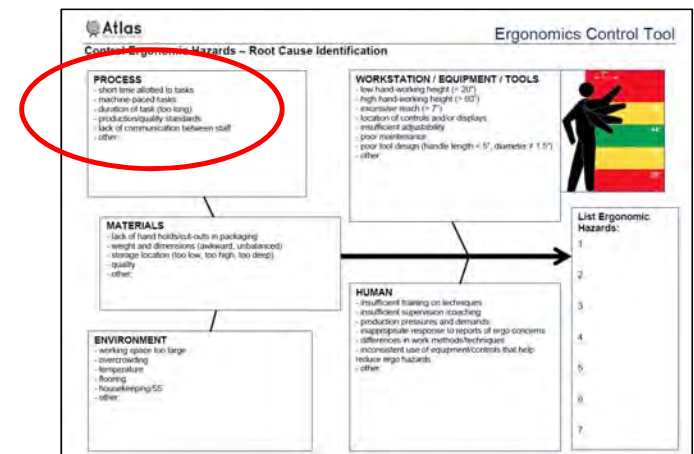
Root Cause Determination...

- Examine the ergonomic assessment results
- Determine what body part is at the greatest risk
- Determine what hazards contribute most to the risk of injury e.g., posture, force, repetition
- Brainstorm and list causes that contribute to the presence of risk factors e.g., product on the floor, operator not following SOP, etc.

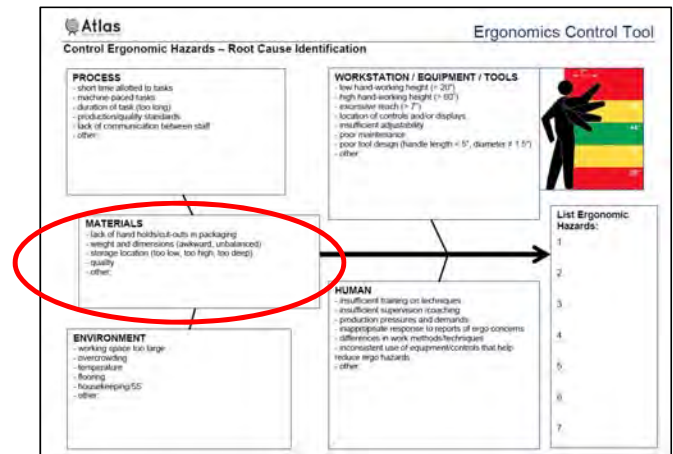
Fishbone Diagram...



- Lack of hand holds/cut-outs in packaging
- Machine-based task
- Duration of task (too long)
- Production / quality standards
- Lack of communication between staff

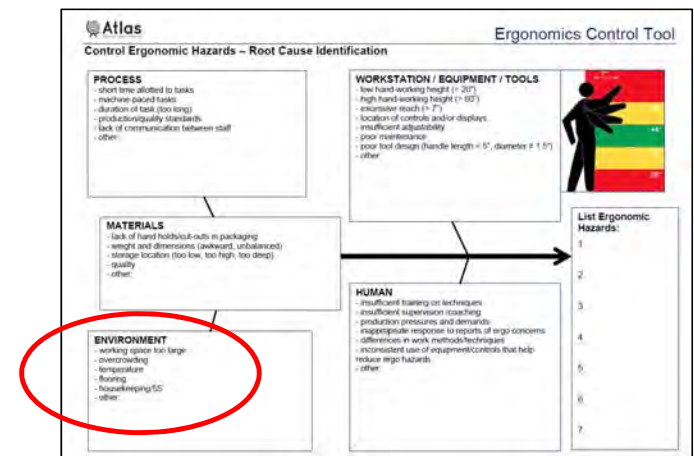


- short time allotted to task
- weight and dimensions (awkward, unbalanced)
- storage location (too low, too high, too deep)



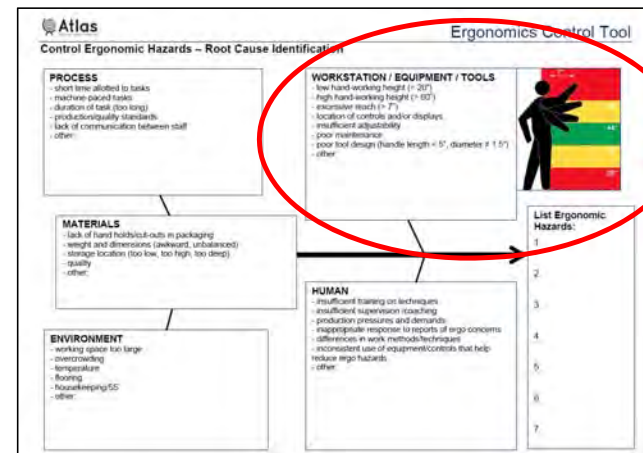
Environment...

- Working space too large
- Over crowding
- Temperature
- Flooring
- Housekeeping / 5S

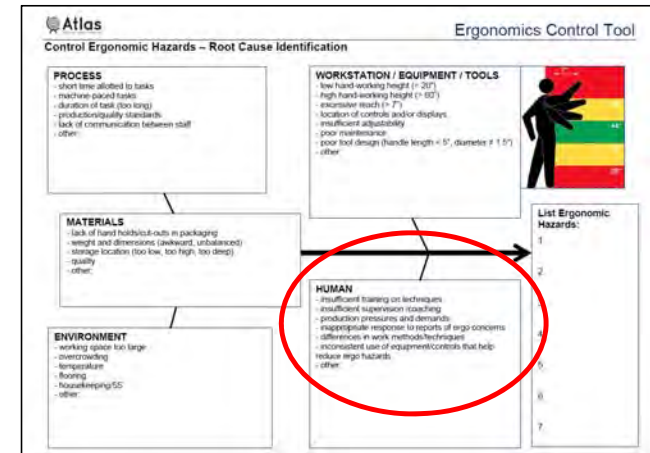


Workstation / Equipment / Tools...

- Low hand-working height
- High hand-working height
- Excessive reach
- Location of controls and/or displays
- Poor maintenance
- Poor tool design (handle length < 5", diameter ≠ 1.5")
- Heavy tool weight (> 8 lbs. power tool, > 2 lbs. precision tool)



- Insufficient training on techniques
- Insufficient supervision /coaching
- Production pressures and demands
- Differences in work methods/techniques
- Inconsistent use of equipment/controls that help reduce ergo hazards



Root Cause Determination...

- Identify which causes are most likely to cause the problem (risk) and to have the biggest impact.
- Perform additional Root Cause Analysis for the leading causes.
- A simple Root Cause Analysis tool is 5 Why
 - By continuing to ask “why” you will be able to get to the root cause
 - The root cause is the issue that if resolved will reduce or eliminate the risk of injury

Hierarchy of Controls...

- Elimination
- Engineering
- Administrative
- Work Practices
- Personal Protective Equipment (PPE)

Elimination...

- Eliminate the task completely and the ergonomic hazards associated with the job or task.
- Examples include:
 - Automation
 - Improved process/newer technology

Engineering Controls...

- Eliminate or significantly reduce ergonomic hazards associated with the job or task.
- Examples include:
 - Adjustable workstations
 - Power tools
 - Work stands
 - Lift tables

Administrative Controls...

- Regulate exposure to ergonomic stressors without making physical changes to the work area or work process.
- Examples Include:
 - Job Rotation
 - Job Enlargement
 - Break Policies
 - Stretching Exercises

Work Practice Controls...

- Change the way employees perform job activities to reduce exposure levels.
- Examples include:
 - Job specific methods training
 - Workstation Features e.g., using adjustability

Personal Protective Equipment...

- Does little to eliminate the root cause of the concern
- Typically a band-aide when it comes to ergonomics



Anthropometry...

- Anthropos = human
- metron = a measure
- A discipline dealing with measurement on the human body

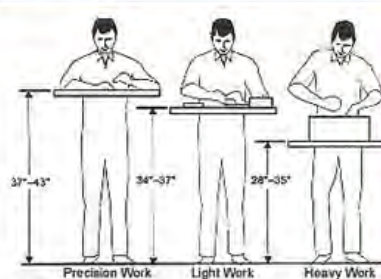
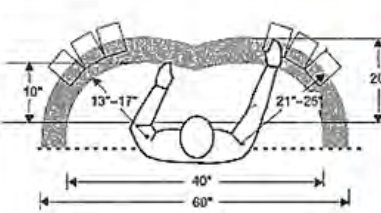



- Design for Range
 - design for 95% of the population
 - accommodates most of your employees
- Design for Extremes
 - tallest - heights, accessibility
 - shortest - reaches, weights, forces, restrict access
- Design for Average
 - accommodates few of your employees

Ergonomic Design Standards...

- Focus on the critical few (80/20 rule)
- Often these areas:
 - Manual material handling
 - Standing workstations
- Use relevant anthropometric data
- Use in the selection and evaluation of new equipment and workstation designs

Ergonomic Design Standards...

POSTURES	Item	Illustration	Description	Do Not Exceed	Ideal Value
	Standing working height		Work surface heights measured from the standing surface: <ul style="list-style-type: none"> Precision work, such as writing or electronic assembly: 37"-43" (4" above elbow height). Light work, such as assembly line or mechanical jobs: 34"-37" (1" below elbow height). Heavy work with demanding downward forces: 28"-35" (4"-6" below elbow height). Fixed height = 39" 		
	Reach – sitting and standing		Measured from the middle of the shoulder: Ideal 13"-17", Do not exceed 21"-25" OR Measured from the front edge of the work surface: Ideal <10", Do not exceed 20" Lateral reach: Ideal <40", Do not exceed 60"		
	Material handling heights - hands		Recommended working heights when lifting, lowering, pushing, pulling or carrying.	20" to 60" (between knees to shoulders) <12" from the front of the body	33" to 44" (between knuckles to armpits) <7" from the front of the body

Underpinning of Success...

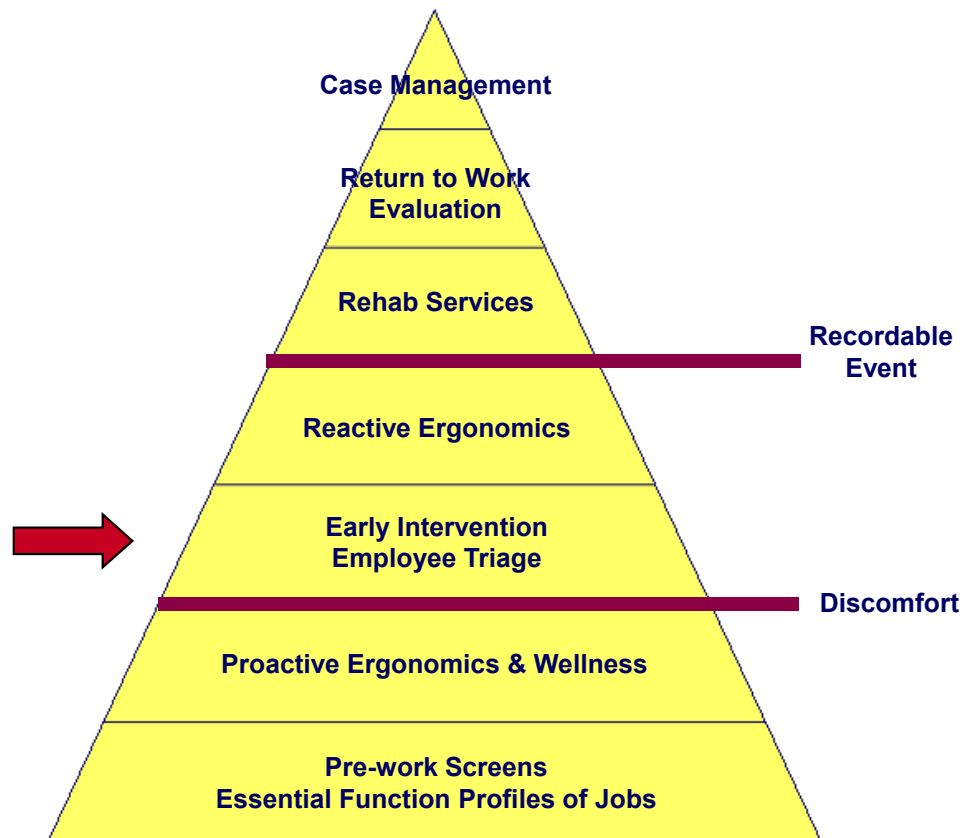
- Systematic approach
- Engineering principles
- Data driven decision making
- Measured outcomes
- Continuous improvement



- **Drew Bossen, PT, MBA**

A Physical Therapist with over 27 years of experience in injury prevention and development of treatment protocols for injured workers. Drew's knowledge and experience is in on-site clinical services, ergonomics and wellness strategies, and compliance.





What is Total Worker Health® ?

Policies, programs, & practices that integrate protection from work-related safety & health hazards with promotion of injury & illness prevention efforts to advance worker well-being

**Keep Workers
Safe**

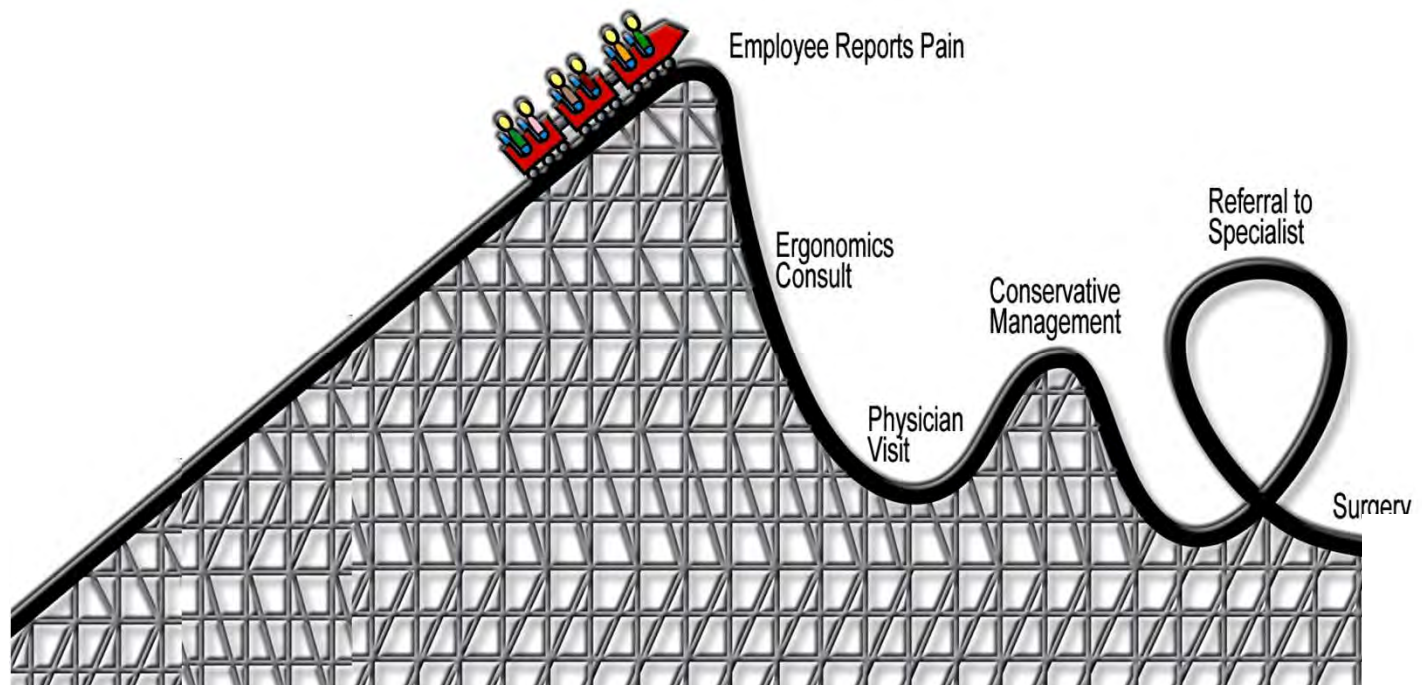


**Invest More in
Worker Health**

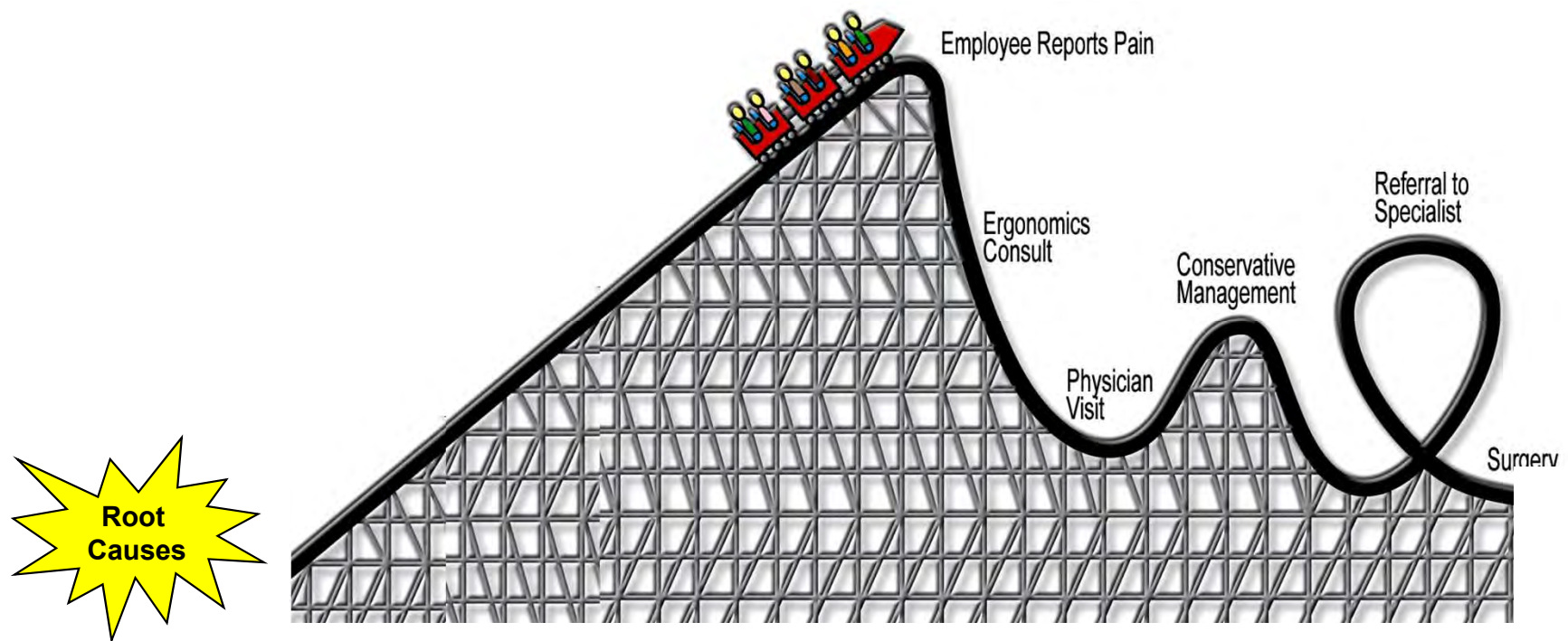


**Create Worker
Wellbeing**

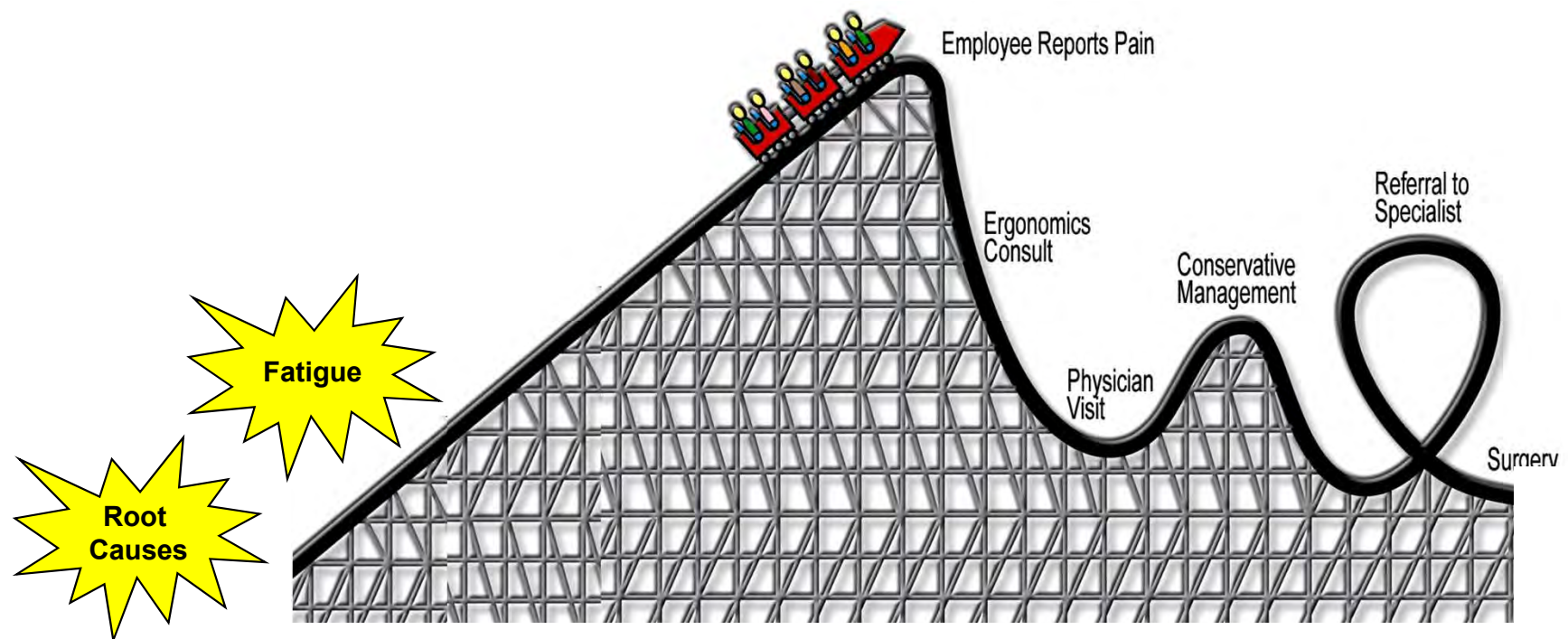
Traditional Approach to Injury Management...



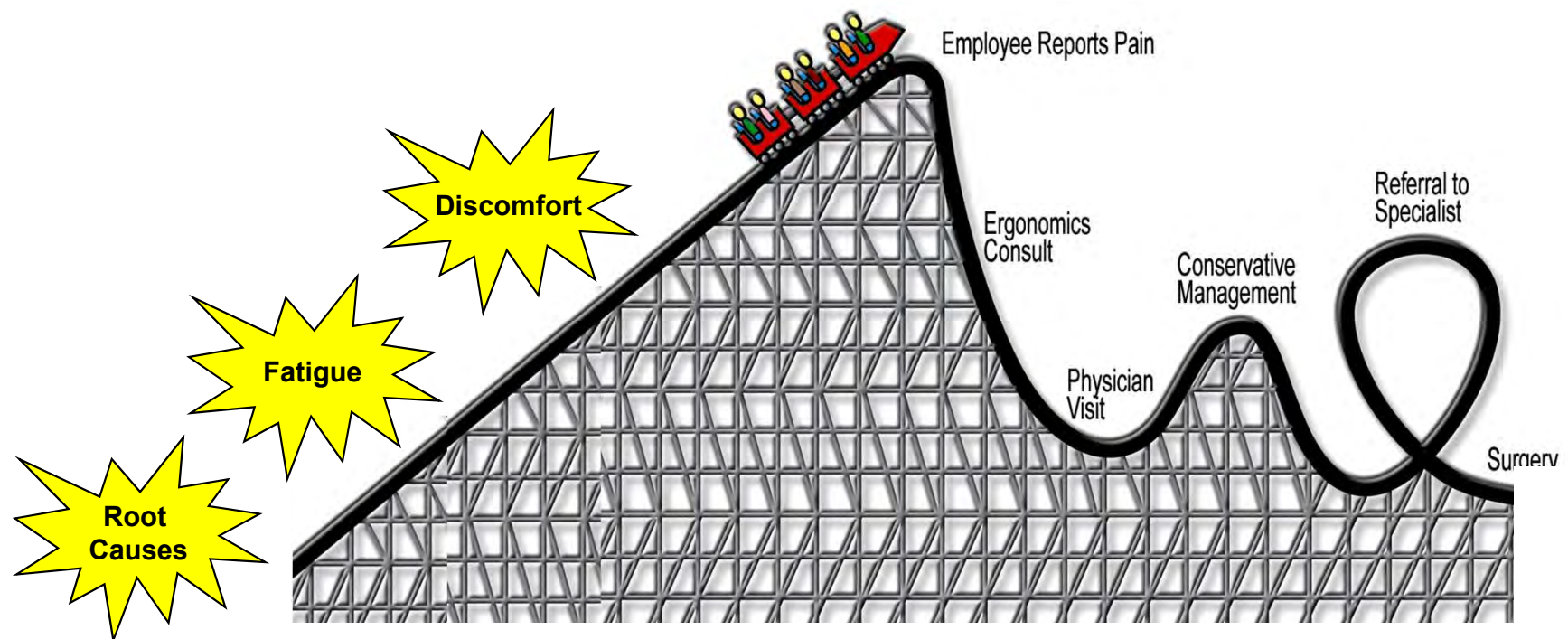
An Alternative Approach to Injury Management...



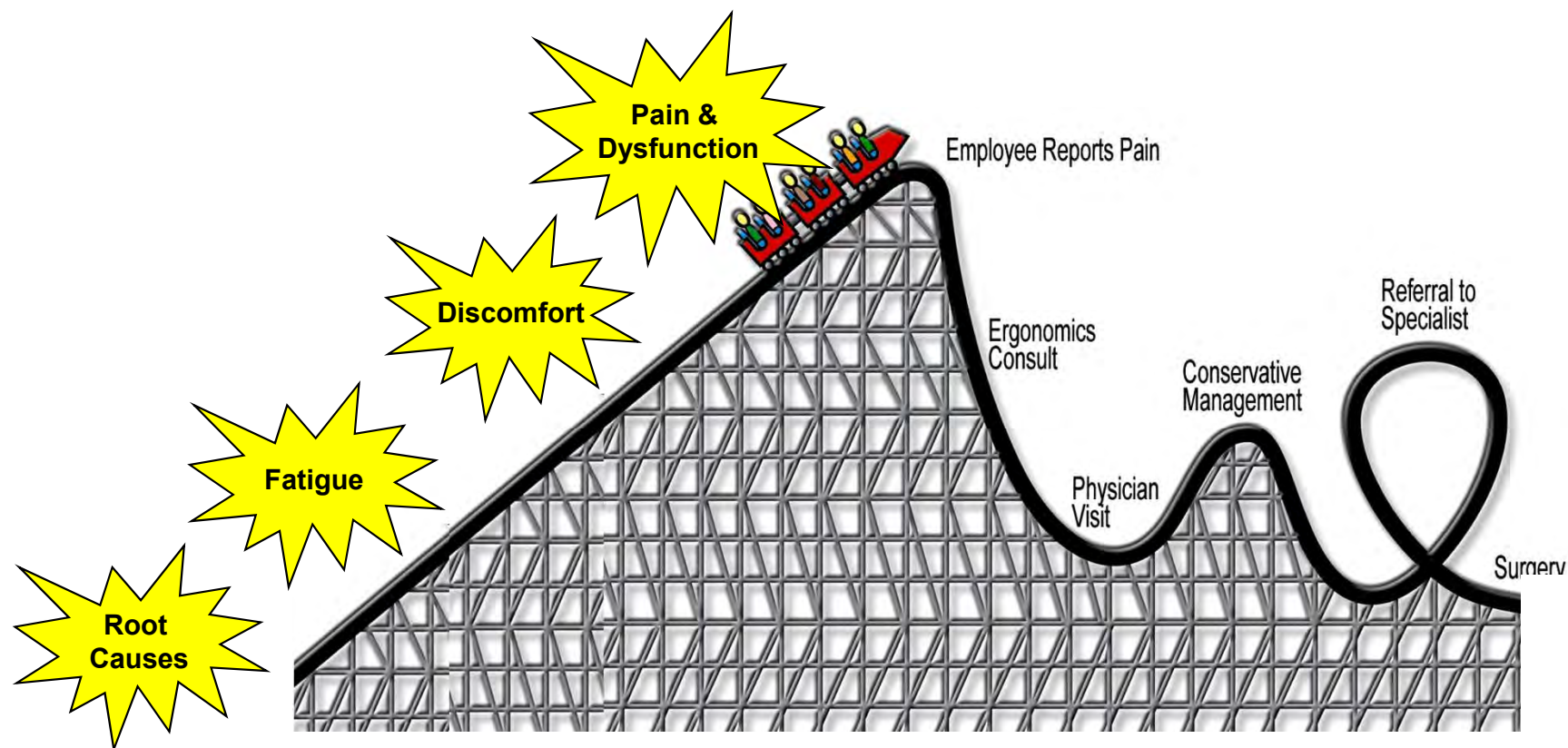
An Alternative Approach to Injury Management...



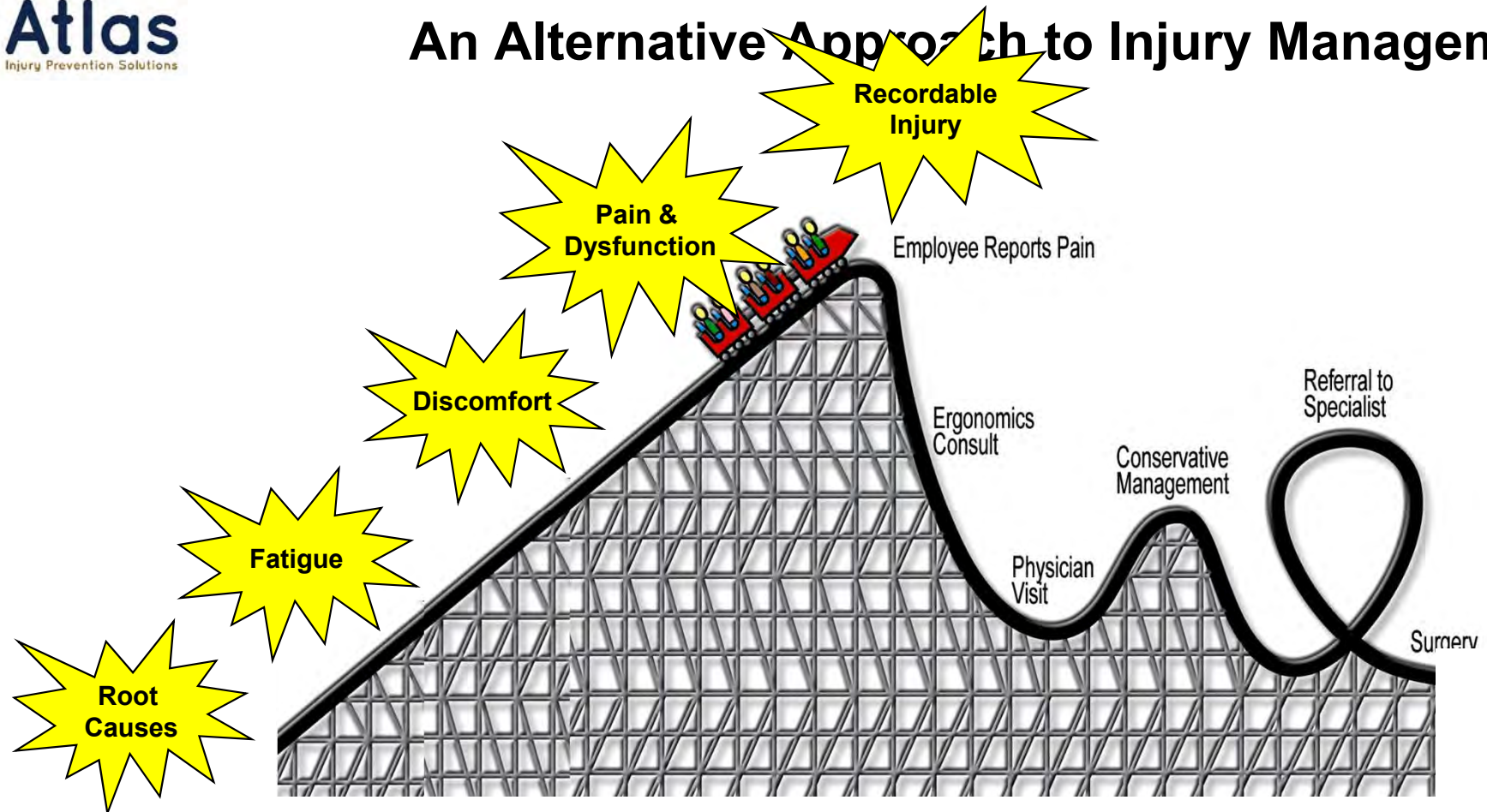
An Alternative Approach to Injury Management...



An Alternative Approach to Injury Management...



An Alternative Approach to Injury Management...





Gang of Four...





Gary Orr,
Ergonomist
US Dept. of Labor - OSHA



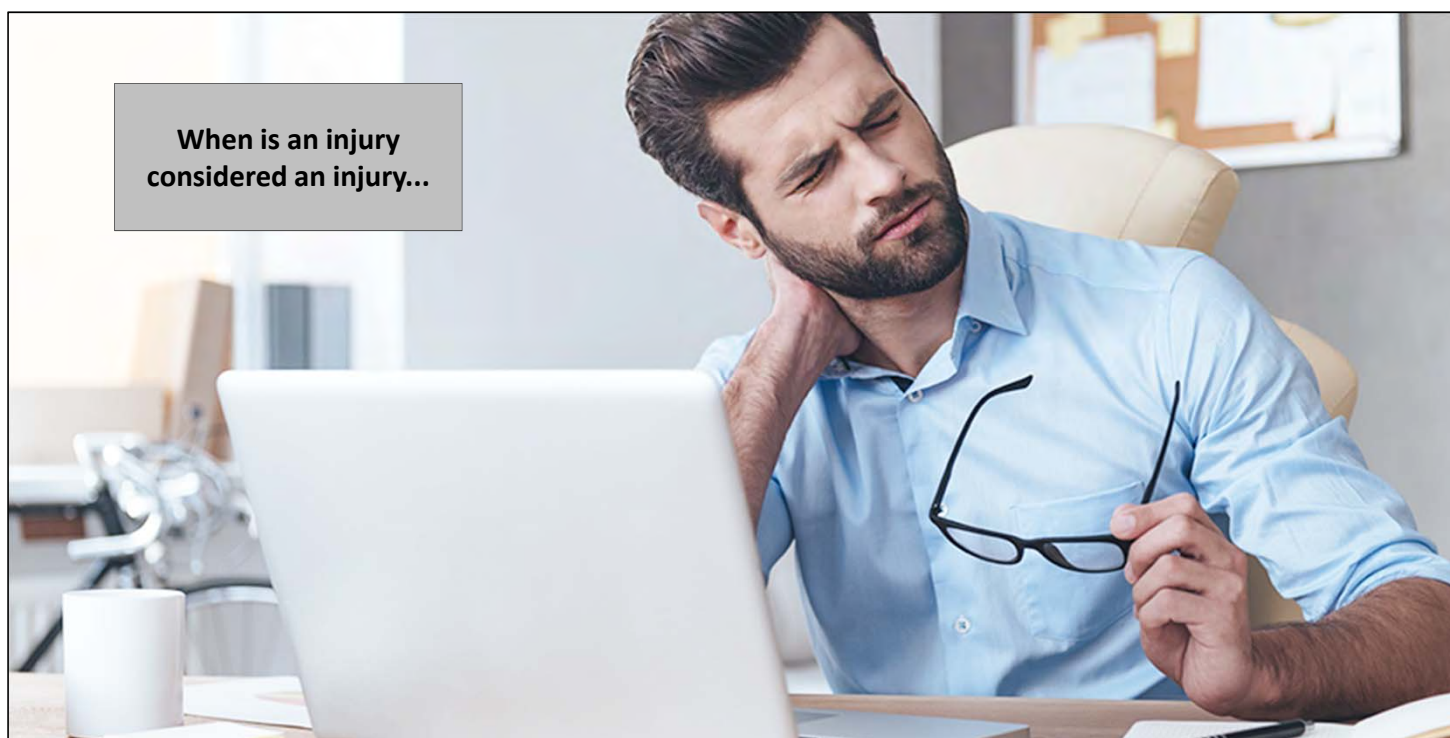
Michael Hodgson
Medical Director
US Dept. of Labor - OSHA

Meeting of:
May 2015



Dave Schmidt
Office of Statistical Analysis
US Dept. of Labor - OSHA

For the Purpose of Clarity...



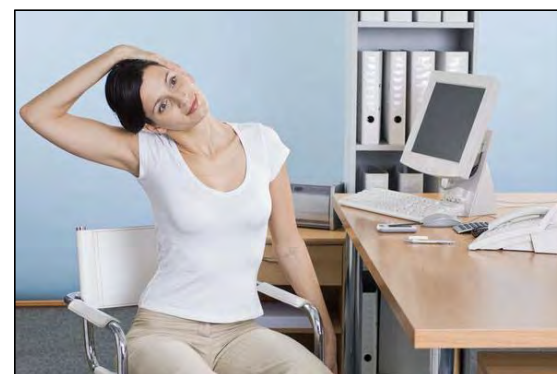
When is an injury
considered an injury...



For the Purpose of Clarity...



Use of Kinesio-Tape



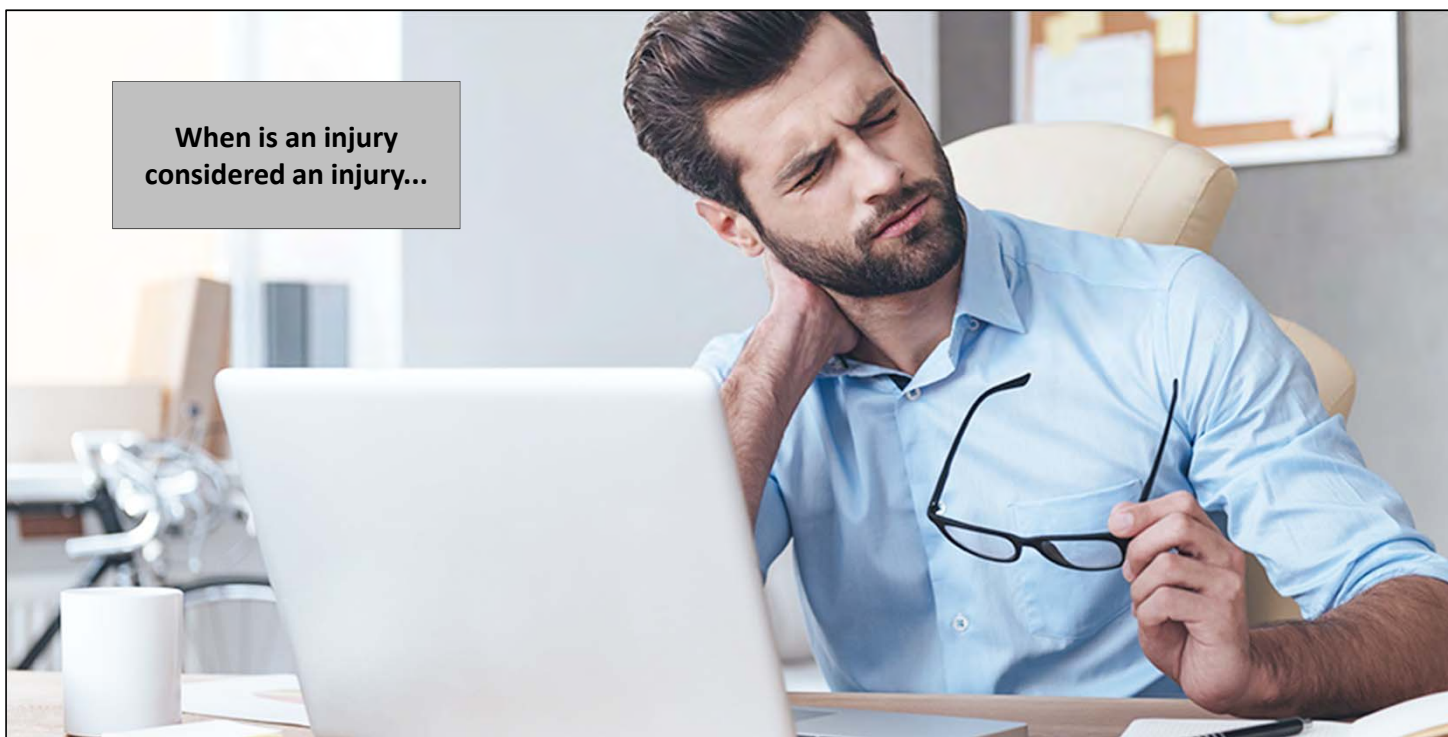
Preventative Exercise



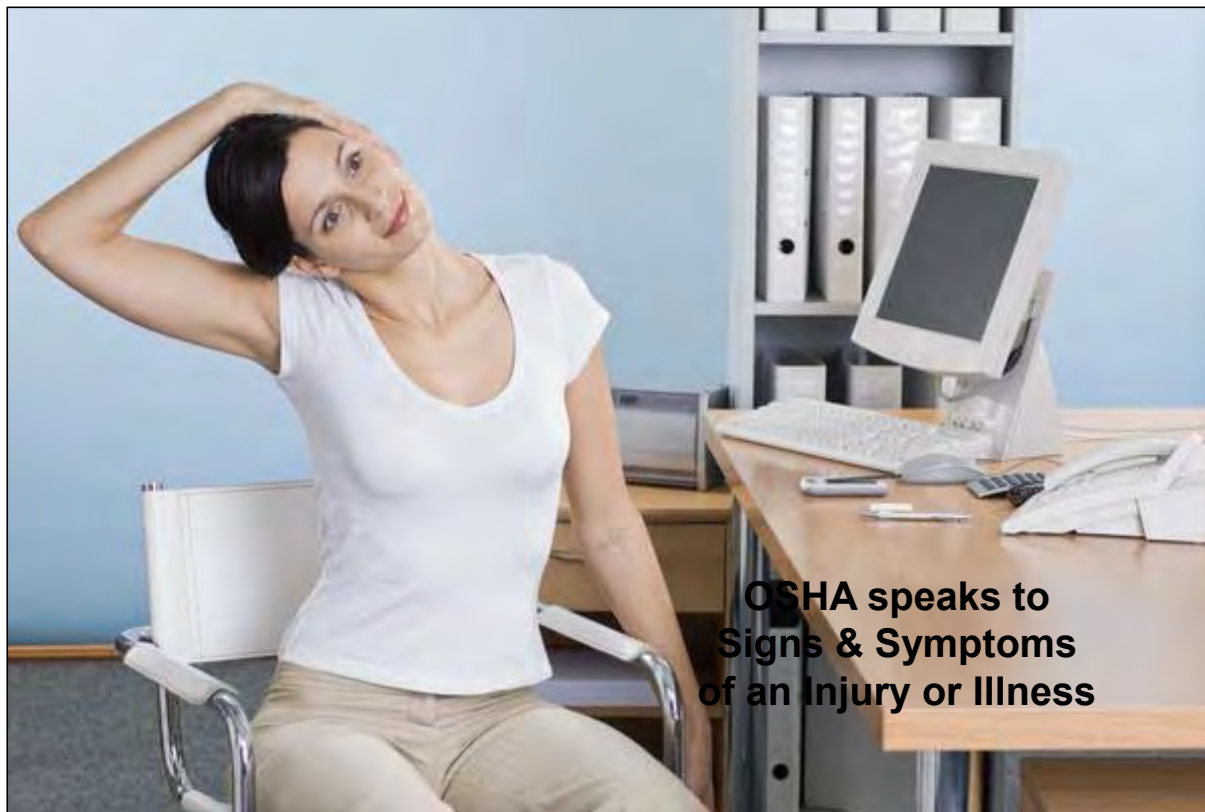
Clarity on ART®

For the Purpose of Clarity...

When is an injury
considered an injury...



Signs & Symptoms...



**OSHA speaks to
Signs & Symptoms
of an Injury or Illness**

Signs of an Injury...

- Signs of a musculoskeletal injury or illness are indications the provider of care can sense when attending to an injured person (e.g. the things that the provider can see, hear and/or feel).
 - Joint pain / Tenderness at a specific point
 - Swelling, warmth, bruising
 - Reduced range of motion
 - Comparative weakness (right vs. left)
 - Joint instability testing
 - Neurologic examination
 - Special tests associated with body part

Symptoms of an Injury...

- Symptoms of an injuries or illnesses is information transferred by the injured person to the care provider (e.g. what he or she says to the care provider).
 - *"My knee feels unstable."*
 - *"My wrist hurts; it is painful when I move it."*
 - *"I have tingling in my thumb and index finger."*

Symptoms of an Injury...

- Symptoms of an injuries or illnesses is information transferred by the injured person to the care provider (e.g. what he or she says to the care provider).
 - *"My knee feels unstable."*
 - *"My wrist hurts; it is painful when I move it."*
 - *"I have tingling in my thumb and index finger."*
 - *"My arm feels tired."*
 - *"My back is fatigued at the end of the day."*
 - *"My knee is sore."*



Tired

The Continuum...

Fatigued

Heaviness

Soreness

Ache

Twinge

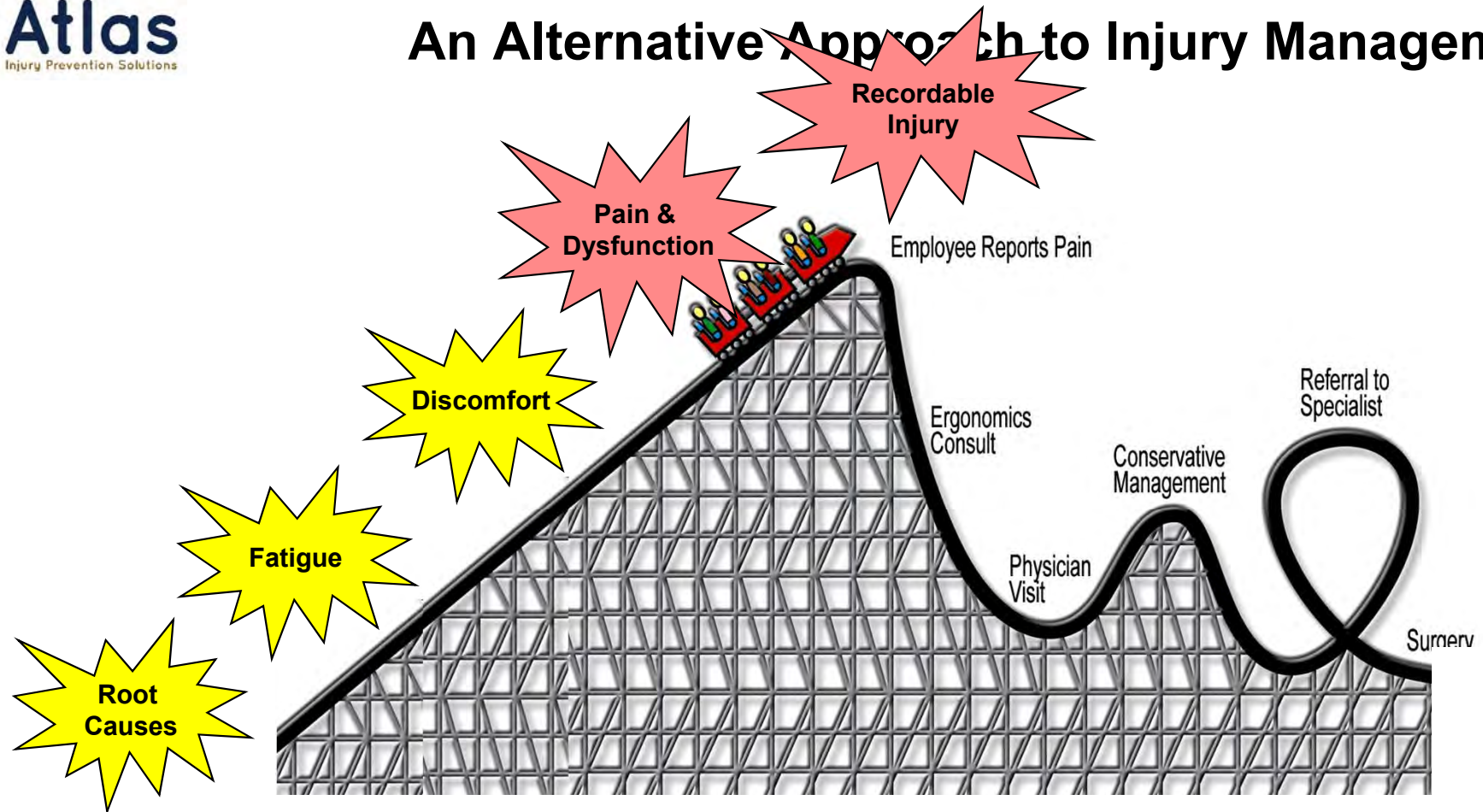
Discomfort

Throb

Distress

Pain

An Alternative Approach to Injury Management...

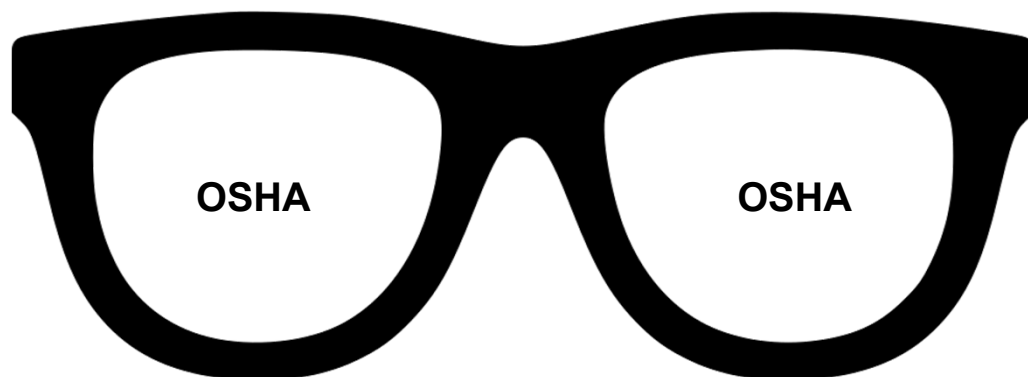


An Alternative Approach to Injury Management...

Pain & Dysfunction Considerations

- Pain is subjective
 - ✓ Varies by individual
 - ✓ Should not be the lone criteria
- Dysfunction is a better measure
 - ✓ Exam findings
 - ✓ Can they perform job task

Medical Treatment vs. First Aid...





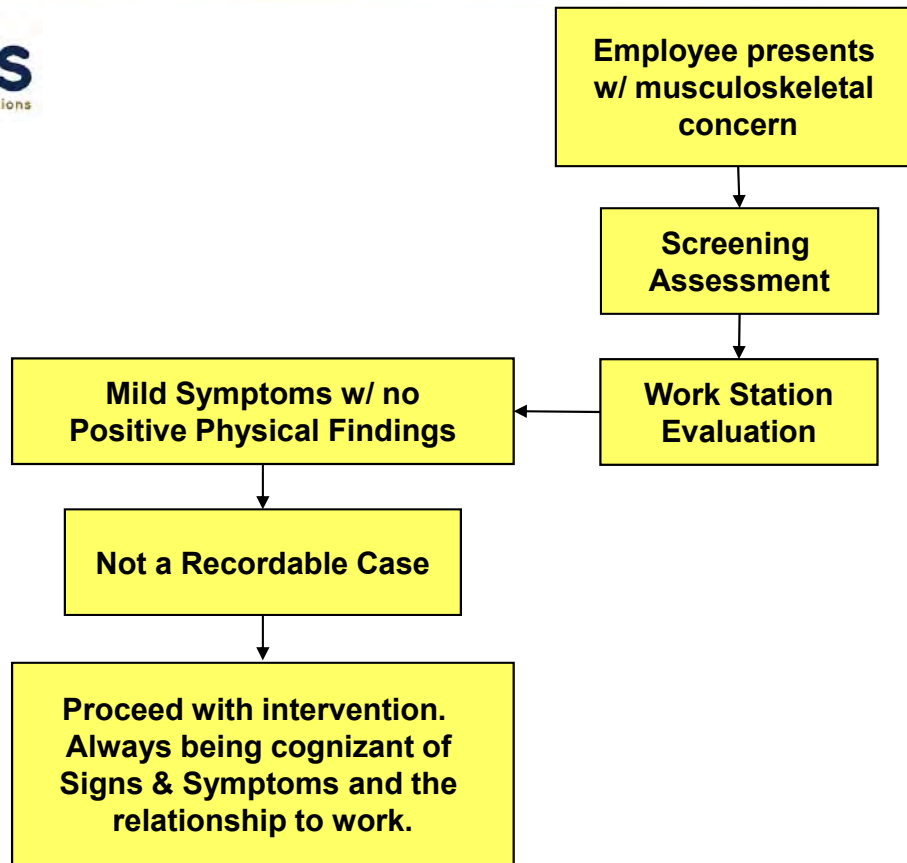
**Employee presents
w/ musculoskeletal
concern**

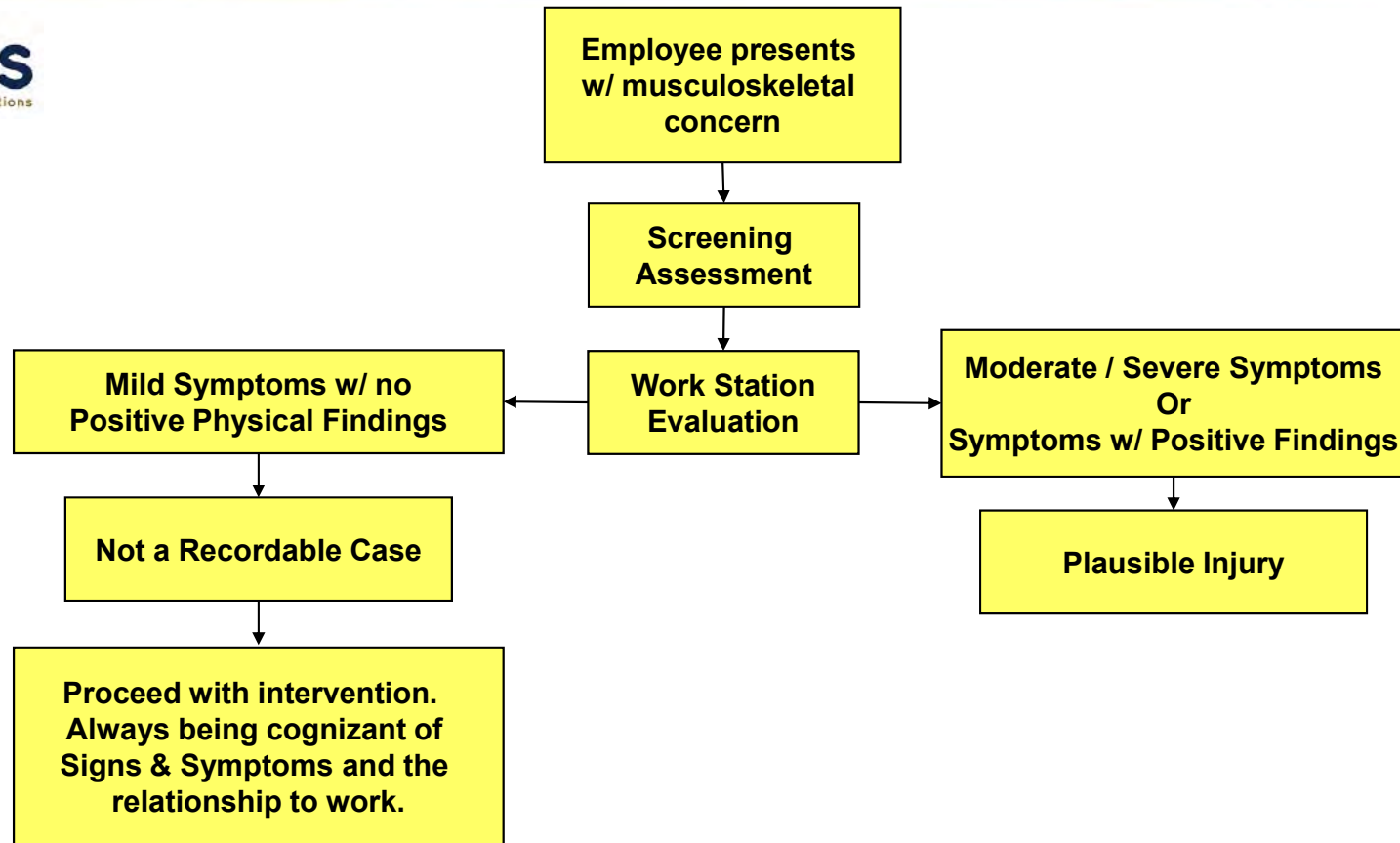


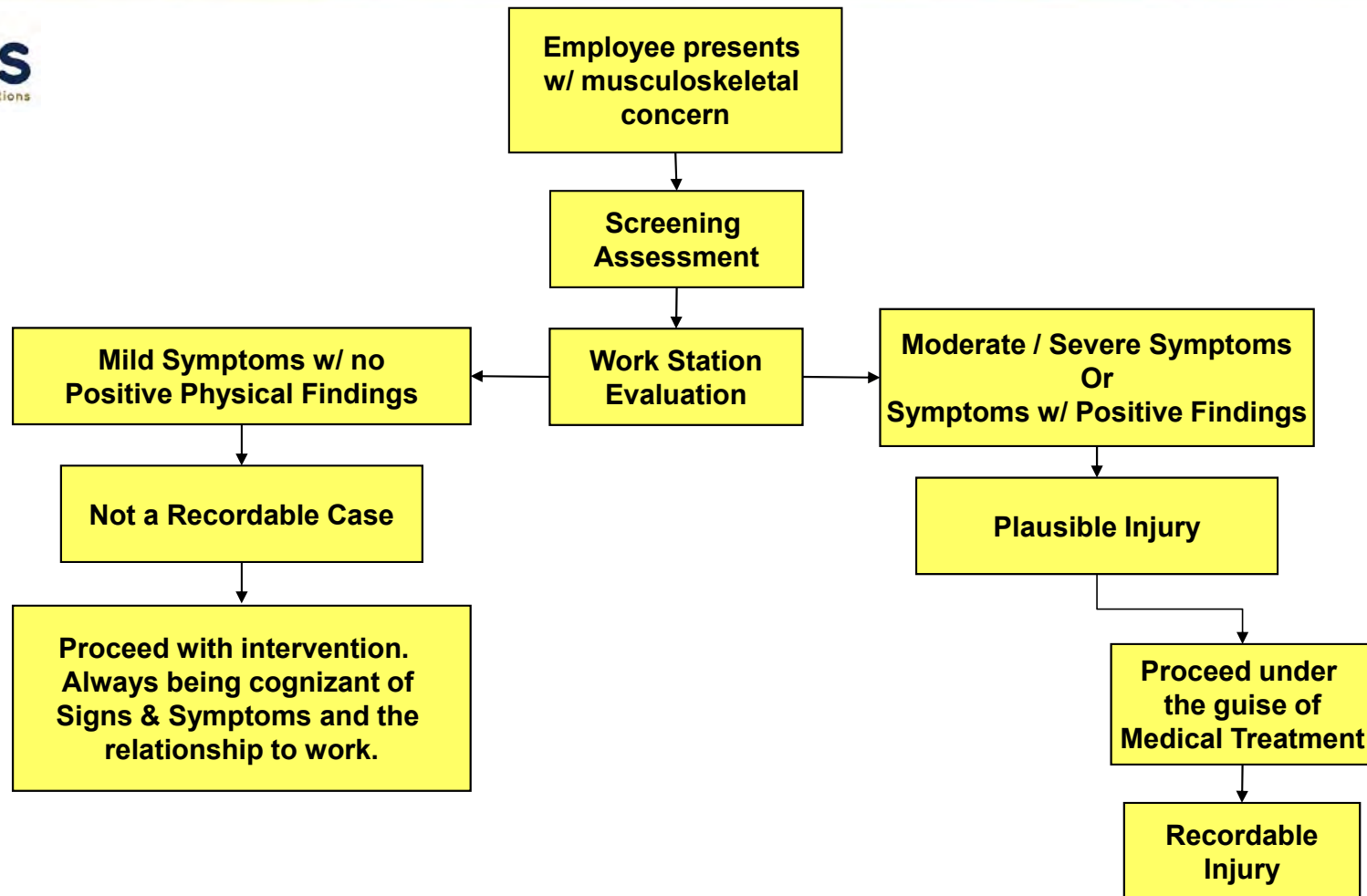
**Screening
Assessment**

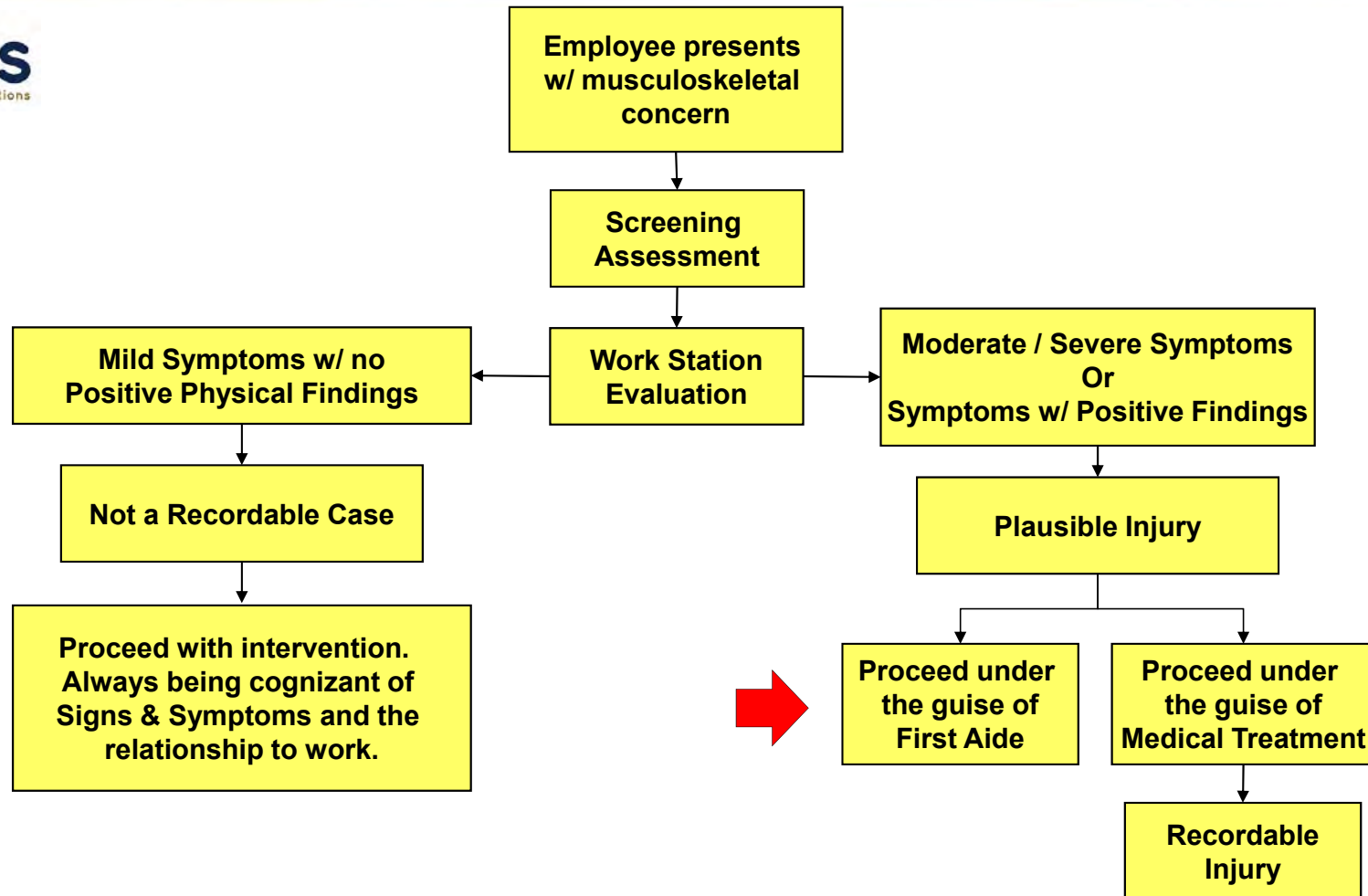


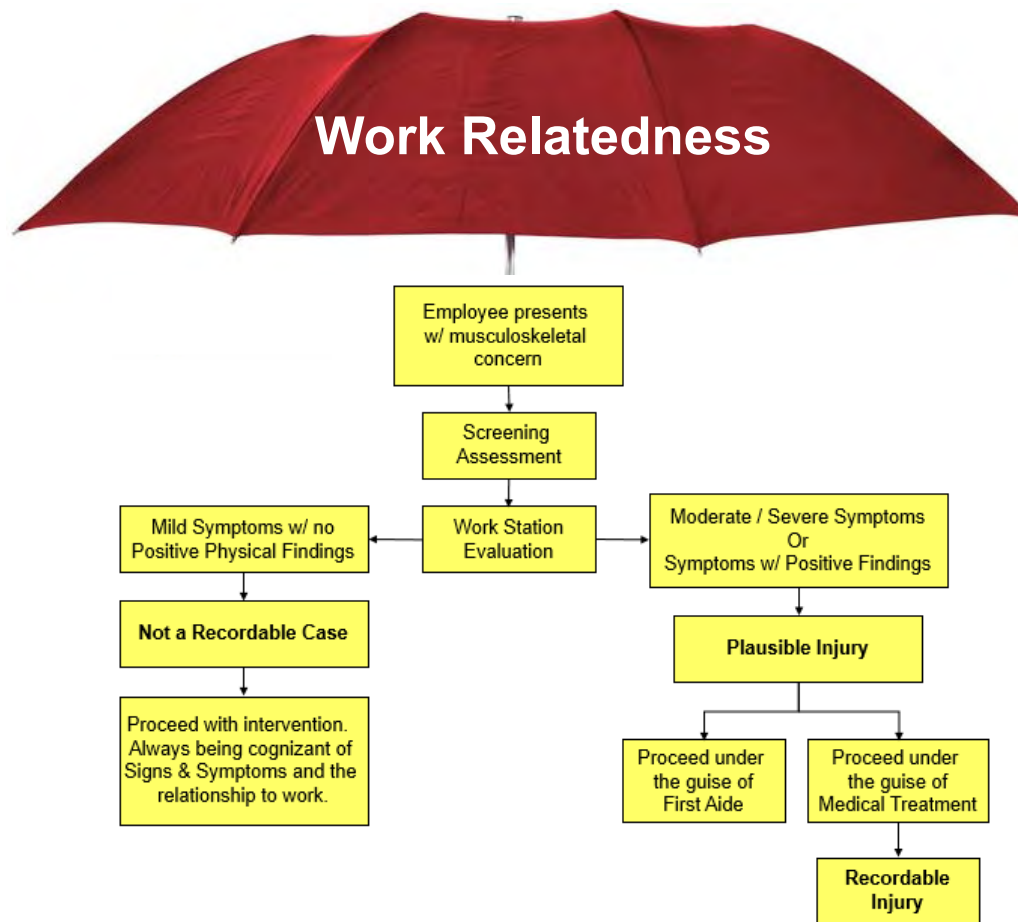
**Work Station
Evaluation**











Medical Treatment vs. First Aid...

Per OSHA

- ***What is the definition of medical treatment?*** "Medical treatment" means the management and care of a patient to combat disease or disorder. For the purposes of Part 1904, medical treatment does not include:

Medical Treatment vs. First Aid...

For the purposes of Part 1904, **medical treatment does not include:**

- 1904.7(b)(5)(i)(A)

Visits to a physician or other licensed health care professional solely for observation or counseling;

- 1904.7(b)(5)(i)(B)

The conduct of diagnostic procedures, such as x-rays and blood tests, including the administration of prescription medications used solely for diagnostic purposes (e.g., eye drops to dilate pupils); or

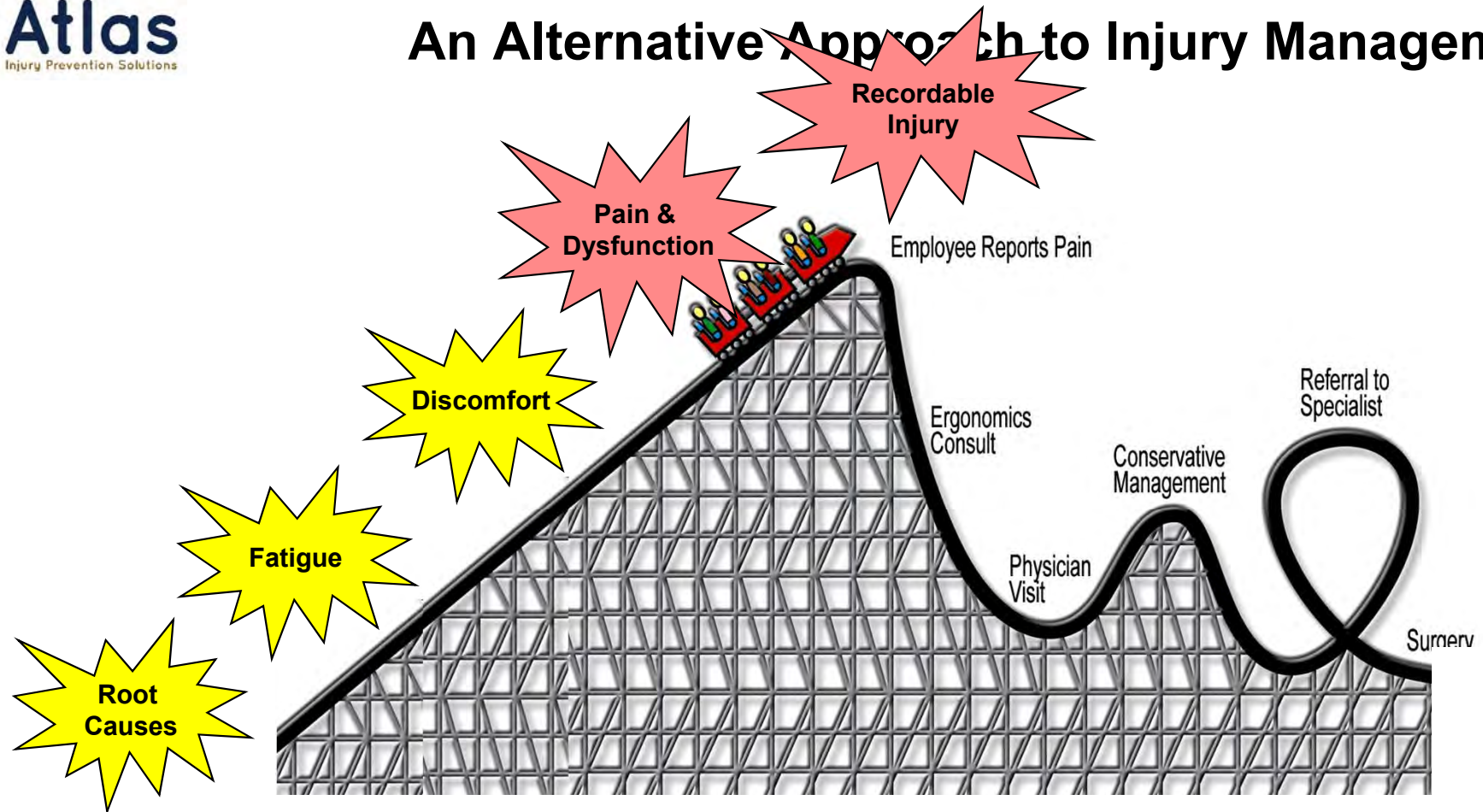
- 1904.7(b)(5)(i)(C)

"First aid" as defined in paragraph (b)(5)(ii) of this section.

Medical Treatment vs. First Aid...

Complete Listing of First Aid Treatments		
First Aid Treatment: 1904.7 (5)(ii)(A)-(N)	A	Using a non-prescription medication at nonprescription strength
	B	Administering tetanus immunization
	C	Cleaning, flushing or soaking wounds on the surface of the skin
	D	Using wound coverings; bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™
	E	Using hot or cold therapy
	F	Any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.
	G	Temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.)
	H	Drilling a fingernail or toenail to relieve pressure, or draining fluid from a blister
	I	Using eye patches
	J	Removing foreign bodies from the eye using only irrigation or a cotton swab
	K	Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs, or other simple means
	L	Using finger guards
	M	Using massage
	N	Drinking fluids for relief of heat stress

An Alternative Approach to Injury Management...



Use of Kinesio-Tape...



Background on the use of Kinesio-Tape...

Standard Number: 1904; 1904.7(b)(5)(ii)(M)

Letter of Interpretation

December 12, 2014

Linda Ballas & Associates
7129 Nightingale Dr.
Holland, OH 43528

Dear Ms. Ballas:

Thank you for your recent letter to the Occupational Safety and Health Administration (OSHA) regarding the recordkeeping requirements contained in 29 CFR Part 1904 - Recording and Reporting Occupational Injuries and Illnesses. You ask if kinesiology tape is considered medical treatment for OSHA recordkeeping purposes.

We consulted with physicians in OSHA's Office of Occupational Medicine and they inform us that kinesiology taping is designed to relieve pain through physical and neurological mechanisms. The lifting

**Letter of:
December 12, 2014**

We consulted with physicians in OSHA's Office of Occupational Medicine and they inform us that kinesiology taping is designed to relieve pain through physical and neurological mechanisms. The lifting action of the tape purportedly relieves pressure on pain receptors directly under the skin, allowing for relief from acute injuries. The use of kinesiology tape is akin to physical therapy and is considered medical treatment beyond first aid for OSHA recordkeeping purposes. (See section 1904.7(b)(5)(ii)(M)).

Francis Yebesi, Acting Director
Directorate of Evaluation and Analysis



**Gary Orr,
Ergonomist
US Dept. of Labor - OSHA**



**Michael Hodgson
Medical Director
US Dept. of Labor - OSHA**

**Meeting of:
May 2015**



**Dave Schmidt
Office of Statistical Analysis
US Dept. of Labor - OSHA**

Medical Treatment vs. First Aid...

Complete Listing of First Aid Treatments		
First Aid Treatment: 1900 (5)(ii)(A)-(N)	A	Using a non-prescription medication at nonprescription strength
	B	Administering tetanus immunization
	C	Cleaning, flushing or soaking wounds on the surface of the skin
	D	Using wound coverings; bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™
	E	Using hot or cold therapy
	F	Any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.
	G	Temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.)
	H	Drilling a fingernail or toenail to relieve pressure, or draining fluid from a blister
	I	Using eye patches
	J	Removing foreign bodies from the eye using only irrigation or a cotton swab
	K	Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs, or other simple means
	L	Using finger guards
	M	Using massage
	N	Drinking fluids for relief of heat stress



Letter of Interpretation...

July 6, 2015

Jim Thornton
National Athletic Trainers' Association
1620 Valwood Parkway, Suite 115
Carrollton, TX 75006

Dear Mr. Thornton:

Thank you for your letter dated January 27, 2015, to the Occupational Safety and Health Administration.

**Letter of:
July 6, 2015**

As requested, OSHA has reevaluated its classification of the application of kinesiology tape as constituting medical treatment. OSHA reviewed information associated with such tape from patent applications, from relevant instructional materials and directions for when and how to use it, from evaluations and descriptive experiences involving recommended uses and their efficacy, from assessments regarding the nature and mechanisms of its effects, and from reviews of the extent and nature of any medicinal, neurological, and physical properties and impacts.

Pursuant to 29 CFR 1904.7, first aid treatment includes "any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc." The use of kinesiology tape and other types of elastic taping is included within the definition of first aid treatment, and thus the use of such tape alone would not be considered medical treatment.

Assistant Secretary for
Directorate of Technical Support and Emergency Management

Preventative Exercise...





Background on Exercise...

May 20, 2011

**Letter of:
May 20, 2011**

Mr. Paul Bragenzer
1415 Rothbury Dr.
Grand Rapids, MI 49505

Dear Mr. Bragenzer:

Thank you for your February 2011 letter to the Occupational Safety and Health Administration (OSHA) regarding the recordkeeping regulation contained in 29 CFR Part 1904 - Recording and Reporting Occupational Injuries and Illnesses. In an effort to provide the public with prompt and accurate responses, we developed and continue to refine a set of Frequently Asked Questions (FAQ), in addition to maintaining a log of Letters of Interpretation (LOI) on the OSHA Recordkeeping web site.

Your letter asks OSHA to clarify whether an exercise regime directed by a Certified Athletic Trainer (ATC) would constitute "first aid" or "medical treatment" for OSHA injury and illness recordkeeping purposes.

Background on Exercise...

Continued...

OSHA discussed the issue of therapeutic exercise in the preamble to the final rule revising OSHA's injury and illness recordkeeping regulation. See, 66 FR 5992, January 19, 2001. OSHA stated that it considers therapeutic exercise as a form of physical therapy and intentionally did not include it on the list of first aid treatments in Section 1904.7(b)(5)(ii). Section 1904.7(b)(5)(ii)(M) states that physical therapy or chiropractic treatment are considered medical treatment for OSHA recordkeeping purposes and are not considered first aid.

Background on Exercise...

Continued...

Please be aware that if a treatment is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. For a case to be recordable, an injury or illness must exist. For example, if, as part of an employee wellness program, an ATC recommends exercise to employees that do not exhibit signs or symptoms of an abnormal condition, there is no case to record. Furthermore, if an employee has an injury or illness that is not work-related, (e.g., the employee is experiencing muscle pain from home improvement work) the administration of exercise does not make the case recordable either.



Letter of Interpretation...

**Letter of:
September 9, 2016**

U.S. Department of Labor

Occupational Safety and Health Administration
Washington, D.C. 20210

Reply to the attention of:



SEP 09 2016

Scott Ege, P.T., M.S.
Ego WorkSmart Solutions, PC
PO Box 603
Rockton, IL 61072

Dear Mr. Ege:

Thank you for your letter to the Occupational Safety and Health Administration (OSHA) regarding 29 CFR Part 1904 – Recording and Reporting Occupational Injuries and Illnesses. You ask for clarification regarding the context, application, and definition of the term “exercise,” and whether the recommendation or use of exercise must always be recorded on the OSHA 300 log. Specifically, you request clarification from OSHA on the differences between the use of preventative exercise as an intervention strategy, and therapeutic exercise used to treat a work-related injury or illness.

Therapeutic exercise is bodily movement prescribed to correct impairment, improve musculoskeletal function, or maintain a state of well-being (see *Krusen's Handbook of Physical Medicine and Rehabilitation*, 3rd ed., 1982). Therapeutic exercise is considered medical treatment when it is designed and administered to combat a particular injury, illness, or disorder as part of a treatment plan that includes termination of the therapeutic exercise once the objectives of its implementation have been met.

As you noted in your letter, OSHA discussed the issue of therapeutic exercise in the preamble to the final rule establishing OSHA's current injury and illness recordkeeping regulation. See, 66 FR 5992, January 19, 2001. OSHA stated that it considers therapeutic exercise as a form of physical therapy and intentionally did not include it on the list of first aid treatments in Section 1904.7(b)(5)(ii). Section 1904.7(b)(5)(ii)(M) states that physical therapy or chiropractic treatment are considered medical treatment for OSHA recordkeeping purposes and are not considered first aid. Section 1904.7(b)(5)(iii) goes on to state that the treatments included in Section 1904.7(b)(5)(ii) is a comprehensive list of first aid treatments. Any treatment not included on this list is not considered first aid for OSHA recordkeeping purposes.

OSHA's regulation at Section 1904.46 defines an injury or illness as an abnormal condition or disorder. Although injury and illness is broadly defined, they capture only those changes that reflect an adverse change in the employee's condition that is of some significance, i.e., that reach the level of an abnormal condition or disorder. Pain and other symptoms that are wholly subjective are included in that definition. See, 66 FR 6080. Accordingly, if an employee exhibits symptoms of an injury or illness, and that injury or illness is considered work-related as defined by Section 1904.5, the administration of exercise makes the case recordable.

Please be aware that if a treatment is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. For a case to be recordable, an injury or illness must exist. For example, if, as part of an employee wellness program, a health care provider recommends exercise to employees who do not exhibit signs or symptoms of an abnormal condition, there is no case to record. Furthermore, if an employee has an injury or illness that is not work-related, (e.g., the employee is experiencing muscle pain from home improvement work), the administration of exercise does not make the case recordable either. See, OSHA's May 20, 2011, Letter of Interpretation, www.osha.gov/recordkeeping/LRIinterpretations.html.

Exercises that are generally part of safe work practices commonly recommended for anyone engaged in certain tasks or working with certain equipment are not considered medical treatment. For example, user instructions provided with a computer work station might include guidance on proper posture or intermittent minor exercises that are typically suggested to help reduce the risk of developing musculoskeletal disorders. Common advice for persons driving long distances may include taking breaks to get out and stretch. Counseling or reminding an employee to engage in such activities or adopt such practices is not considered to be medical treatment. Again, for purposes of OSHA recordkeeping, the focus is on whether an employee has sustained a work-related injury or illness, and whether exercise is used to treat that condition.

We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain those requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in responses to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

Sincerely,

Amanda Edens, Director
Directorate of Technical Support and Emergency Management



August 20 - 23, 2019

#ErgoExpo

www.ErgoExpo.com

Letter of Interpretation...

**Letter of:
September 9, 2016**

U.S. Department of Labor
Occupational Safety and Health Administration
Washington, D.C. 20210
Reply to the attention of:

SEP 09 2016

Scott Ege, P.T., M.S.
Ego WorkSmart Solutions, PC
PO Box 603
Rockton, IL 61072

Dear Mr. Ege:

Thank you for your letter to the Occupational Safety and Health Administration (OSHA) regarding 29 CFR Part 1904 – Recording and Reporting Occupational Injuries and Illnesses. You ask for clarification regarding the context, application, and definition of the term “exercise,” and whether the recommendation or use of exercise must always be recorded on the OSHA 300 log. Specifically, you request clarification from OSHA on the differences between the use of preventative exercise as an intervention strategy, and therapeutic exercise used to treat a work-related injury or illness.

Therapeutic exercise is bodily movement prescribed to correct impairment, improve musculoskeletal function, or maintain a state of well-being (see *Krusen's Handbook of Physical Medicine and Rehabilitation*, 3rd ed., 1982). Therapeutic exercise is considered medical treatment when it is designed and administered to combat a particular injury, illness, or disorder as part of a treatment plan that includes termination of the therapeutic exercise once the objectives of its implementation have been met.

As you noted in your letter, OSHA discussed the issue of therapeutic exercise in the preamble to the final rule establishing OSHA's current injury and illness recordkeeping regulation. See, 66 FR 5992, January 19, 2001. OSHA stated that it considers therapeutic exercise as a form of physical therapy and intentionally did not include it on the list of first aid treatments in Section 1904.7(b)(5)(ii). Section 1904.7(b)(5)(ii)(M) states that physical therapy or chiropractic treatment are considered medical treatment for OSHA recordkeeping purposes and are not considered first aid. Section 1904.7(b)(5)(iii) goes on to state that the treatments included in Section 1904.7(b)(5)(ii) is a comprehensive list of first aid treatments. Any treatment not included on this list is not considered first aid for OSHA recordkeeping purposes.

Please be aware that if a treatment is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. For a case to be recordable, an injury or illness must exist. For example, if, as part of an employee wellness program, a health care provider recommends exercise to employees who do not exhibit signs or symptoms of an abnormal condition, there is no case to record. Furthermore, if an employee has an injury or illness that is not work-related, (e.g., the employee is experiencing muscle pain from home improvement work), the administration of exercise does not make the case recordable either. See, OSHA's May 20, 2011, Letter of Interpretation, *Clarification on whether an exercise regimen is first aid or medical treatment*, www.osha.gov/recordkeeping/LRIinterpretations.html.

Exercises that are generally part of safe work practices commonly recommended for anyone engaged in certain tasks or working with certain equipment are not considered medical treatment. For example, user instructions provided with a computer work station might include guidance on proper posture or intermittent minor exercises that are typically suggested to help reduce the risk of developing musculoskeletal disorders. Common advice for persons driving long distances may include taking breaks to get out and stretch. Counseling or reminding an employee to engage in such activities or adopt such practices is not considered to be medical treatment. Again, for purposes of OSHA recordkeeping, the focus is on whether an employee has sustained a work-related injury or illness, and whether exercise is used to treat that condition.

We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in responses to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

Therapeutic exercise is bodily movement prescribed to correct impairment, improve musculoskeletal function, or maintain a state of well-being (see *Krusen's Handbook of Physical Medicine and Rehabilitation*, 3rd ed., 1982). Therapeutic exercise is considered medical treatment when it is designed and administered to combat a particular injury, illness, or disorder as part of a treatment plan that includes termination of the therapeutic exercise once the objectives of its implementation have been met.

Letter of Interpretation...

**Letter of:
September 9, 2016**

U.S. Department of Labor
Occupational Safety and Health Administration
Washington, D.C. 20210
Reply to the attention of:

SEP 09 2016

Scott Ege, P.T., M.S.
Ego WorkSmart Solutions, PC
PO Box 603
Rockton, IL 61072

Dear Mr. Ege:

Thank you for your letter to the Occupational Safety and Health Administration (OSHA) regarding 29 CFR Part 1904 – Recording and Reporting Occupational Injuries and Illnesses. You ask for clarification regarding the context, application, and definition of the term “exercise,” and whether the recommendation or use of exercise must always be recorded on the OSHA 300 log. Specifically, you request clarification from OSHA on the differences between the use of preventative exercise as an intervention strategy, and therapeutic exercise used to treat a work-related injury or illness.

Therapeutic exercise is bodily movement prescribed to correct impairment, improve musculoskeletal function, or maintain a state of well-being (see *Krusen’s Handbook of Physical Medicine and Rehabilitation*, 3rd ed., 1982). Therapeutic exercise is considered medical treatment when it is designed and administered to combat a particular injury, illness, or disorder as part of a treatment plan that includes termination of the therapeutic exercise once the objectives of its implementation have been met.

As you noted in your letter, OSHA discussed the issue of therapeutic exercise in the preamble to the final rule establishing OSHA’s current injury and illness recordkeeping regulation. See 66

Please be aware that if a treatment is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. For a case to be recordable, an injury or illness must exist. For example, if, as part of an employee wellness program, a health care provider recommends exercise to employees who do not exhibit signs or symptoms of an abnormal condition, there is no case to record. Furthermore, if an employee has an injury or illness that is not work-related, (e.g., the employee is experiencing muscle pain from home improvement work), the administration of exercise does not make the case recordable either. See, OSHA’s May 20, 2011, Letter of Interpretation, www.osha.gov/recordkeeping/LRIinterpretations.html.

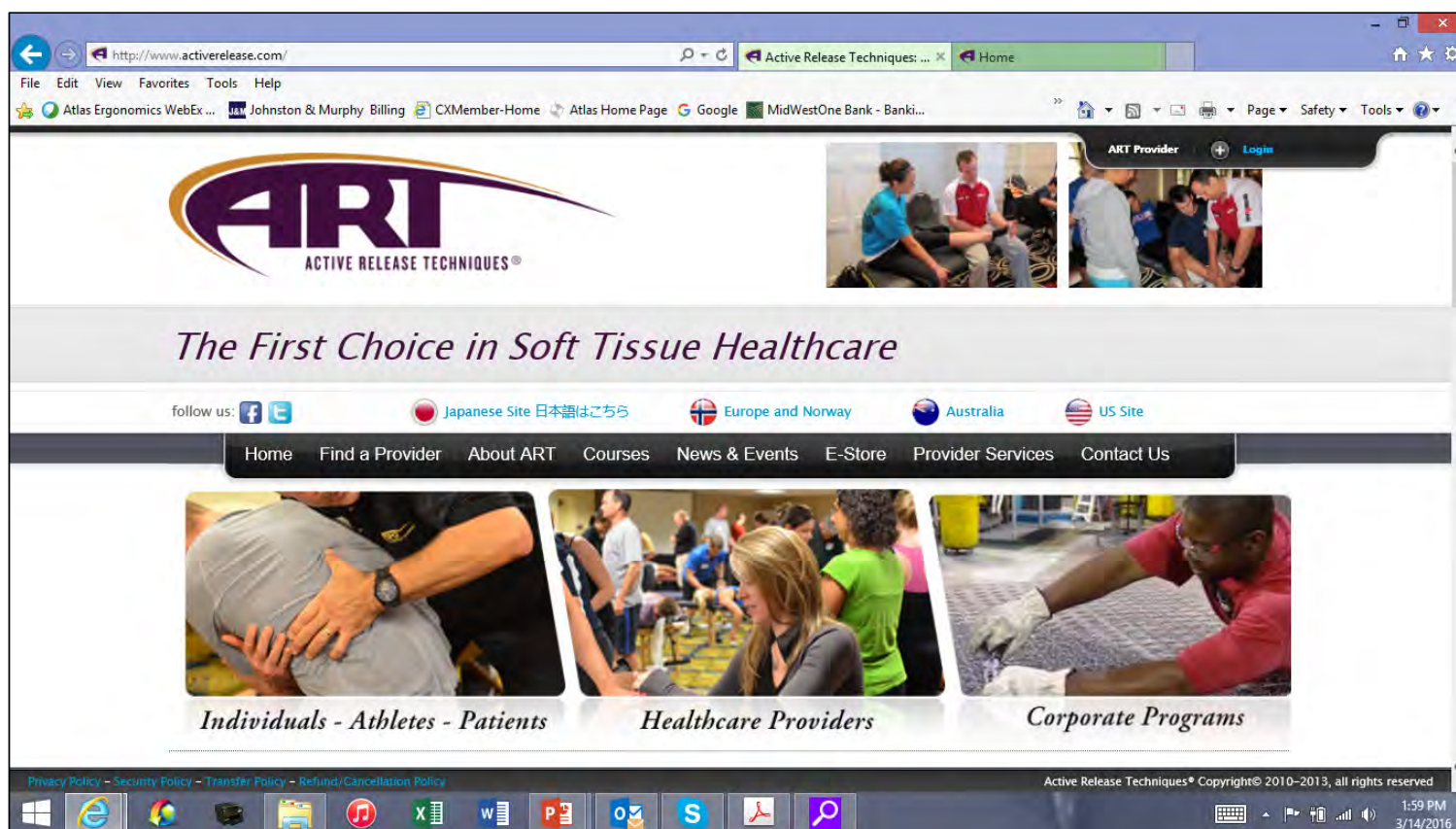
Exercises that are generally part of safe work practices commonly recommended for anyone engaged in certain tasks or working with certain equipment are not considered medical treatment. For example, user instructions provided with a computer work station might include guidance on proper posture or intermittent minor exercises that are typically suggested to help reduce the risk of developing musculoskeletal disorders. Common advice for persons driving long distances may include taking breaks to get out and stretch. Counseling or reminding an employee to engage in such activities or adopt such practices is not considered to be medical treatment. Again, for purposes of OSHA recordkeeping, the focus is on whether an employee has sustained a work-related injury or illness, and whether exercise is used to treat that condition.

Exercises that are generally part of safe work practices commonly recommended for anyone engaged in certain tasks or working with certain equipment are not considered medical treatment. For example, user instructions provided with a computer work station might include guidance on proper posture or intermittent minor exercises that are typically suggested to help reduce the risk of developing musculoskeletal disorders. Common advice for persons driving long distances may include taking breaks to get out and stretch. Counseling or reminding an employee to engage in such activities or adopt such practices is not considered to be medical treatment. Again, for purposes of OSHA recordkeeping, the focus is on whether an employee has sustained a work-related injury or illness, and whether exercise is used to treat that condition.



Clarity on ART®...







Background on ART®...

Letter of:
July 24, 2006

U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, D.C. 20210



JUL 24 2006

Michael Leahy, DC
Active Release Techniques, LLC
175 South Union Blvd.
Suite 230
Colorado Springs, Colorado 80910

Dear Dr. Leahy

This letter is in response to your requests, including your most recent letter dated July 7, 2006, that OSHA reconsider its decision to classify Active Release Techniques (ART) as medical treatment as it relates to 29 CFR Part 1904, OSHA's injury and illness recordkeeping regulation. Please note that this letter supersedes the January 5, 2006 memorandum from the Director of OSHA's Directorate of Evaluation and Analysis to OSHA's Region VIII Administrator concerning Active Release Techniques.

Section 24(a) of the Occupational Safety and Health Act of 1970 requires the Secretary of Labor to compile accurate statistics on work injuries and illnesses. In response, OSHA promulgated 29 CFR Part 1904, Occupational Injury and Illness Recording and Reporting Requirements. This rule directs employers to record work related injuries and illnesses that, among other criteria, require medical treatment beyond first aid. Through the rulemaking process, OSHA has defined what constitutes a work-related injury or illness and what constitutes medical treatment for recordkeeping purposes (29 CFR Part 1904.7(b)(5)). In this situation, the key issue is whether ART should be considered massage, thereby falling within the definition of first aid, rather than medical treatment under this regulation. Please keep in mind that the list of first aid treatments in Section 1904.7(b)(5)(ii) is comprehensive, and that any treatment not included on this list is not considered first aid for OSHA recordkeeping purposes.

In determining whether ART constitutes first aid or a medical treatment under the definitions of the recordkeeping rule, OSHA's Directorate of Evaluation and Analysis, in consultation with the Office of Occupational Medicine, undertook a comprehensive analysis including: 1) evaluation of the literature description of ART; 2) examination of the patent application for ART and the subsequent Certificate of Correction filed at the U.S. Patent Office; 3) review of articles concerning ART in medical journals; 4) review of an insurance provider's classification of the ART procedures you provided to us; and 5) observation of an ART demonstration.

After completing an analysis of the information currently available, OSHA cannot determine that ART generally exceeds what is commonly recognized as massage practices. Based on this determination, OSHA finds that ART is considered first aid for injury and illness recordkeeping purposes. However, please keep in mind that work-related injuries and illnesses that involve ART are recordable if they also entail the use of medical treatment, a job transfer, restricted work activity, or days away from work. For example, a work-related injury or illness is recordable if prescription medications are administered in response to an injury or illness, in conjunction with the manipulation of the skeleton, it would be recordable.

Regarding recordability in general, we would like to point out that when ART is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. If ART is administered to employees as part of an employee wellness program and those employee do not exhibit signs or symptoms of an abnormal condition related to work, there is no case to record.

Additionally, if an employee has an injury or illness that is **not** work-related (e.g., the employee is experiencing muscle pain for home improvement work) the administration of the ART technique does not render that case recordable.

In summary, work-related injuries and illnesses are not recordable based solely on the administration of ART, but may become recordable when administered in conjunction with medical treatment. As stated above, if ART is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. In addition, we reserve the right to review or revise the interpretation stated in this letter based on new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please contact the Division of Recordkeeping Requirements at 202-693-1702.

Sincerely,

Edwin G. Foulke, Jr.

Background on ART®...

**Letter of:
July 24, 2006**

U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, D.C. 20210



JUL 24 2006

Michael Leahy, DC
Active Release Techniques, LLC
175 South Union Blvd.
Suite 230
Colorado Springs, Colorado 80910

Dear Dr. Leahy:

After completing an analysis of the information currently available, OSHA cannot determine that ART generally exceeds what is commonly recognized as massage practices. Based on this determination, OSHA finds that ART is considered first aid for injury and illness recordkeeping purposes. However, please keep in mind that work-related injuries and illnesses that involve ART are recordable if they also entail the use of medical treatment, a job transfer, restricted work activity, or days away from work. For example, a work-related injury or illness is recordable if prescription medications are administered in response to an injury or illness, in conjunction with the manipulation of the skeleton, it would be recordable.

Regarding recordability in general, we would like to point out that when ART is

After completing an analysis of the information currently available, OSHA cannot determine that ART generally exceeds what is commonly recognized as massage practices. Based on this determination, OSHA finds that ART is considered first aid for injury and illness recordkeeping purposes. However, please keep in mind that work-

related injuries and illnesses that involve ART are recordable if they also entail the use of medical treatment, a job transfer, restricted work activity, or days away from work. For example, a work-related injury or illness is recordable if prescription medications are administered in response to an injury or illness, in conjunction with the manipulation of the skeleton, it would be recordable.

Confusion in the Marketplace...

Confusion Exists:

Since the OSHA's June 24, 2006, letter of interpretation regarding soft tissue massage and ART®, confusion has existed among health and safety professionals.

- Some have been led to believe ART® provides a unique non-recordable method to address discomfort and avoid Musculoskeletal Disorder (MSD) related injury claims.
- Some also have been led to believe if a physical therapist or certified athletic trainer provides massage, doing so is considered treatment and drives a recordable injury.
- **Neither are true...**

Analysis:

1. The 2006 Leahy Letter provided those with ART[®] certification a competitive edge within the employer onsite marketplace.
2. It should not be OSHA's position to advocate for a singular proprietary treatment intervention as outlined in OSHA's provision of First Aid 1904.7(b)(5)(ii)(M) regarding Massage. The playing field needs to be evened between ART[®] and the services physical therapists provide onsite.
3. ART[®] is not the only massage related soft tissue massage approach constituted as first aid for injury and illness recordkeeping purposes.
4. Finally, physical therapists and athletic trainers are well trained and versed in providing similar soft tissue management techniques, akin to ART[®].



U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, D.C. 20210



JUL 24 2006

Michael Leahy, DC
Active Release Techniques, LLC
175 South Union Blvd.
Suite 230
Colorado Springs, Colorado 80910

Dear Dr. Leahy

This letter is in response to your requests, including your most recent letter dated July 7, 2006, that OSHA reconsider its decision to classify Active Release Techniques (ART) as medical treatment as it relates to 29 CFR Part 1904, OSHA's injury and illness recordkeeping regulation. Please note that this letter supersedes the January 5, 2006 memorandum from the Director of OSHA's Directorate of Evaluation and Analysis to OSHA's Region VIII Administrator concerning Active Release Techniques.

Section 24(a) of the Occupational Safety and Health Act of 1970 requires the Secretary of Labor to compile accurate statistics on work injuries and illnesses. In response, OSHA promulgated 29 CFR Part 1904, Occupational Injury and Illness Recording and Reporting Requirements. This rule directs employers to record work related injuries and illnesses that, among other criteria, require medical treatment beyond first aid. Through the rulemaking process, OSHA has defined what constitutes a work-related injury or illness and what constitutes medical treatment for recordkeeping purposes (29 CFR Part 1904.7(b)(5)). In this situation, the key issue is whether ART should be considered massage, thereby falling within the definition of first aid, rather than medical treatment under this regulation. Please keep in mind that the list of first aid treatments in Section 1904.7(b)(5)(ii) is comprehensive, and that any treatment not included on this list is not considered first aid for OSHA recordkeeping purposes.

In determining whether ART constitutes first aid or a medical treatment under the definitions of the recordkeeping rule, OSHA's Directorate of Evaluation and Analysis, in consultation with the Office of Occupational Medicine, undertook a comprehensive analysis including: 1) evaluation of the literature description of ART; 2) examination of the patent application for ART and the subsequent Certificate of Correction filed at the U.S. Patent Office; 3) review of articles concerning ART in medical journals; 4) review of an insurance provider's classification of the ART procedures you provided to us; and 5) observation of an ART demonstration.

Taking Action...

**Letter of:
September 11, 2015**



injury and illness recordkeeping purposes. However, please keep in mind that work-related injuries and illnesses that involve ART are recordable if they also entail the use of medical treatment, a job transfer, restricted work activity, or days away from work. For example, a work-related injury or illness is recordable if prescription medications are administered in response to an injury or illness, in conjunction with the manipulation of the skeleton, it would be recordable.

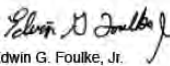
Regarding recordability in general, we would like to point out that when ART is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. If ART is administered to employees as part of an employee wellness program and those employee do not exhibit signs or symptoms of an abnormal condition related to work, there is no case to record.

Additionally, if an employee has an injury or illness that is **not** work-related (e.g., the employee is experiencing muscle pain for home improvement work) the administration of the ART technique does not render that case recordable.

In summary, work-related injuries and illnesses are not recordable based solely on the administration of ART, but may become recordable when administered in conjunction with medical treatment. As stated above, if ART is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable.

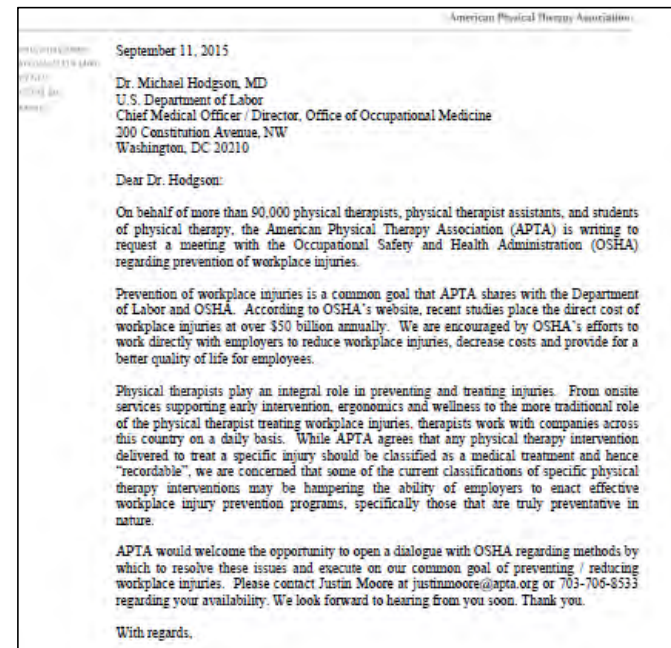
Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. In addition, we reserve the right to review or revise the interpretation stated in this letter based on new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please contact the Division of Recordkeeping Requirements at 202-693-1702.

Sincerely,


Edwin G. Foulke, Jr.

Letter of Interpretation...

**Letter of:
May 23, 2019**





Letter of Interpretation...

injury and illness recordkeeping purposes. However, please keep in mind that work-related injuries and illnesses that involve ART are recordable if they also entail the use of medical treatment, a job transfer, restricted work activity, or days away from work. For example, a work-related injury or illness is recordable if prescription medications are administered in response to an injury or illness, in conjunction with the manipulation of the skeleton, it would be recordable.

Regarding recordability in general, we would like to point out that when ART is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. If ART is administered to an employee who does not exhibit signs or symptoms of an injury or illness, there is no case to record.

Additionally, if an employee is experiencing symptoms of an injury or illness, the use of the ART technique does not make the case recordable.

In summary, work-related injuries and illnesses that involve the administration of ART, but which do not involve medical treatment, are not recordable. As a precautionary measure to an injury or illness, the case is not recordable.

Thank you for your interest in this information. OSHA's interpretation letters are not precedents, but they do constitute OSHA's interpretation of the law. OSHA reserves the right to review and revise its interpretation. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please contact the Division of Recordkeeping Requirements at 202-693-1702.

Letter of:
May 23, 2019

constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. In addition, we reserve the right to review or revise the interpretation stated in this letter based on new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please contact the Division of Recordkeeping Requirements at 202-693-1702.

Sincerely,

Edwin G. Foulke, Jr.



Letter of Interpretation...

injury and illness recordkeeping purposes. However, please keep in mind that work-related injuries and illnesses that involve ART are recordable if they also entail the use of medical treatment, a job transfer, restricted work activity, or days away from work. For example, a work-related injury or illness is recordable if prescription medications are administered in response to an injury or illness, in conjunction with the manipulation of the skeleton, it would be recordable.

Regarding recordability in general, we would like to point out that when ART is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. If ART is administered to employees as part of an employee wellness program and those employee do not exhibit signs or symptoms of an abnormal condition related to work, there is no case to record.

Additionally, if an employee has an injury or illness that is **not** work-related (e.g., the employee is experiencing muscle pain for home improvement work) the administration of the ART technique does not render that case recordable.

In summary, work-related injuries and illnesses are not recordable based solely on the administration of ART, but may become recordable when administered in conjunction with medical treatment. As stated above, if ART is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable.

Thank you for your interest in occupational safety and health. We hope you find this

**Letter of:
May 23, 2019**



September 11, 2015

Dr. Michael Hodgson, MD
U.S. Department of Labor
Chief Medical Officer / Director, Office of Occupational Medicine
200 Constitution Avenue, NW
Washington, DC 20210

Dear Dr. Hodgson:

On behalf of more than 90,000 physical therapists, physical therapist assistants, and students of physical therapy, the American Physical Therapy Association (APTA) is writing to

Dr. Michael Hodgson, MD
U.S. Department of Labor
Chief Medical Officer / Director, Office of Occupational Medicine
200 Constitution Avenue, NW

Early Intervention Strategies...



Early Intervention Strategies...

Proactive Interventions

1. Job Demands Analysis
2. Ergo Audits
3. Ergonomic Risk Assessment
4. Ergo Fixes
5. Onboarding of New Employees
6. Stretching & Body Mechanics – Form & Function
7. Discomfort Surveys



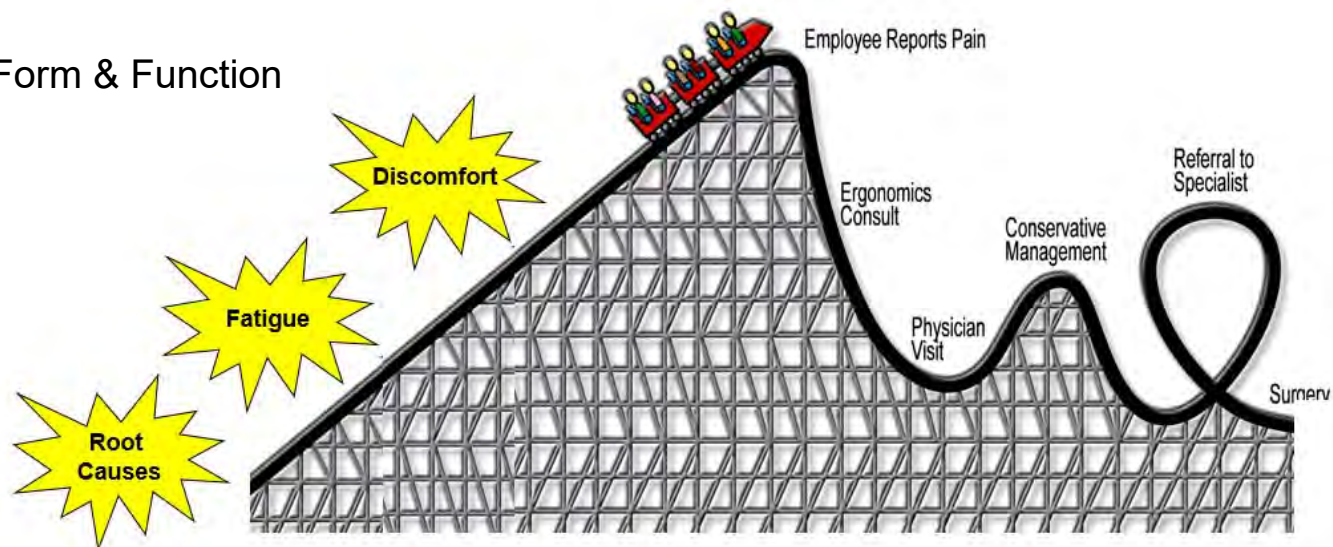
Early Intervention Strategies...

Proactive Interventions

1. Job Demands Analysis
2. Ergo Audits
3. Ergonomic Risk Assessment
4. Ergo Fixes
5. Onboarding of New Employees
6. Stretching & Body Mechanics – Form & Function
7. Discomfort Surveys

Reactive Interventions

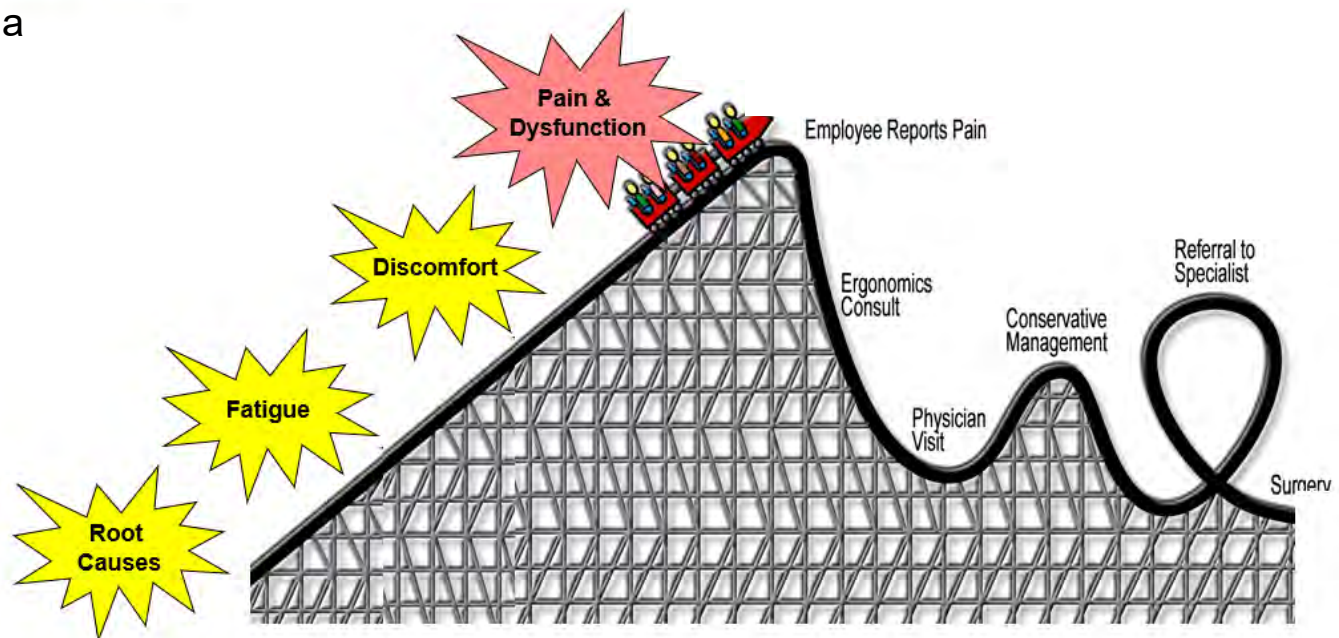
7. Preventative Exercises
8. Taping Techniques
9. Soft Tissue Techniques
10. Non-Rigid Supports
11. Ice / NSAID (OTC)



Early Intervention Strategies...

Pain & Dysfunction Considerations

- Pain is subjective
 - ✓ Varies by individual
 - ✓ Should not be the lone criteria



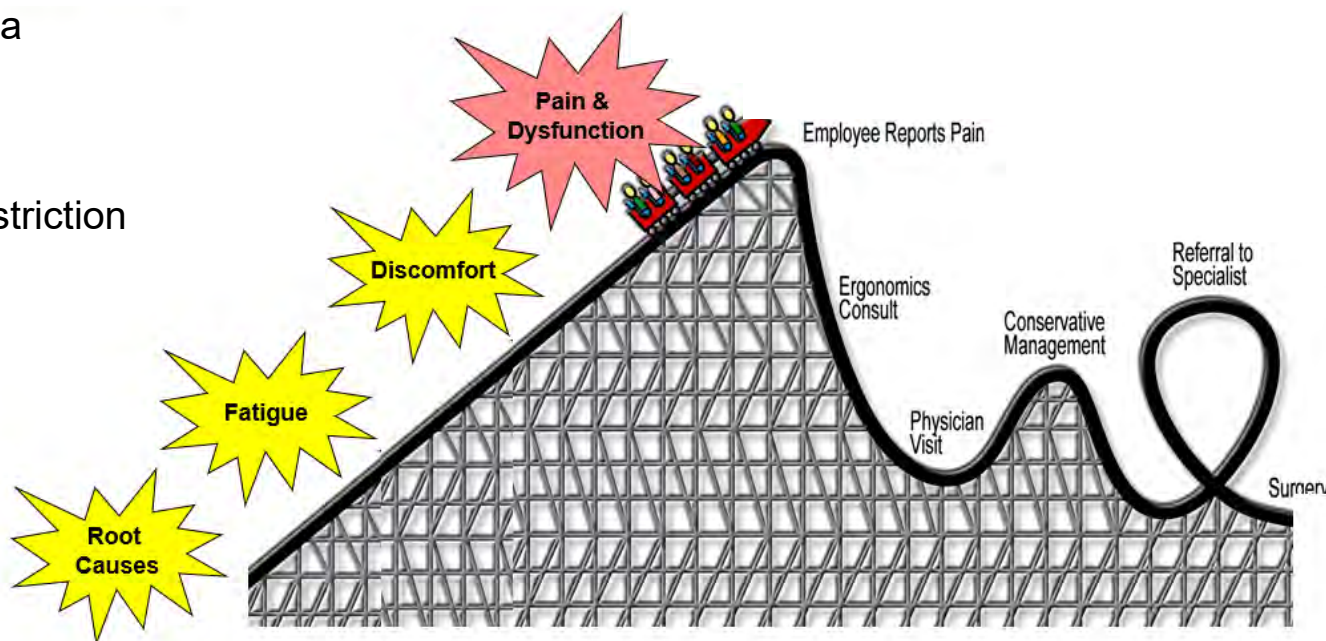
Early Intervention Strategies...

Complete Listing of First Aid Treatments		
First Aid Treatment: 1904.7 (5)(ii)(A)-(N)	A	Using a non-prescription medication at nonprescription strength
	B	Administering tetanus immunization
	C	Cleaning, flushing or soaking wounds on the surface of the skin
	D	Using wound coverings; bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™
	E	Using hot or cold therapy
	F	Any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.
	G	Temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.)
	H	Drilling a fingernail or toenail to relieve pressure, or draining fluid from a blister
	I	Using eye patches
	J	Removing foreign bodies from the eye using only irrigation or a cotton swab
	K	Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs, or other simple means
	L	Using finger guards
	M	Using massage
	N	Drinking fluids for relief of heat stress

Early Intervention Strategies...

Pain & Dysfunction Considerations

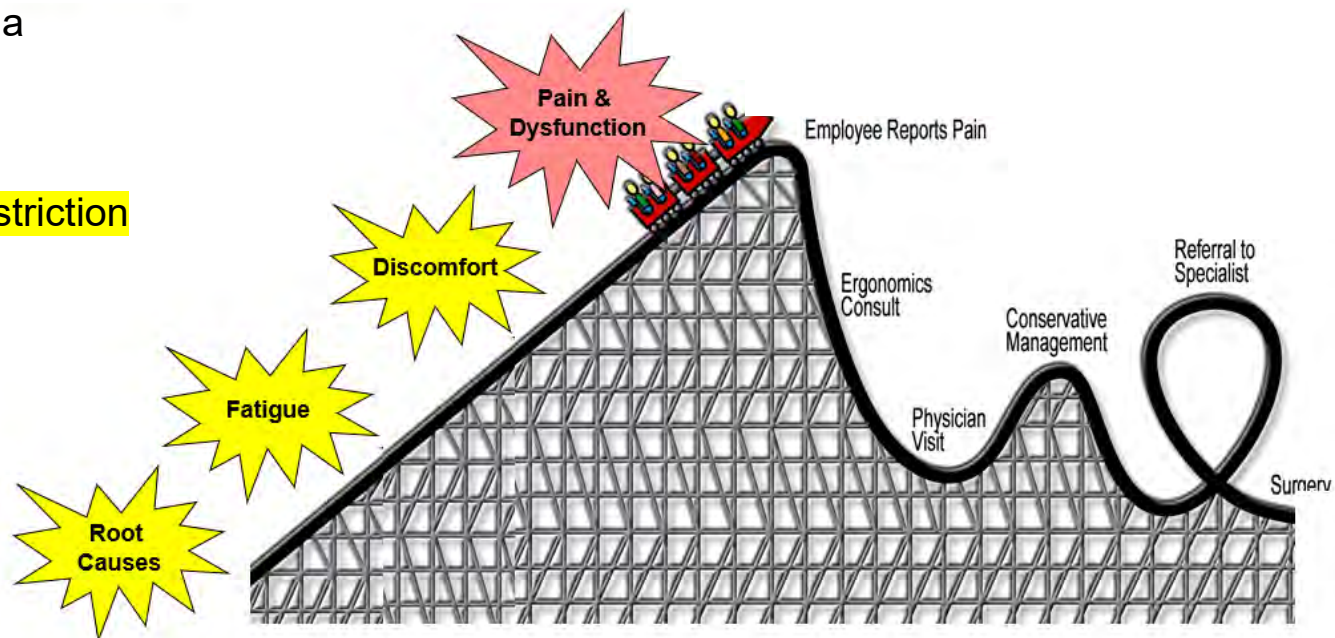
- Pain is subjective
 - ✓ Varies by individual
 - ✓ Should not be the lone criteria
- Dysfunction is a better measure
 - ✓ Exam findings
 - ✓ Can they perform job task
 - Yes... Consider Job Restriction
 - No... Consider Referral



Early Intervention Strategies...

Pain & Dysfunction Considerations

- Pain is subjective
 - ✓ Varies by individual
 - ✓ Should not be the lone criteria
- Dysfunction is a better measure
 - ✓ Exam findings
 - ✓ Can they perform job task
 - **Yes... Consider Job Restriction**
 - No... Consider Referral



Work Restrictions...



OSHA Frequently Asked Questions:

- Question 7-19. ***Does the employer have to record a work-related injury and illness if an employee experiences minor musculoskeletal discomfort, the health care professional determines that the employee is fully able to perform all of his or her routine job functions, but the employer assigns a work restriction to the injured employee?***

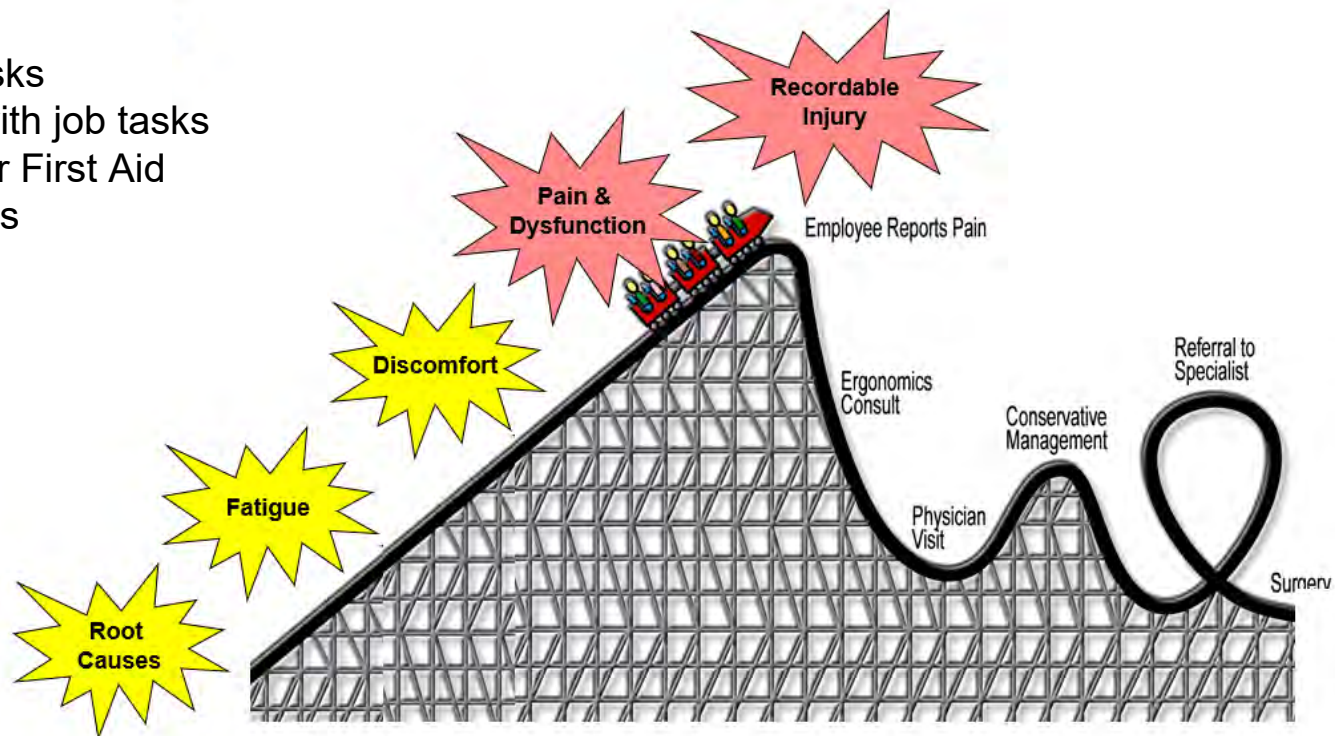
Work Restrictions...

- As set out in Chapter 2, I., F. of the Recordkeeping Policies and Procedures Manual (CPL 2-00.135) **a case would not be recorded** under section 1904.7(b)(4) if (1) the employee experiences minor musculoskeletal discomfort, and (2) a health care professional determines that the employee is fully able to perform all of his or her routine job functions, and (3) the employer assigns a work restriction to that employee for the purpose of preventing a more serious condition from developing. If a case is or becomes recordable under any other general recording criteria contained in section 1904.7, such as medical treatment beyond first aid, a case involving minor musculoskeletal discomfort would be recordable.

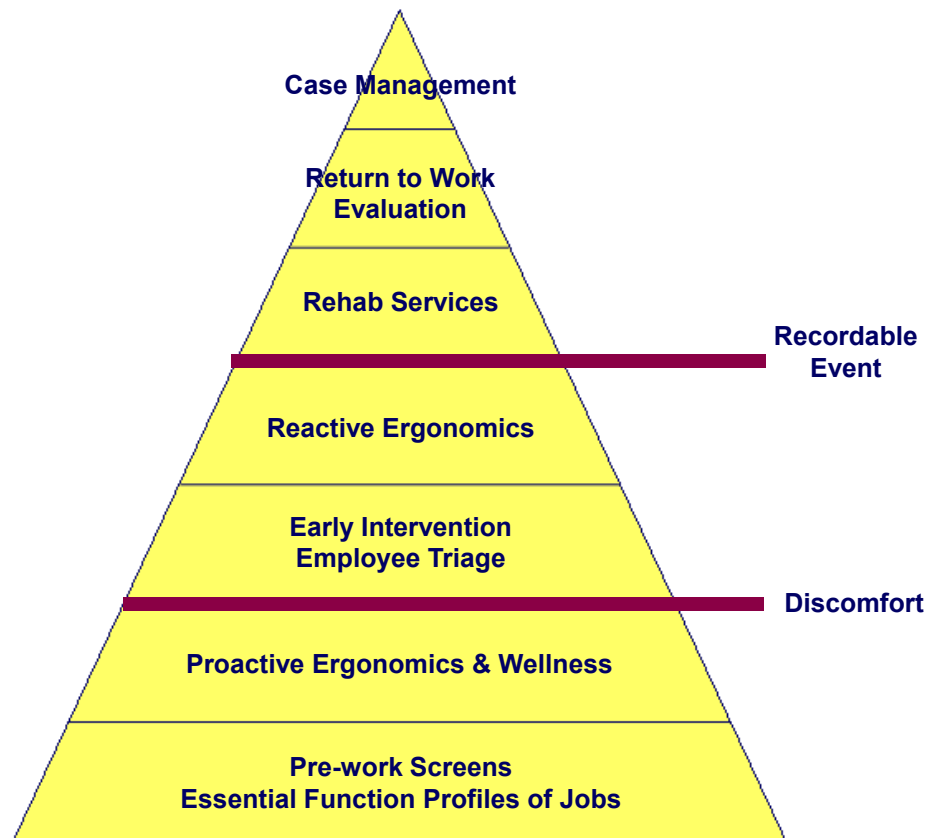
Early Intervention Strategies...

Consider Referral or Formal Physical Therapy

- Positive findings on exam
- Unable to perform routine job tasks
- Pain is persistent and interfering with job tasks
- Limited or no improvement under First Aid
 - ✓ General Guideline: 3-4 weeks
 - ✓ Not an absolute



Total Worker Health





Contact Info...

Kris Corbett, Wellness Specialist

Phone: 616-607-6869

Cell: 215-820-5319

Email: kcorbett@atlas-ips.com

Tony Silva, CPE

Phone: 616-607-6984

Cell: 226-339-7312

Email: tsilva@atlas-ips.com

Drew Bossen, PT, MBA

Phone: 616-607-6980

Cell: 319-430-3382

Email: dbossen@atlas-ips.com