

Introduction

- Ergonomics in Construction
- Welcome
- Given current OSHA and industry information regarding construction worksite incidents and disabling injuries, the student should be able to recognize the hazards associated with musculoskeletal disorders (referred to as MSDs) and Repetitive Motion Disorder (RMD) injuries in construction.

Introduction

- Objectives
- At the end of this course, the student should be able to:
 - Identify the major hazards associated with MSD and RMD type injury and illness.
 - Describe types of activities that can lead to MSD and RMD injury and illness.
 - Tools and a better understanding of how to protect themselves from MSD and RMD injury and illness producing hazards.
 - Recognize employer requirements to protect workers from exposure to MSD and RMD injuries.

Introduction

- Demanding Occupation
- Construction is a physically demanding occupation,
 - Vital part of our nation and the U.S. economy.
 - In 2006, the total annual average number of workers employed in construction rose to an all-time high of nearly 7.7 million, according to U.S. BLS data.
 - This large workforce handled tasks that range from carrying heavy loads to performing repetitive tasks, placing them at risk of serious injury.
 - Physically demanding nature of this work helps to explain why injuries, such as strains, sprains, and work-related musculoskeletal disorders, are so prevalent and are the most common injury resulting in days away from work.

Safety Tip

For more data on ergonomic injuries, go to the BLS website at <http://www.bls.gov/opub/ted/2008/dec/wk1/art02.htm>

Delete Introduction

- Ergonomic Safety
- Ergonomic safety is achievable.
 - Although the construction industry presents many workplace hazards, it is important to understand that there are quality contractors in the U.S. who are successfully implementing safety and health programs to address these ergonomic issues, including work-related musculoskeletal disorders and repetitive motion injuries.

Introduction

Course Intentions

- Intended for construction workers, unions, supervisors, contractors, safety specialists, human resources managers—anyone with an interest in safe construction sites.
- Some of the most common injuries in construction are the result of job demands that push the human body beyond its natural limits.
- Workers who must often lift, stoop, kneel, twist, grip, stretch, reach overhead, or work in other awkward positions to do a job are at risk of developing a work-related musculoskeletal disorder (WMSD).

Safety Tip

These WMSDs can include back problems, carpal tunnel syndrome, tendinitis, rotator cuff tears, sprains, and strains.

Introduction

Simple Solutions

- To aid in the prevention of ergonomic injuries,
 - Training will suggest simple and inexpensive ways to make construction tasks easier, more comfortable, and better suited to the needs of the human body.
 - Example of a “simple solution”: This ironworker uses a tool that automatically ties rebar with the pull of a trigger. The extended handle lets him work while standing upright. No leaning, kneeling, stooping, or hand twisting are necessary.

Delete Introduction

Statistics

- Did You Know . . . ?
 - Construction is one of the most hazardous industries in the United States.
 - The number of back injuries in U.S. construction was 50% higher than the average for all other U.S. industries in 1999 (CPWR, 2002).
 - Backaches and pain in the shoulders, neck, arms, and hands were the most common symptoms reported by construction workers in one study (Cook et al, 1996).
 - Material handling incidents account for 32% of workers' compensation claims in construction, and 25% of the cost of all claims. The average cost per claim is \$9,240 (CNA, 2000).
 - Musculoskeletal injuries can cause temporary or even permanent disability, which can affect the workers earnings and contractors profits.

Delete Some Basics

Aims

- Ergonomics
- Aims to design systems and tasks so as to improve human safety, health, comfort, and performance.
- Focuses on the worker rather than the product or production.
- Focuses on human capabilities, limitations, motivations, and desires.
- Many factors play a role in ergonomics, including
 - body posture,
 - movement,
 - environmental factors and
 - information processing.

Some Basics

What is Ergonomics?

- Ergonomics is the “study of work”
 - The rules that govern it, are derived from the Greek words “ergon” meaning work and “nomos” meaning rule or law.
 - Is the science of “Human and machine interaction”-- essentially the science of doing your job safely, and well.
 - Is often referred to as Human Factors Engineering, and relies on principles from many disciplines, including psychology, physiology, biomechanics, and industrial and systems engineering.

Some Basics

Good Ergonomics

- Good ergonomics ...
 - Attempts to fit or adapt the job to the worker rather than forcing the worker to fit the job.
 - Is becoming more and more important as the working world becomes filled with specialized tasks, higher assembly line speeds, and increased repetition, which all have ergonomic injury and illness effects on workers.

Some Basics

More Disturbing Facts

- Ergonomic hazards lead to work-related MSDs.
 - Account for 1/3d of all occupational injuries and illnesses reported to the BLS.
 - Disorders increasing every year and constitute the largest job-related injury and illness problem in the US today.
 - Employers reported a total of 626,000 lost workday MSDs to the BLS, and these disorders accounted for \$1 of every \$3 spent for workers' compensation.
 - Employers pay more than \$15-\$20 billion in workers' compensation costs for these disorders every year.

Some Basics

Ergonomic Factors

- Many factors play a role in ergonomics. Can you pick them out?
 - Body posture [correct]
 - Trips and falls [wrong]
 - Movement [correct]
 - Environmental factors [correct]
 - Falls from elevation [wrong]
 - information processing [correct]

Delete Ergonomic Disorders

Disabilities

- Workers with severe MSDs
 - Can face permanent disability that prevents them from returning to their jobs or handling simple, everyday tasks like combing their hair, picking up a baby, or pushing a shopping cart.
 - OSHA is taking steps to prevent ergonomic hazards in American workplaces with regulations and enforcement.

Ergonomic Disorders

General Types

- Ergonomic-related disorders principally include:
 - Musculoskeletal Disorders (MSDs)
 - Cumulative Trauma Disorders
 - Repetitive Motion Injuries
 - Back injuries
 - Strains and sprains

Ergonomic Disorders

How We're Put Together

- The Musculoskeletal System consists of:
 - bones
 - muscles
 - tendons
 - joints
 - ligaments
 - tissue
 - nerves

Ergonomic Disorders

Our Anatomy

- The Average human adult skeleton contains ...
 - 206 bones joined to ligaments and tendons.
 - Muscles are elastic, contracting and expanding to produce movement and work.
 - Tendons attach muscles to bone.
 - Joints are structures where two or more bones join together.
 - Ligaments are the tough fibrous bands of tissue that bind bone ends together.
 - Tissue is the collections of specialized cells which perform particular functions.
 - Nerves, the body's electrical and alarm system which reports of disturbances in sensation such as numbness or tingling.

Ergonomic Disorders

What Ails Us

- Which of these are regarded as ergonomic related disorders, injuries, and illnesses?
 - Musculoskeletal disorders known as MSDs [correct]
 - Burns [wrong]
 - Cumulative Trauma Disorders known as CTDs [correct]
 - Fractures [wrong]
 - Repetitive Motion Injuries known as RMIs [correct]
 - Back injuries [correct]
 - Strains and sprains [correct]

Ergonomic Disorders

Work

- Conducting repetitive work,
 - using too much force, working in awkward positions, or using poor lifting techniques can put strain on the body and can cause a workers to suffer.
 - Effects of Ergonomic Injuries may include:
 - Pain
 - Aches
 - Numbness
 - Tingling
 - Restricted movement
 - Employees and Supervisors should learn to anticipate, recognize, evaluate, and control ergonomic hazards in the workplace before these injuries occur.

Ergonomic Disorders

Common MSDs

- Musculo-skeletal Disorders (MSDs)
- Carpal Tunnel Syndrome
- Tendonitis
- Tenosynovitis
- DeQuervain's disease
- Raynaud's Syndrome (white finger)
- Epicondylitis (tennis elbow)
- Rotator Cuff injury
- Cervical disc syndrome

Ergonomic Disorders

Carpal Tunnel Syndrome

- Tendons/nerves in wrist pass through 'carpal tunnel'
 - Hand movement causes tendons to slide back and forth through the tunnel
 - Repetitive movement causes friction, inflammation, pain, and swelling.

Ergonomic Disorders

Tendonitis

- Tendonitis is a form of tendon or muscle inflammation.
 - Caused by tendon overuse or unaccustomed usage.
 - Typically affects wrist and shoulder.
 - Rest/recovery time needed
 - Common among welders, painters, assembly line workers .

Ergonomic Disorders

Tenosynovitis

- Tenosynovitis is an inflammation or injury of the synovial sheath surrounding the tendon.
 - The tendon is surrounded by a sheath with synovial fluid which acts as a lubricant to reduce friction during movement.
 - Excessive movement of the hands and wrists may cause the sheath to become swollen and painful.
 - Tenosynovitis is common among jobs such as core making and meatpacking.

Ergonomic Disorders

DeQuevain's Disease

- With DeQuevain's disease,
 - the tendon sheath of the thumb is inflamed because of excessive friction between the thumb tendons and their common sheath.
 - Twisting and forceful gripping motions with the hands, similar to the movement of wringing clothing, can place stress on the tendons and cause De Quervain's disease.
 - Example; an electrician using a screw driver or a carpenter placing "snap ties" for extended periods of time may become susceptible to this condition.

Ergonomic Disorders

Trigger Finger

- Trigger finger is tendon disorder.
 - Attributed to a groove in the flexing tendon of the finger.
 - Tendon may become locked in its sheath and attempts to move the finger will cause snapping and jerking movements of the finger.
 - Disorder is common among workers who use tools with handles with hard or sharp edges, such as assemblers, carpenters, and welders.

Ergonomic Disorders

Raynaud's Syndrome

- “White Fingers”
 - Occurs when the blood vessels of the hand are damaged as a result of repeated exposure to vibration for long periods of time.
 - Skin and muscles of the hands are unable to get the necessary oxygen from the blood and eventually die.
 - Symptoms include numbness and tingling in the fingers.
 - Associated with the prolonged use of vibrating tools such as pneumatic hammers, chain saws, and gasoline powered hand tools.

Ergonomic Disorders

Effects

- Can you identify the common effects of Ergonomic Injuries?
 - Pain [correct]
 - Aches[correct]
 - Coughing [wrong]
 - Numbness[correct]
 - Tingling[correct]
 - Excessive energy [wrong]
 - Restricted movement [correct]

Ergonomic Disorders

Other MSD / RMI Disorders

- Other ergonomic injuries and illnesses or disorders include:
 - Epicondylitis or tennis elbow.
 - Inflammation of the tendons in the elbow and occurs because of overuse -- such as painting with a brush or roller, running a chain saw, and using many types of hand tools continuously.
 - Rotator cuff disorder.
 - Inflammation of the tendons of the shoulder.
 - Chronic inflammation or injury can cause tearing of the rotator cuff.
 - Key risk factors are an age of over 40 years and participation in sports or work activities that involve repetitive arm motion over the head, such as sheet-rocking.

Ergonomic Disorders

Other MSD / RMI Disorders

- Back Disorders
 - Expensive to worker and contractor
 - Common reason of job absenteeism
 - Most back disorders caused by chronic or long term injury
 - Muscles, ligaments, tendons, and discs repetitively pulled and strained

Ergonomic Disorders

Other MSD / RMI Disorders

- Back Disorders: Sources
 - Faulty body mechanics
 - excessive twisting
 - bending
 - reaching
 - carrying
 - lifting heavy or awkward loads
 - Staying in one position
 - Poor physical condition
 - Poor posture

TIP: Nearly all workers are at risk to back disorders.

Hazards Recognition

Recognize Causes

- Recognizing the causes of MSD's/Ergonomic Illnesses
 - Primary causes:
 - Excessive repetitive motions
 - Excessive or sustained force
 - Sustained or awkward body positions

Hazards Recognition

Recognize Causes

- Secondary Causes
 - Poor tool design
 - Environmental factors:
 - poor lighting
 - noise
 - excessive temperatures
 - mechanical or contact stress

Hazards Recognition

Repetitive Motion

- Many workers spend all day in one posture:
 - performing 1-2 tasks repeatedly
 - performing hundreds of movements with same muscles
- Keyboard work relies on repetitive movement
- Likewise with physical work. Even a very physical task such as moving concrete may involve just a few muscles working repeatedly.

Hazards Recognition

Force

- Force is the energy exerted to cause movement ...
 - Such as turning a wrench to making a nut or bolt move.
 - Using excessive force, such as when turning a wrench on a rusted bolt, can irritate muscles and tendons and compress nerves.
 - Combining excessive force with repetitive motions puts the body at increased risk to ergonomic injury.
 - Combine excessive force and repetitive motion with awkward posture and you have a real likelihood of developing an ergonomic injury.

Hazards Recognition

Posture

- Awkward postures ...
 - Create stress and fatigue on the musculo-skeletal system
 - A neutral position--the position that is easiest or most natural for the body--is the least stressful.
 - Your body, when healthy, naturally rests in a neutral posture when still, when no muscles are flexed unnecessarily.

Hazards Recognition

Hazards Evaluation

- Good Practices
 - Observe jobs at risk
 - Focus on:
 - repetitive motions
 - forces applied
 - postures
 - tools
 - environment
 - Talk with the operators
 - Try new things
 - Call in an expert

Hazards Recognition

Causes

- Can you identify which of these are the primary causes of musculoskeletal disorders and other ergonomic related injury and illnesses?
 - Talking too much [wrong]
 - Excessive repetitive motions [correct]
 - Excessive or sustained force [correct]
 - Sustained or awkward body positions [correct]
 - Maintaining a neutral body position [wrong]

Hazard Control

Engineering Controls

- Hazard recognition and evaluation is followed by Hazard Control
- Ergonomic hazards are controlled best by Engineering Controls
 - Engineering controls focus on making the job fit the worker and not forcing the person to fit the job.
 - Controls include designing work stations, tools, and equipment to minimize repetition, forces and posture problems..

Hazard Control

Administrative Controls

- Administrative Controls include:
- Breaking up the work schedule to minimize repetitive tasks, which involves doing different things with different muscles;
- Breaking old habits such as poor lifting techniques; and
 - Developing new habits such as learning how to lift properly.

Hazard Control

Administrative Controls

- Work Practice Procedures
 - Proper work techniques
 - Training (proper lifting)
 - Conditioning (stretching)
 - Job monitoring
 - Employee feedback
 - Equipment maintenance, adjustments, and
 - Modification of tools or equipment.

Hazard Control

PPE

- Personal Protective Equipment useful in controlling or minimizing ergonomic hazards and MSDs.
- For example:
 - Gloves may be used to minimize the effects of vibration and force.
 - Vibrating tools may be dampened by using rubber backed low pile carpets on the work surface
 - Specifically designed back braces may be useful to promote good posture and minimize the stresses of force on the lower back.
 - As always, the principle is to fit the PPE to the worker and not the worker to the PPE

Hazard Control

Medical Management

- Medical management is an important tool in an effective ergonomics program.
 - Medical management can identify and evaluate early signs and symptoms of MSDs and help eliminate or reduce the risk of developing MSDs.
 - For example, some wearable braces help diminish the symptoms of repetitive stress, and some workers can receive eye testing and examinations to determine if they need new or special glasses that minimize eye strain and even relieve tension on the neck and shoulders.

Hazard Control

Engineering Controls

- Which of these are the two primary engineering controls?
 - Making the job fit the worker and not forcing the person to fit the job. [correct]
 - Developing new habits such as learning how to lift properly. [wrong]
 - Designing work stations, tools, and equipment to minimize repetition, forces and posture problems. [correct]

Simple Solutions

What is simple solutions?

- Simple Solutions is a booklet ...
 - Published by the National Institute for Occupational Safety and Health.
 - Some of the most common injuries in construction are the result of job demands that push the human body beyond its natural limits.
 - Workers who must often lift, stoop, kneel, twist, grip, stretch, reach overhead, or work in other awkward positions to do a job are at risk of developing a work-related musculoskeletal disorder (WMSD).
 - Can include back problems, carpal tunnel syndrome, tendinitis, rotator cuff tears, sprains, and strains.

Simple Solutions

Review of Simple Solutions

- Common “Simple Solutions” concepts and ideas.
 - Click on the link shown.
 - Additionally, copies can be ordered by contacting;
 - National Institute for Occupational Safety and Health (NIOSH)
 - Centers for Disease Control and Prevention
 - 800-CDC-INFO
 - (800-232-4636)

Simple Solutions

Simple Solutions

- Floor and Ground-Level Work, The Problem
 - Potential to develop a serious muscle or joint injury.
 - Your risk is higher if you stoop or kneel often or for long periods of time. It is also higher if you twist your body while working in these positions.
 - These positions can also make it harder to do your job. When stooping or kneeling, you can't lift, push, or pull as much weight without putting stress on your body.

Simple Solution

Example of a “simple solution.” This ironworker uses a tool that automatically ties rebar with the pull of a trigger. The extended handle lets him work while standing upright. No leaning, kneeling, stooping, or hand twisting are necessary.

Simple Solutions

Risky Tasks

- You have an increased risk ergonomic related injury/illness if you often:
 - Carry heavy loads
 - Work on your knees
 - Twist your hands or wrists
 - Stretch to work overhead
 - Use certain types of tools
 - Use vibrating tools or equipment.
- On top of that, tight deadlines mean a fast pace. Pushing the pace increases your risk even more.

Simple Solutions

Ergonomics Program?

- Many ergonomics experts recommend ergonomics programs to analyze risk factors at the worksite and find solutions.
 - Can be a valuable way to reduce injuries, improve worker morale, and lower workers' compensation costs. Often, these programs can also increase productivity.
 - May be a particularly urgent need for an ergonomics program at your site if:
 - Injury records or workers' compensation claims show excessive hand, arm, and shoulder problems; low back pain; or carpal tunnel syndrome.
 - Workers often say that some tasks are causing aches, pains, or soreness
 - There are jobs on the site that require forceful actions, movements that are repeated over and over, heavy lifting, overhead lifting, use of vibrating equipment, or awkward positions such as raising arms, bending over, or kneeling.

Simple Solutions

Ergonomic Program Elements:

- Employer commitment
- Someone in charge of the program
- Active employee involvement in identifying problems and solutions
- A clearly defined administrative structure (e.g. a committee)
- A system to identify and analyze risk factors
- A system to research, obtain, and implement solutions
- Worker and management training
- Medical care for injured workers
- Maintaining good injury records
- Regular evaluation of the program's effectiveness.

TIP: For additional information on developing an ergonomics program, see Elements of Ergonomics Programs (NIOSH Pub. No. 97-117) at www.cdc.gov/niosh/docs/97-117.

Simple Solutions

Increased Risk

- Which of these, if you do them often, create an increased risk of ergonomic injury/illness?
 - Carry heavy loads [correct]
 - Work on your knees [correct]
 - Twist your hands or wrists [correct]
 - Stretch to work overhead [correct]
 - Use certain types of tools [correct]
 - Varying your activities [wrong]
 - Use vibrating tools or equipment [correct]

Simple Solutions

TIP 1

- Fastening Tools that Reduce Stooping
- The Problem
 - When working at floor or ground level, construction workers often use screw guns / fastening tools that require stooping, bending, kneeling, or squatting for long periods of time.
 - Working repeatedly in these positions can result in fatigue, pain, and injury.
 - Your lower back and knees are the areas at greatest risk of a muscle or joint injury when you stoop, bend, kneel, or squat for prolonged periods.
 - Risk is increased if you have to lift, push, or pull while stooping.

Simple Solutions

TIP 1

- Fastening Tools that Reduce Stooping
 - One solution:
 - Use an auto-feed screw gun with an extension that allows you to stand upright while working.
 - Standing while you work keeps your spine and knees in a neutral position, minimizing strain and muscle fatigue.
 - Many stand-up tools have adjustable lengths to fit workers of different heights.
 - Stand-up screw guns that automatically feed the screws are available.
 - Powder-actuated fastening tools (PAT's) can be used with a stand-up handle provided by the manufacturer.

TIP: NIOSH reports that the approximate cost for stand-up screw guns are \$200–400. PAT fastening tools with stand-up handles are \$500–700. The PAT handles can also be purchased separately

Simple Solutions

TIP SHEET # 4

- Kneeling Creepers, One Solution
 - Use a portable kneeling creeper with chest support.
 - When the job requires kneeling or squatting to work at floor level, these devices will reduce the stress to your knees, ankles, and lower back.

TIP: Kneeling creepers without the chest support cost around \$200 and the optional adjustable chest support is around \$75.

Simple Solutions

TIP SHEET # 6

- Bit Extension Shafts for Drills and Screw Guns, The Problem
 - If you use a drill or screw gun for overhead work, you are forced to keep your arms and neck in fixed, awkward, hard-to-hold positions.
 - You have to push upward with a heavy tool above your shoulders, using your shoulder muscles instead of your biceps.
 - This work can put stress on your arms, neck, shoulders, and back.
 - It can lead to fatigue and serious muscle or joint injuries.

Simple Solutions

TIP SHEET #6

- Bit Extension Shafts for Drills and Screw Guns, One Solution
 - Use a bit extension shaft for the drill or screw gun, so you can hold the tool below your shoulder and closer to your waist.
 - You strain your arms, neck, shoulders, and back less because you don't have to hold the tool above your shoulders or work in an awkward position.
 - You work with your upper arms held close to your sides, and your hands in front of your body.
 - You are pushing with your biceps muscles instead of your shoulders.

Simple Solutions

TIP SHEET #8

- Spring-Assisted Drywall Finishing Tools, The Problem
 - Flat and corner "mud-boxes" for drywall finishing require lot of strength to push the compound out of the box.
 - Forceful, repetitive pushing motions with reaching overhead can cause fatigue.
 - Work can lead to serious wrist, arm, shoulder, and back injuries.
 - Often have to push hard while bending your wrist and back.
 - Increases chance of developing a muscle or joint injury.
 - Risk is higher when job done over and over.
 - Finishers say that corner boxes require them to push even harder than flat boxes.

Simple Solutions

TIP SHEET #8

- Spring-Assisted Drywall Finishing Tools, One Solution
 - Use a spring-assisted finishing tool.
 - Spring assisted flat boxes and corner tools are available that cut down significantly on the strain caused by pushing.
 - With spring-assisted flat boxes, the springs provide up to 75% of the force needed to push the compound onto the wall. Spring-assisted corner tools provide 100% of the force needed to finish corners.

TIP: Approximate Cost; you can rent or purchase these tools. Rentals cost about the same as for regular boxes. One manufacturer sells a set of three spring-assisted flat boxes for about \$1,300 and a spring-assisted corner finisher for about \$1,400.

Simple Solutions

Tip Sheet # 14

- Ergonomic Hand Tools, The Problem
 - Using a conventional hand tool over and over can lead to muscle strain or even a serious injury like carpal tunnel syndrome or tendinitis.
 - Using the wrong tool, or using a tool the wrong way, can strain your hand, wrist, forearm, shoulder, and neck.

Simple Solutions

Tip Sheet # 14

- Ergonomic Hand Tools, One Solution
 - Use an "ergonomic" tool that fits the job.
 - Many new tools are available that may help prevent muscle and joint injuries, check them first.
 - A tool can be considered “ergonomic” when it fits the task you do, fits your hand, allows a good grip, takes less effort, does not require you to work in an awkward position, does not dig into your fingers or hand, and is comfortable and effective.
 - A tool designed for one task may put more stress on the hand or wrist when used for a different task.

Simple Solutions

Tip Sheet # 14

- Ergonomic Hand Tools, How It Works
 - Handle. The handle should be non-slip, coated with soft material, and not have sharp edges.
 - Wrist position. Pick a tool that keeps your wrist straight when you use it.
 - Handle diameter. For single-handle tools, if the task requires high force, handle diameter should be between 1-1/4 inches and 2 inches. For low-force tasks requiring precision or accuracy, handle diameter should be between 1/4 inch and 1/2 inch.
 - Pinching, gripping, or cutting tools. Choose a tool with a spring-loaded handle that automatically returns to an open position.

TIP: Approximate Cost; many tool manufacturers now produce ergonomically improved hand tools. Often these are no more expensive than non-ergonomic tools.

Summary

Employer Requirements

- OSHA does not have a regulation specific to construction ergonomics.
- OSHA has a wealth of information and compliance guidelines to assist employers to provide a more safe place of employment.
- OSHA can and will cite an employer for unsafe ergonomic work conditions.
- OSHA has stated that they will use the General Duty Clause to cite employers for ergonomic hazards.
- Under the OSH Act's General Duty Clause, employers must keep their workplaces free from recognized serious hazards, including ergonomic hazards.
- This requirement exists whether or not there are voluntary guidelines.

Summary

TIP: The General Duty Clause is found in Section 5 “Duties” of the Occupational Safety and Health Act and specifies the following:

(a) Each employer --

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

Summary

Summary

- Construction is a physically demanding occupation, but a vital part of our nation and the U.S. economy.
- The construction workforce handle tasks that range from carrying heavy loads to performing repetitive tasks, placing them at risk of serious injury.
- The physically demanding nature of this work helps to explain why injuries, such as strains, sprains, and work-related musculoskeletal disorders, are so prevalent and are the most common injury resulting in days away from work.

TIP: It is important to recognize that although federal OSHA does not have an ergonomics standard, several state OSHA programs do. Find out more by contacting your state OSHA program.

Click on the link shown to learn more: <http://www.osha.gov/dcsp/osp/index.html>

Summary

Employers' Responsibility

- Selected employer responsibilities under the Occupational Safety and Health Act of 1970.
 - Provide a workplace free from serious recognized hazards
 - Comply with standards, rules and regulations.
 - Inspect the worksite and examine workplace conditions.
 - Make sure employees have and use safe tools, equipment and maintain them.
 - Establish or update operating, safety and health procedures and communicate them.
 - Provide medical examinations and training when required.
 - Keep records of work-related injuries and illnesses.
 - Provide access to employee medical records and exposure records.

<http://www.osha.gov/as/opa/worker/employer-responsibility.html>