BACK SAFETY IN THE WORKPLACE

EHS
Oklahoma State University
Environmental Health and Safety
(405) 744-7241

Current as of April 2016
Back Safety & Lifting

- Training Objectives:
  - Common Causes of Back Injuries
  - Back Injury Prevention
  - Principles of Safe Handling
  - Proper Lifting Techniques
  - Exercises
  - Summary
Back Safety & Lifting

Job requires heavy lifting:
- Use equipment when possible or ask for help.
- Try to avoid repetitive lifting over a long period of time.

Twisting at the waist while lifting or holding a heavy load.

Injury usually occurs when reaching over the head, across a table or out the back of a truck.
Back Safety & Lifting

- Injury usually occurs when carrying or lifting objects with awkward or odd shapes.
- Poor postures that can contribute to back pain are caused by poor workstation layout and/or equipment design.
- It is very easy to injure your back, neck or legs while slipping, tripping or falling.
Back Safety & Lifting

- Sitting or standing too long in one position. Sitting can be very hard on the lower back.

- For every 45 min. of sitting, stand up and take a stretch.

- For every one to two hours standing, sit down or move around and stretch.
80% of the population can expect to have back pain at some time in their lives.

About 8 million Americans suffer new back injuries every year.

Twice as many back injuries occur at home as in the workplace.

About 400,000 people suffer disabling back injuries each year.

Sooner or later 8 out of 10 adults at some point in their lives will experience back pain that impairs activity.
Common Back Disorders

- Acute strains and sprains
- Muscle spasm
- Herniated Disc
The majority of back injuries that result in lost work time involve the lumbar region.
Leading Causes of Back Problems

- Poor Body Mechanics
- Stressful Living & Working
- Loss of Flexibility
- Loss of Strength

Source: The Saunders Group
EMERGENCY

SORE BACK?
Back Injury Cycle

Back Problem

Weakness

Stiffness

Stop Moving

Hurts to Move

Source: The Saunders Group
How do I Take Care of My Back?

- Body Mechanics
- Proper Lifting Techniques
- Exercise
- Stretching
- Correct Posture
Body Mechanics

“It’s not how much you lift or move, but the way you do it”!

General Rules:
1) Push vs. Pull
2) Keep Work Within “Strike Zone”
3) Keep Load Close To Body
4) Use Abdominal Bracing
5) Pivot with Feet - Avoid Twisting
6) Team Work vs. Mule Work
Power Position:
- Wide base of support
- Feet shoulder width apart
- Back straight
- Head and shoulders up
- Bend at hips and knees - NOT BACK!
- Keep load close to body
- Tighten stomach muscles
- Use leg, hip and buttock muscles
- Breathe out with lift
Avoid Lifting and Bending Whenever You Can

Place objects up off the floor.
Set objects down on a table or other elevated surface instead of on the floor.

Raise / lower shelves.
The best zone for lifting is between your shoulders and your waist. Put heavier objects on shelves at waist level, lighter objects on lower or higher shelves.

Avoid Lifting and Bending Whenever You Can
Why Focus on Conditioning?

- Strength and Stability
- Flexibility
- Aerobics for Endurance
- Anaerobic for Recovery
Benefits of Conditioning

- Increased Strength
- Increased Endurance
- Decreased Risk of Injury
- Better Job Performance
Start Safe - The Warm-Up

Begin with 5 - 10 minute warm-up
- Should be specific to activity
- Gradually increase intensity

Stretch lightly (after warm-up)
- Don’t overstretch
- Hold each stretch for at least 20 seconds
Aerobic Exercise

- 60 minutes per day
- Weight Management Benefit
- Enhanced Circulation
- Healthier Heart
- Decrease High Cholesterol
Strength & Flexibility...
Areas of Focus

- **Trunk**
  - Abdominals
  - Extensors

- **Legs**
  - Quads
  - Gluts
  - Hip Flexors
Stability Exercises

- Crunches
- Press Ups
- Bird Dog
Cool Down

- Prevents injury
- Rids muscles of waste products
- Returns heart rate and blood pressure to normal

Suggestions:
- Stretch should last 15 or more seconds
- Gently stretch for 10 minutes
STRETCH!!
Stretches & Flexibility

- Lower Trunk Rotation
- Hamstring Stretch
- Quad Stretch
Correcting Posture

1. Sit Straight
2. Stretch Out
3. Walk Tall
Bad posture can be the cause of spinal pain, it can make existing pain worse, and it certainly can make the pain last a lot longer.
Other Ways to Take Care of Your Back

- Relaxation Techniques
- Staying Hydrated
- Stress Management
- Rest/Sleep
Water

- We need at least eight 8 oz glasses of water a day (64 ounces)
- The human body can live weeks without food, but only a few days without water!
Ways to Relief Stress

- Breathing techniques
- Exercise regularly
- Rest & Relaxation
- Express your feelings
**DON'T**

- Sleep on a sagging mattress
- Sleep in one position too long

**DO**

- Sleep on a mattress that is firm
- Sleep on a king or queen size bed allows freedom to change positions frequently
Injury Prevention Tips

- Increase intensity/duration gradually
- Use proper technique
- Use appropriate equipment
- Do not ignore aches/pains
CAUSES OF INJURIES

- Increasing activity too quickly
- Poorly functioning equipment
- Improper form
- Working through pain
- Lack of conditioning
Treat Injuries the RICE Way!

**Rest** - avoid using affected area until pain-free

**Ice** - for 20 minutes at a time every few hours

**Compression** - pressure bandage to reduce swelling

**Elevation** - raise at or above heart level
When to See Your Doctor

- Injured limb/joint is deformed
- Broken skin over injury site
- Numbness, tingling
- Inability to move area without pain
- Joint feels unstable
- Can not bear weight
- Swelling
  - Does not improve within 48 hours
  - Begins within 30 minutes of injury
Back Safety & Lifting

- Back Injury Prevention Cont.:
  - Avoid Hyper extension movements of the back.
  - Avoid Hyper flexion movements of the back.
Back Safety & Lifting

- Back Injury Prevention cont.:
  - Maintain good posture
  - Lift objects holding them close to your body
  - **Never “twist”** when carrying, handling, or transferring a heavy object
    - Avoid “locking out” the knees
    - Use proper lifting techniques
Back Safety & Lifting

Proper Lifting Techniques

- Get close to the load
- Squat Down
- Grip the Load
- Slowly Lift
- Hug the Load
Back Safety & Lifting

- **Proper Lifting Techniques**
  - Get as close to the load as possible with your feet wide apart about shoulder width, with one foot slightly in front of the other for balance.
  - Test the object’s weight before lifting it.
  - Ask for assistance from a co-worker when appropriate.
  - Have the object close to the body and put less force on the low back.
  - Avoid rapid, jerky movements.
Back Safety & Lifting

 Proper Lifting Techniques Cont.:

- Keep yourself in an upright position while squatting to pick up.

- Squat by bending the knees and hips.

- Keep the three Curves of the Back properly aligned:
  - Ears, Shoulders, and Hips are in a straight line.
Back Safety & Lifting

Proper Lifting Techniques Cont.:

- Tightening the stomach helps support the spine.
- Do not hold your breath while tightening the muscles.
- Get a firm grasp of the object before beginning the lift.
  - Use both hands.
  - Use whole hand, not just fingers.
  - Use gloves as needed to prevent “pinched” grips or to protect the hands during lift.
Back Safety & Lifting

- **Proper Lifting Techniques Cont.**:
  - Legs are the strongest muscles in the body – so use them.
  - Avoid back flexion.
  - Hold objects close to body.
  - Slide the object from the knee on the ground to mid-thigh.
  - Keep the head forward.
  - Hug the object to your stomach & chest.

*Hug the Load*
Back Safety & Lifting

- Proper Lifting Techniques Cont.:
  - Lift with the legs to allow the body’s powerful leg muscles to do the work.
  - Flex the knees and hips, not the back.
  - Avoid bending & twisting at the waist.
  - Try to keep the back “straight” during the lift.
  - Do not look down at the object during lift.
  - Look up to help “straighten” the position of the back for a safer lift.
  - Never Bend, Lift, and Twist at the same time.
Back Safety & Lifting

- Takeaways:
  - Common Causes of Back Injuries
  - Back Injury Prevention
  - Principles of Safe Handling
  - Proper Lifting Techniques
  - Exercises
Environmental Health and Safety

Programs and Services

- Fire Protection Engineering
- Life Safety & Emergency Preparedness
- Environmental Compliance
- Laboratory Safety
- Occupational Safety
- Occupational Health and Medical Surveillance
- Materials Management
- Industrial Hygiene
- Chemical Hygiene
- Safety Training

- Location: University Health Services Bldg, Room 002 (basement)
- Phone number: 744-7241 Email: EHS@okstate.edu
- Website: http://ehs.okstate.edu/
Back Safety & Lifting

- Any Questions, Comments!!!