Back Safety In The Workplace

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Objectives

• Common Causes of Back Injuries
• Back Injury Prevention
• Principles of Safe Handling
• Proper Lifting Techniques
• Exercises
Back Safety Facts

- 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.
Back Injuries Involving Lost Work

- 70% Lumbar
- 12% Cervical
- 7% Thoracic
- 11% Unspecified

Diagram showing the levels of the spine (C1 to C7, T1 to T12, L1 to L5, S1 to S5) and the sections (Cervical, Thoracic, Lumbar, Sacral, Coccygeal).
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Back Injury Cycle

- Back Problem
- Stiffness
- Weakness
- Hurts to Move
- Stop Moving
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.

Depression, anxiety, frustration, reinforcement, stress, anger, fear, and other psychological states can cause back pain. Also, loss of flexibility and strength.
How do I Take Care of My Back?

- Body Mechanics
- Proper Lifting Techniques
- Use appropriate equipment
- Exercise
- Stretching
- Correct Posture
Body Mechanics

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

General Rules:
- Push vs. Pull
- Keep Work Within “Strike Zone”
- Keep Load Close To Body
- Use Abdominal Bracing
- Pivot with Feet - Avoid Twisting
- Team Work vs. Mule Work
Proper Lifting Techniques

- Get close to the load
- Squat Down
- Grip the Load
- Slowly Lift
- Hug the Load
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.
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.: 

Grip the Load

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.
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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.
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

• Back Injury Prevention:
  • Avoid Hyper extension movements of the back.
  • Avoid Hyper flexion movements of the back
Why Focus on Conditioning?

Benefits

- Strength and Stability
- Flexibility
- Aerobics for Endurance
- Anaerobic for Recovery
- 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
Stretches & Flexibility

Lower Trunk Rotation

Hamstring Stretch

Quad Stretch
Posture

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
  - Recommended 64 ounces of water a day
- Stress Management
- Rest/Sleep
  - Ensure proper sleeping methods
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
Environmental Health and Safety

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

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Any Questions, Comments!!!