



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

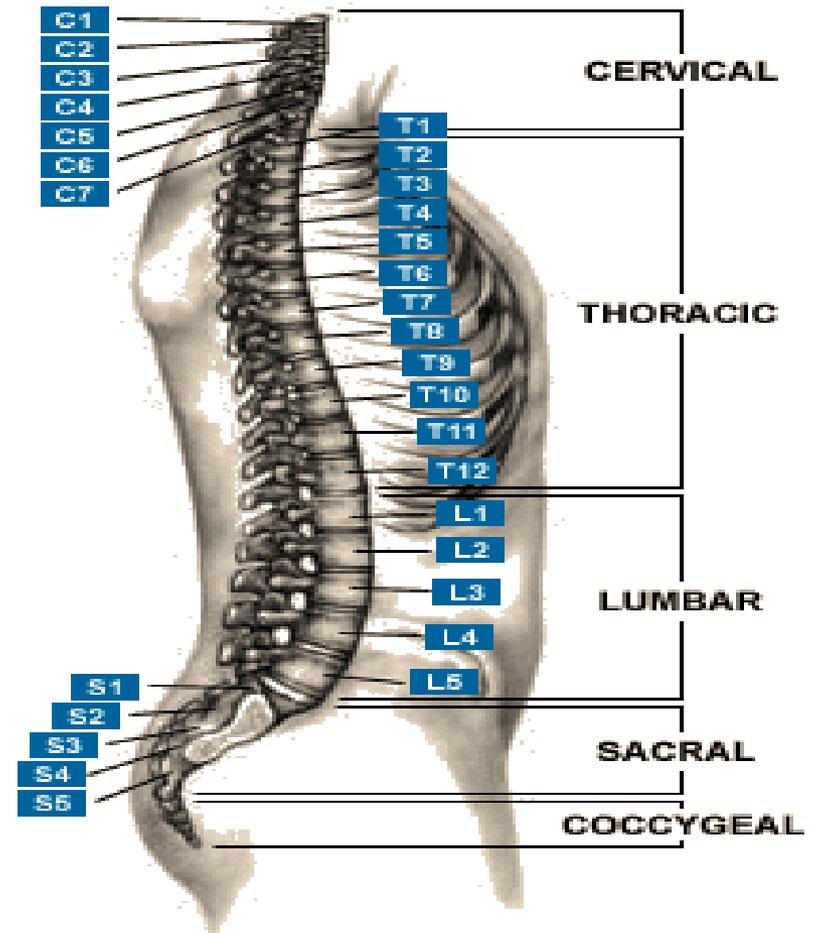
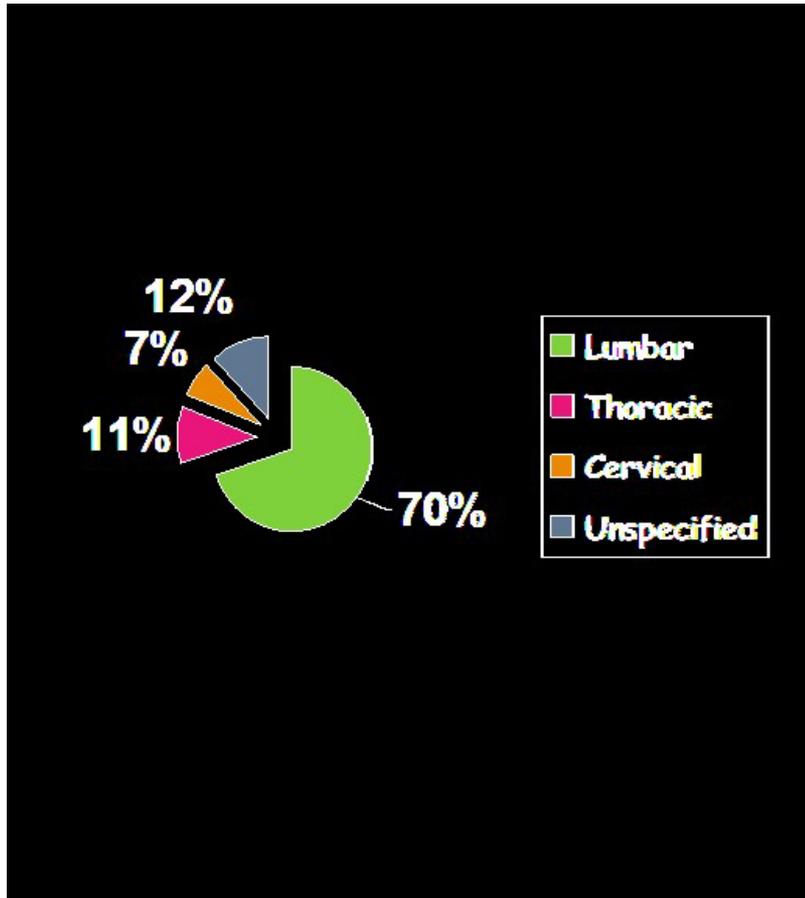


Back Safety Facts

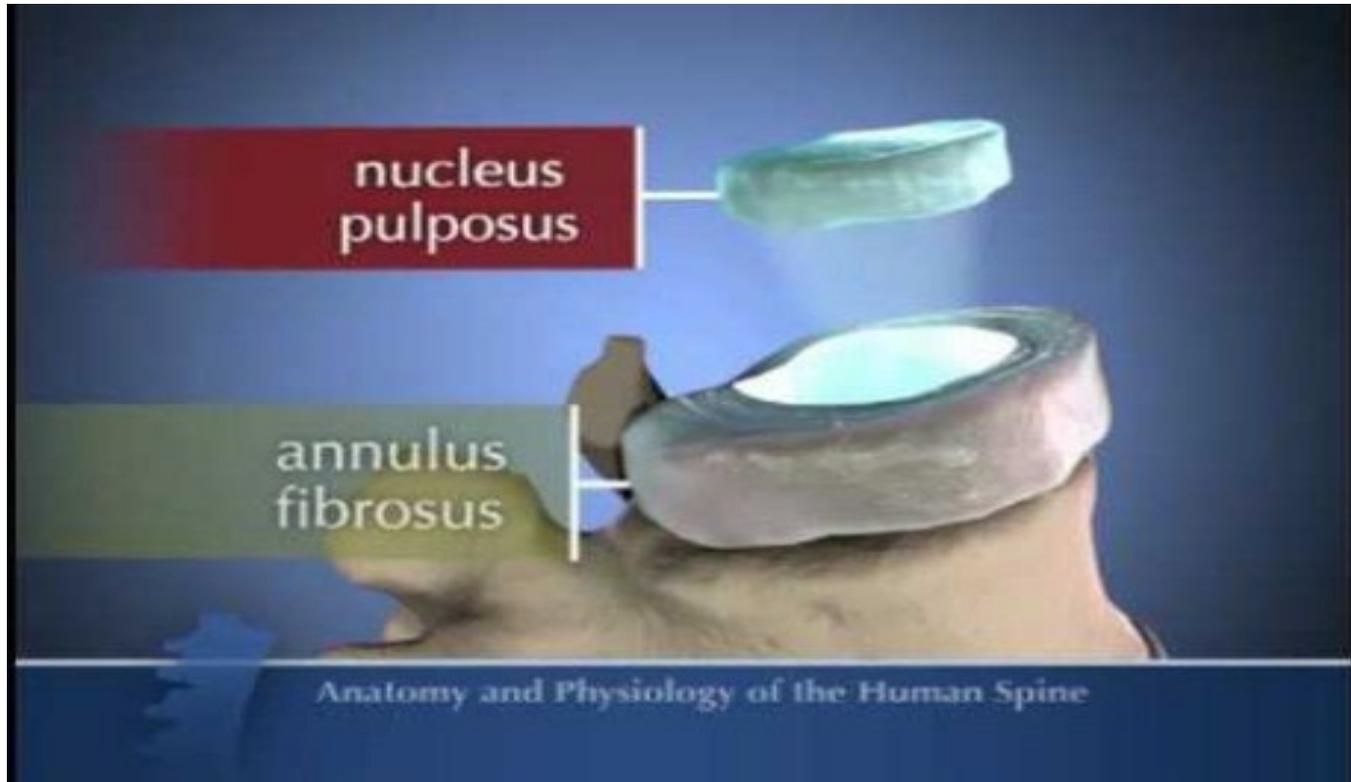
- 80% of the population can expect to have back pain at some time in their lives.
- About 8 million Americans suffer new back injuries every year.
- Twice as many back injuries occur at home as in the workplace.
- About 400,000 people suffer disabling back injuries each year.
- At some point 8 out of 10 adults in their lives will experience back pain that impairs activity.



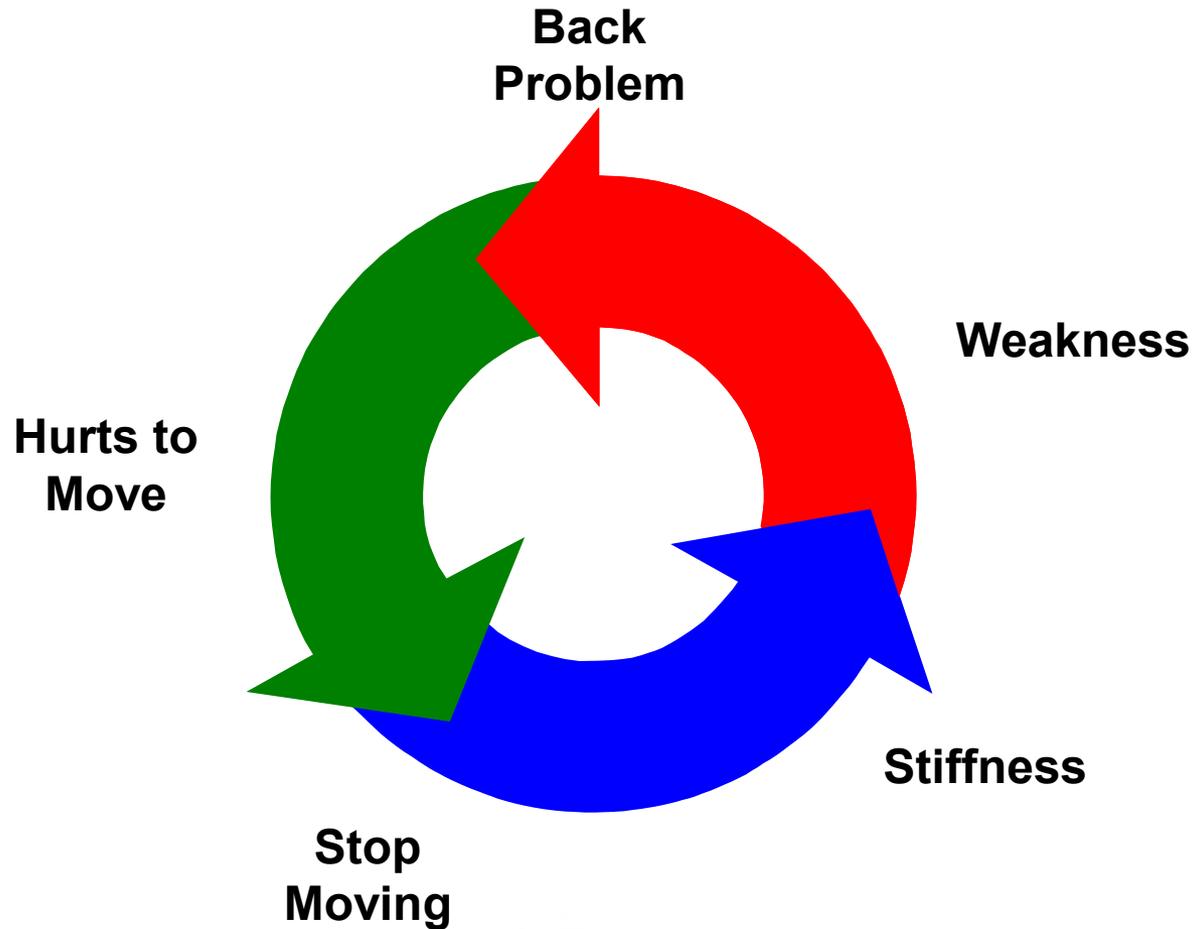
Back Injuries Involving Lost Work



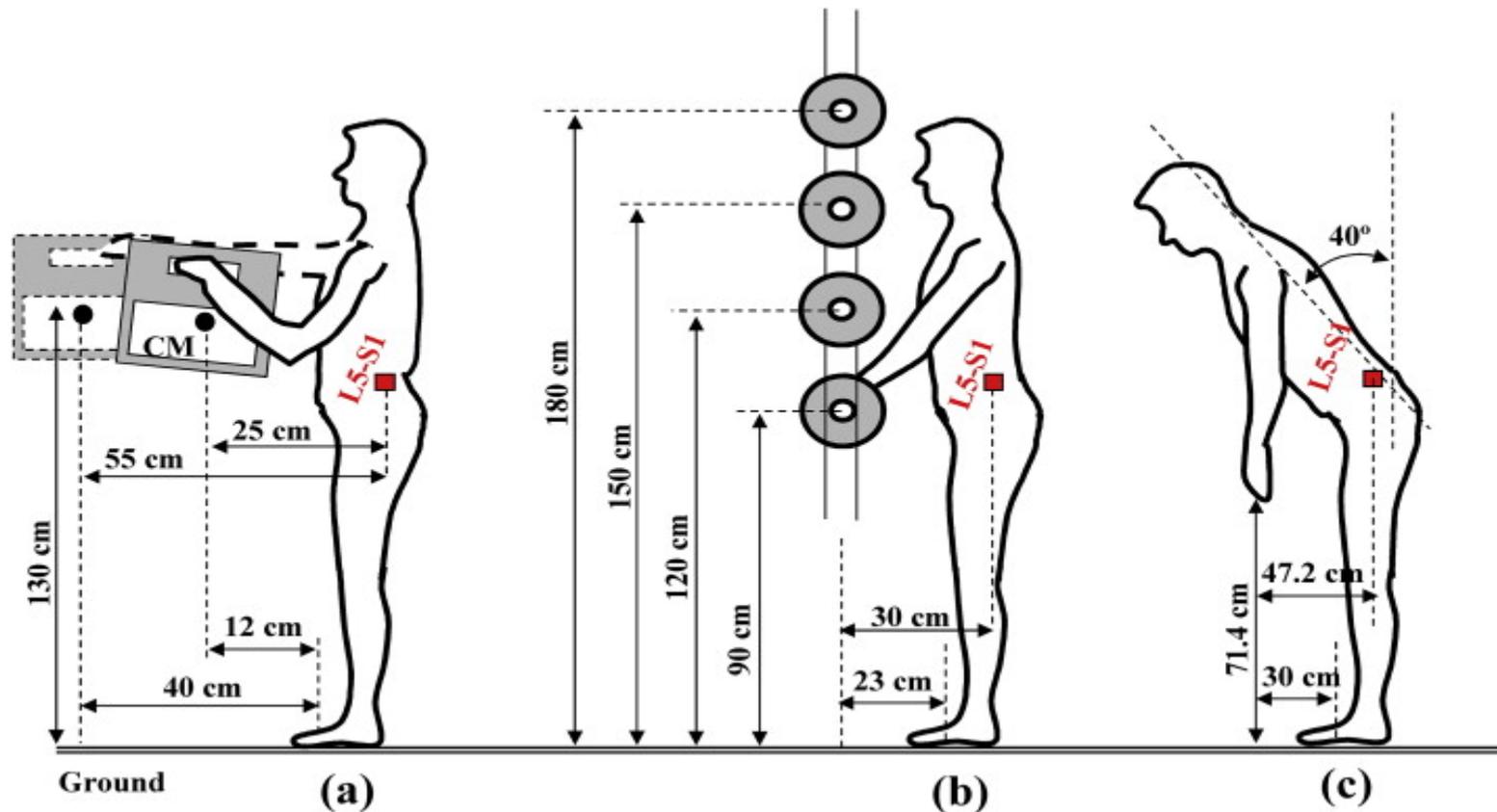
Anatomy and Physiology of the Human Spine



Back Injury Cycle



Lifting – More Than Just Weight



The position of the load relative to the body is as important as the weight!



Back Safety & Lifting



Heavy 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

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



Reaching & Lifting

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



Back Safety & Lifting

Carrying & Lifting

Injury usually occurs when carrying or lifting objects with awkward or odd shapes.

Awkward Positions

Poor postures that can contribute to back pain are caused by poor workstation layout and/or equipment design.

Slips, Trips & Falls

It is very easy to injure your back, neck or legs while slipping, tripping or falling.



Back Safety & Lifting

Sitting or Standing

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

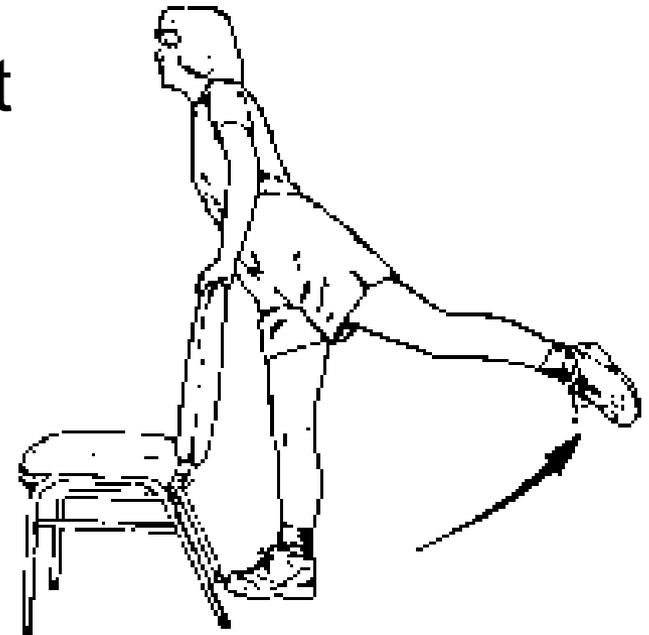
Other Causes

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

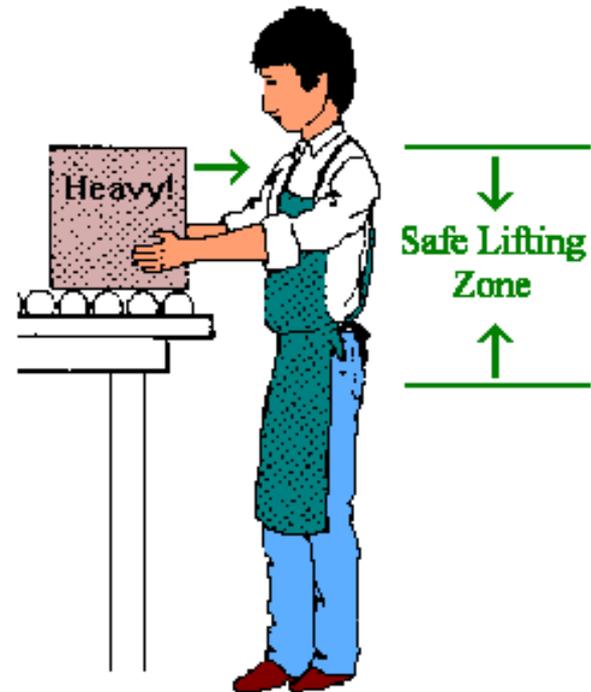


Body Mechanics

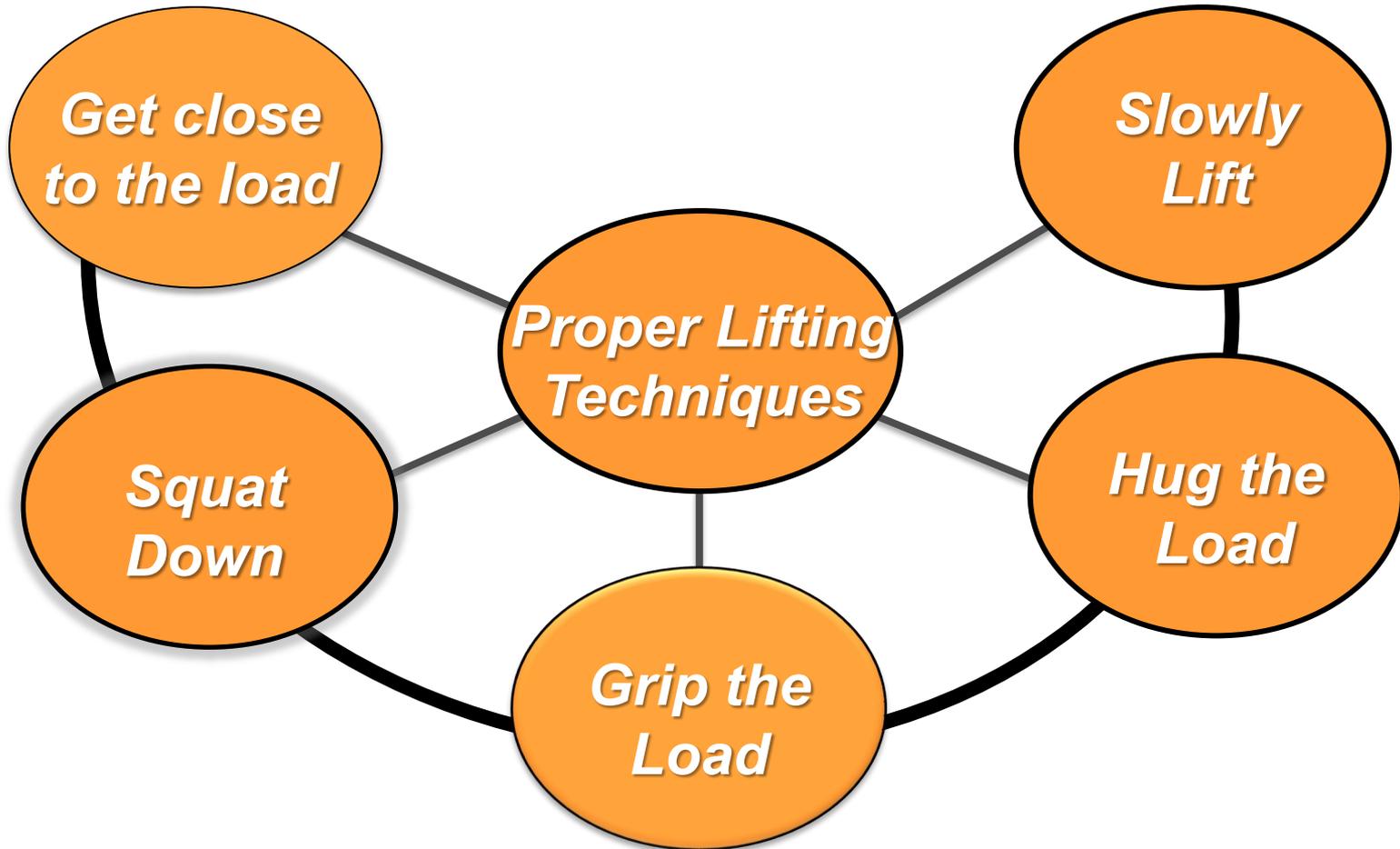
It's not how much you lift or move, but the way you do it”!

General Rules:

- Push vs. Pull
- Keep work within “Safe Zone”
- Keep load close to body
- Use abdominal bracing
- Pivot with feet - Avoid twisting
- Teamwork vs. mule work



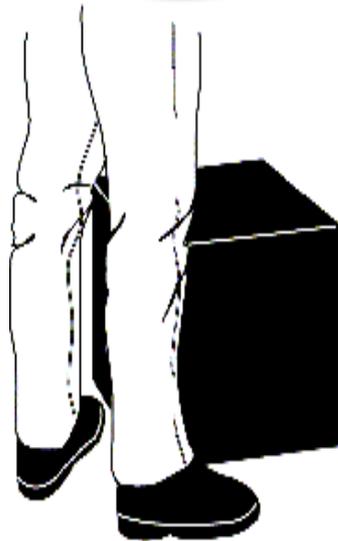
Back Safety & Lifting



Back Safety & Lifting

Proper Lifting Techniques

*Get close
to the load*



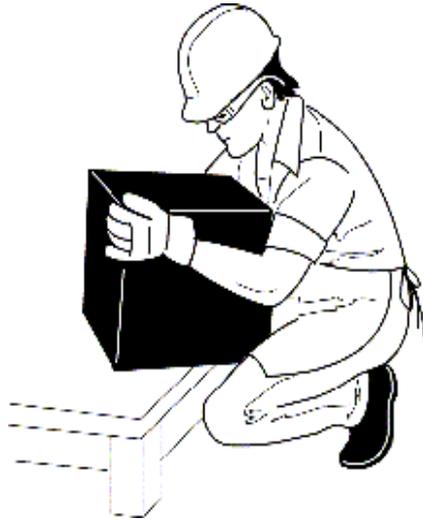
- Get as close to the load as possible with your feet about shoulder-width apart, with one foot slightly in front of the other for balance.
 - Test the object's weight before lifting it.
 - Ask for assistance from a co-worker when appropriate.
 - Have the object close to the body and put less force on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



Back Safety & Lifting

Proper Lifting Techniques continued

Squat Down



- 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 continued

Grip the Load



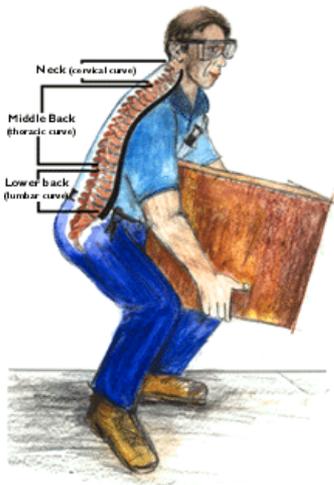
- Tightening the stomach helps support the spine.
- Do not hold your breath while tightening the muscles.
- Get a firm grasp of the object before beginning the lift.
 - Use both hands.
 - Use the whole hand, not just fingers.
 - Use gloves as needed to prevent “pinched” grips or to protect the hands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



Back Safety & Lifting

Proper Lifting Techniques continued

Hug the Load



- Legs are the strongest muscles in the body – so use them.
- Avoid back flexion.
- Hold objects close to the 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 continued

Slowly Lift

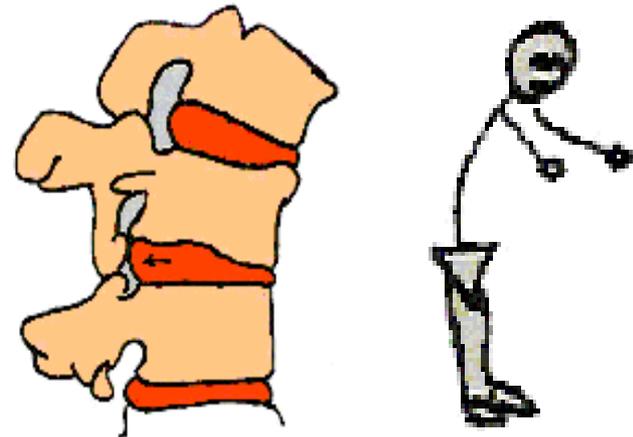
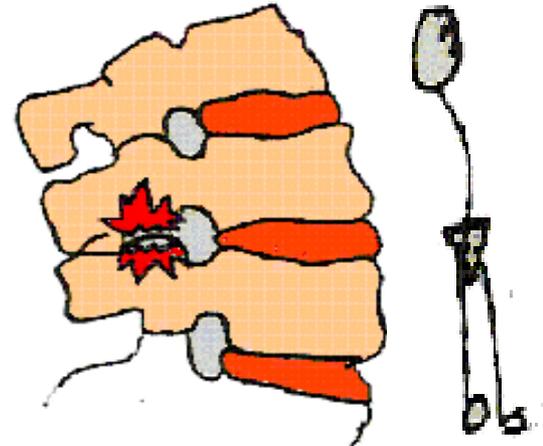
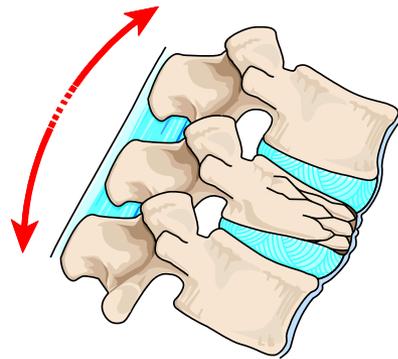


- Lift with the legs to allow the body’s powerful leg muscles to do the work.
- Flex the knees and hips, not the back.
- Avoid bending & twisting at the waist.
- Try to keep the back “straight” during the lift.
- Do not look down at the object during lift.
- Look up to help “straighten” the position 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 a 5 – 10-minute warm-up

- Should be specific to the activity
- Gradually increase the intensity

Stretch lightly (after warm-up)

- Don't overstretch
- Hold each stretch for at least 20 seconds



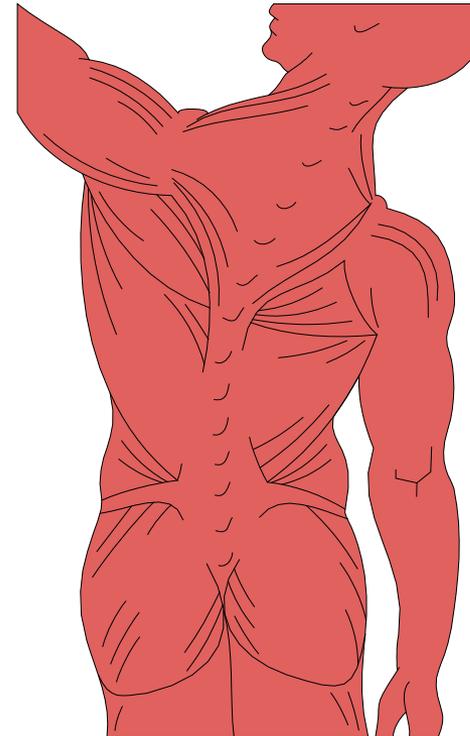
Aerobic Exercise

- 60 minutes per day
- Weight management benefit
- Enhanced circulation
- Healthier heart
- Decrease high cholesterol



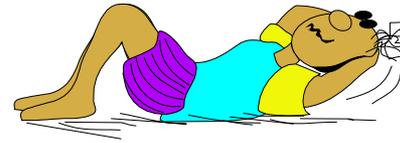
Strength & Flexibility Areas of Focus

- Trunk
 - Abdominals
 - Extensors
- Legs
 - Quads
 - Glutes
 - Hip Flexors

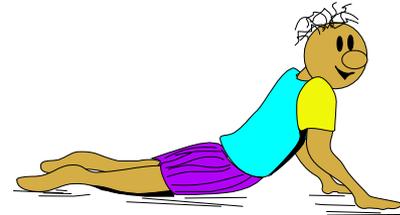


Stability Exercises

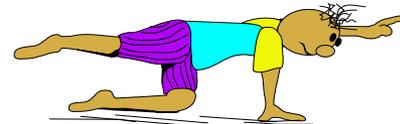
Crunches



Press Ups



Bird Dog

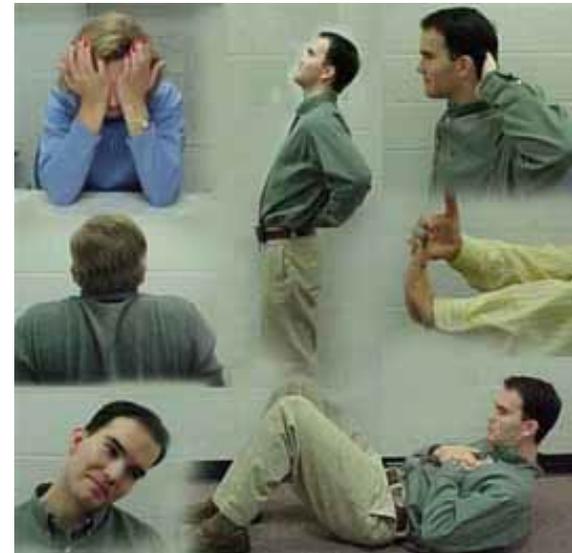


Cool Down

- 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

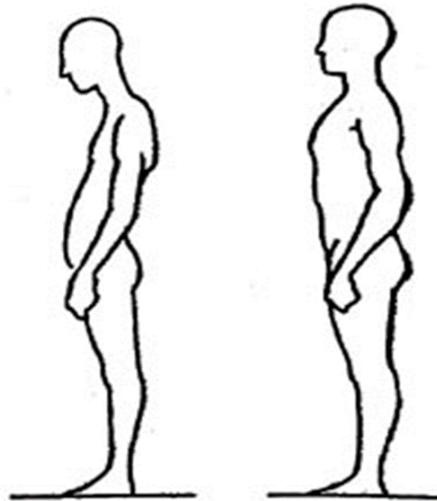


Quad Stretch



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
- Cannot bear weight
- Swelling
 - Does not improve within 48 hours
 - Begins within 30 minutes of injury



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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Back Safety & Lifting

Any questions, comments???

