

# Back Sense



Dr. Katie Kearney-Bidwell

# An Epidemic?

- ❖ Of the 1.8 million disabilities each year, 23% are back injuries.
- ❖ Common back pain causes more people to miss work than any other ailment.
- ❖ 80% of back pain can be traced to muscle strain and bad back habits.



# Why Injuries Occur

- ❖ The spine is made of small bones call vertebrae
- ❖ Vertebrae are stacked on top of each other separated by discs
- ❖ Vertebrae are held together by ligaments
- ❖ Muscles which move the vertebrae are attached by tendons



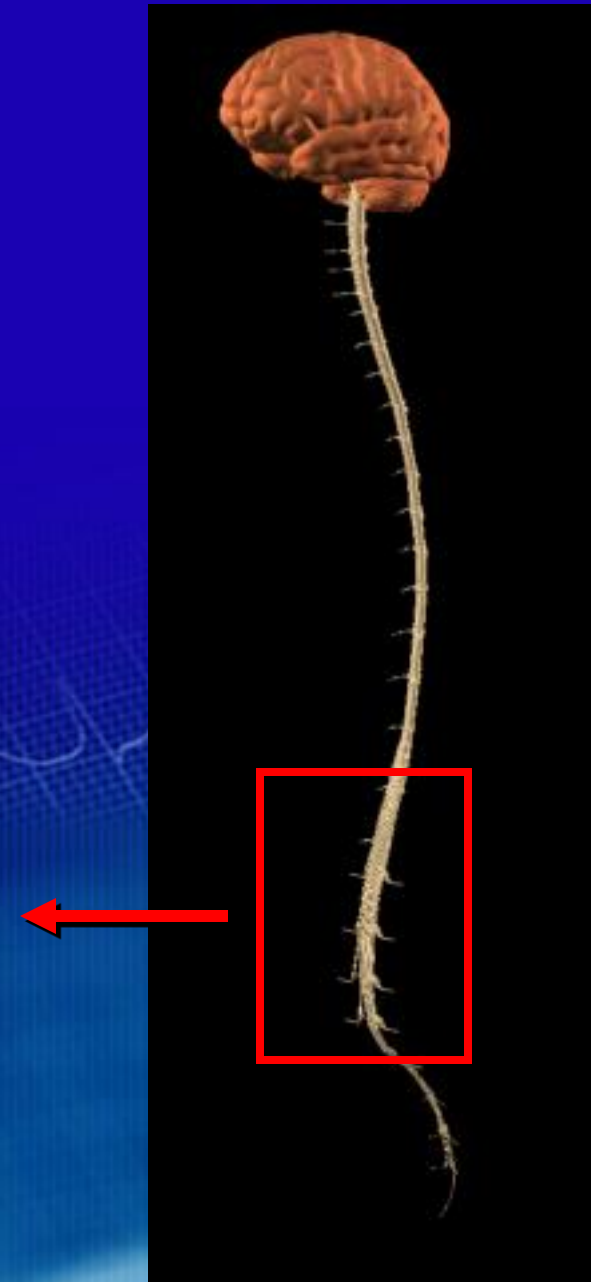
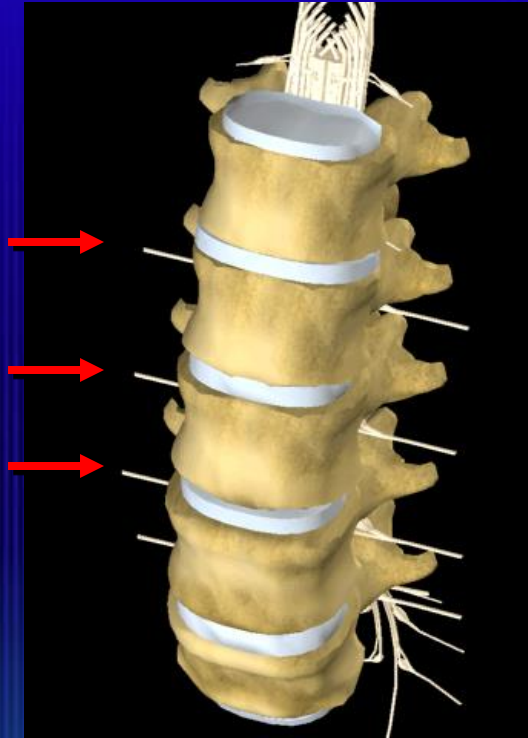
# Why Injuries Occur

- ❖ Openings in each vertebrae line up to form a long tube called the spinal canal
- ❖ The spinal cord runs through this canal extending from the base of the brain to the tailbone



# Why Injuries Occur

- ❖ Nerves branch out from the spinal cord exiting through spaces between the vertebrae
- ❖ Nerves connect to every cell, tissue, organ and system of your body



# Why Injuries Occur

❖ Even minor changes to the...

Bones (Subluxations)

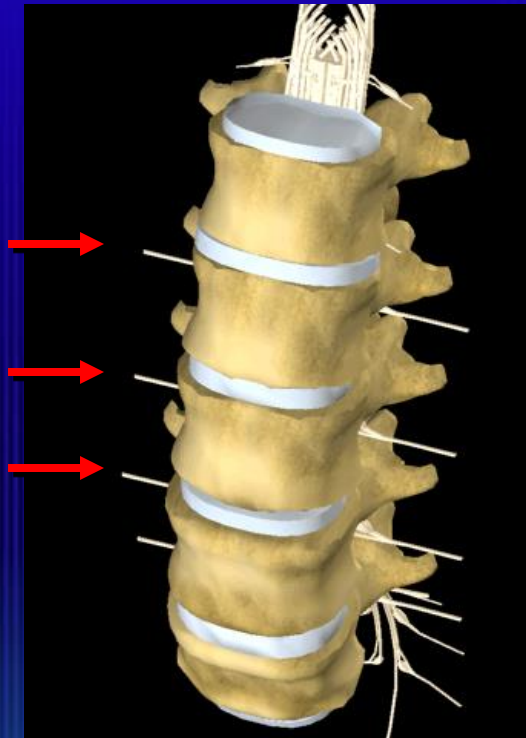
Ligaments (Sprains)

Muscles and Tendons

(Strains)

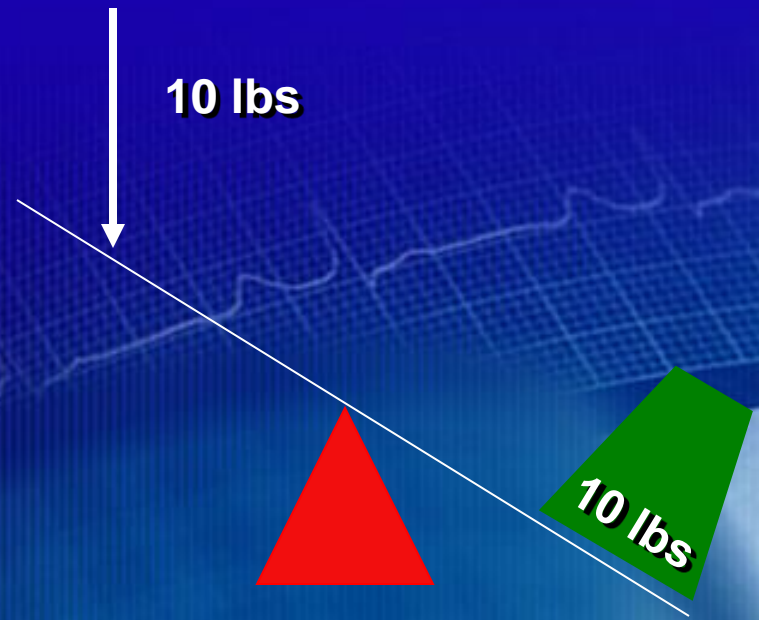
Discs (Herniations)

...can cause pain



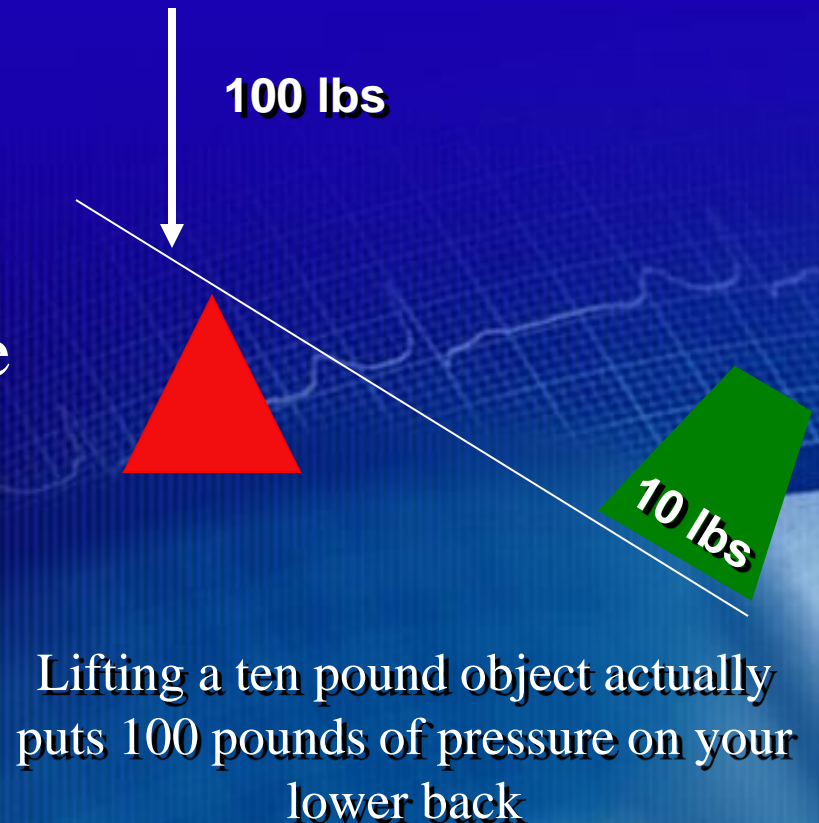
# Understanding the Forces Involved

- ❖ Most of your body weight is supported by the lower back
- ❖ Think of your back as a lever with the fulcrum in the center
- ❖ It only takes ten pounds of effort to lift ten pounds of weight



# Understanding the Forces Involved

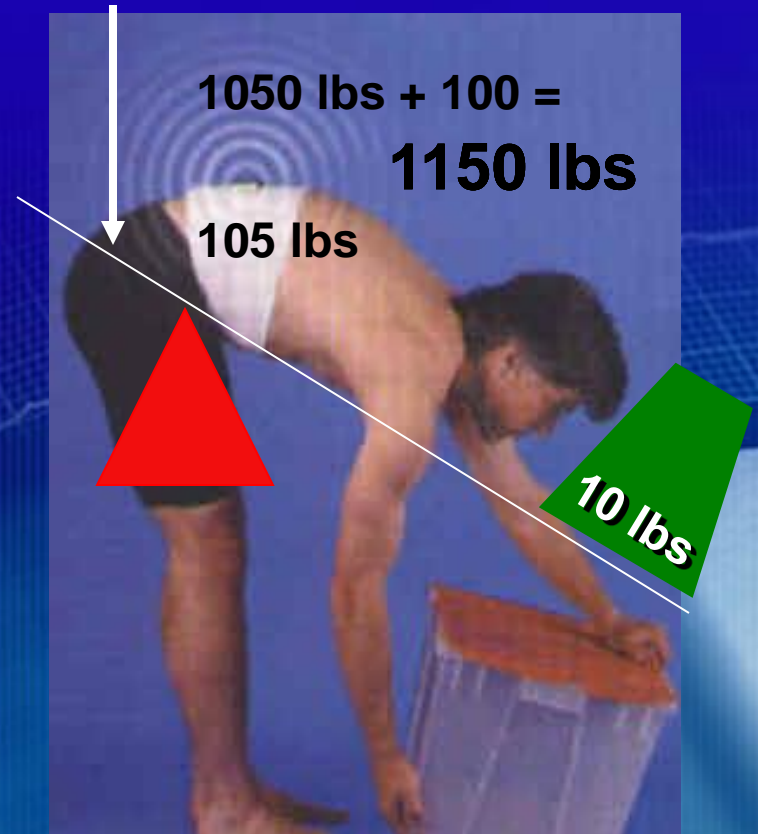
- ❖ However if you shift the fulcrum to one side, it takes much more force to lift the same object
- ❖ Your waist actually acts like the fulcrum in a lever system but is not centered
- ❖ In fact your waists lever system operates on a 10:1 ratio



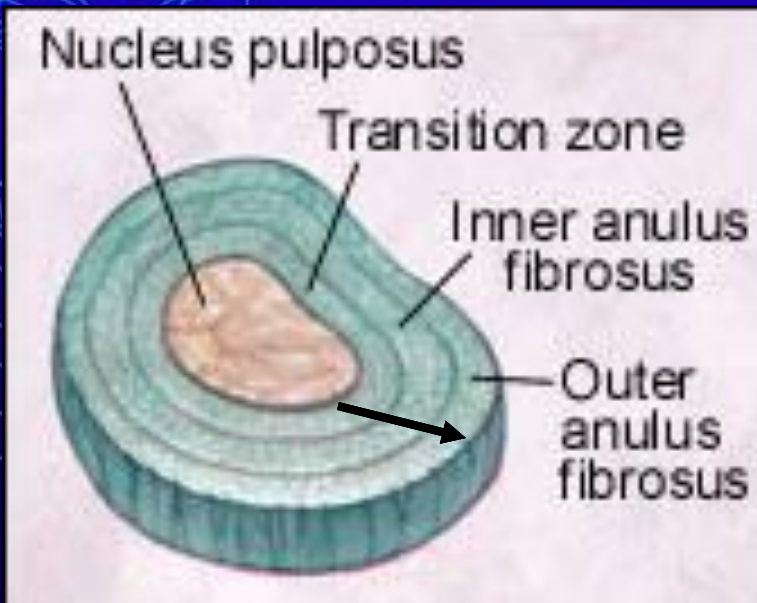


# Understanding the Forces Involved

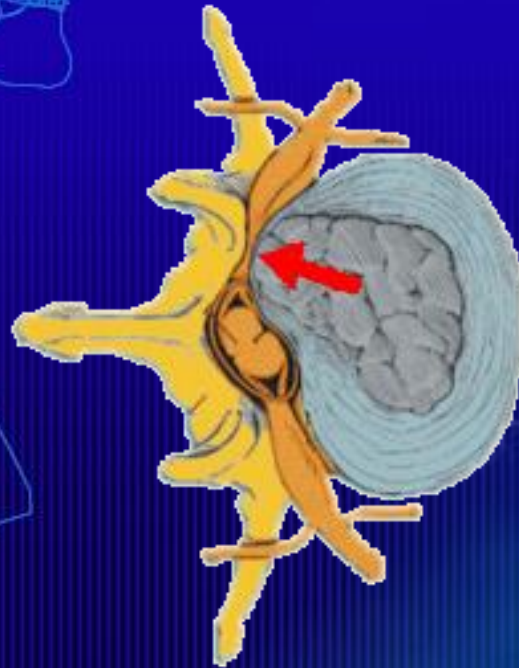
- ❖ The average human upper torso weighs 105 pounds. Lifting a ten pound object actually puts 1150 pounds of pressure on the lower back.
- ❖ If you were 25 pounds overweight, it would add an additional 250 pounds of pressure on your lower back every time you lift.



# Understanding the Forces Involved



# Understanding the Forces Involved



# Contributing Factors

Poor Physical Condition

Poor Posture

Extra weight

Overdoing it

Stress

Physical

Mental



# Common Causes of Back Injuries



- ❖ Less than 5 percent of all back injuries can be attributed to a single casual factor
- ❖ 95 percent are the result of cumulative damage over a long period of time

# Common Causes of Back Injuries

## Heavy lifting

Especially repetitive heavy lifting over a long period of time.

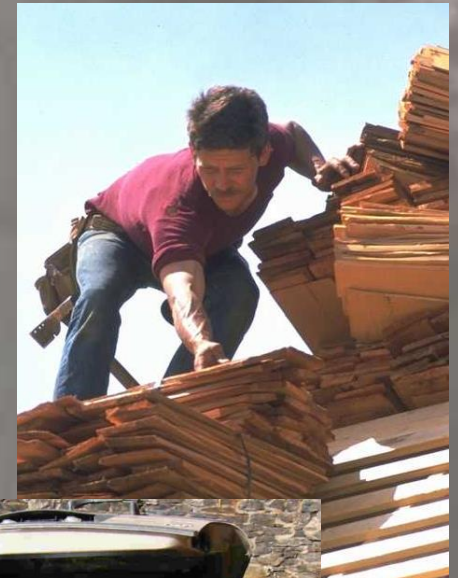
Lifting objects with awkward and/or odd shapes



# Common Causes of Back Injuries

Twisting at the waist  
Especially damaging when  
lifting and/or holding a heavy  
object.

Common problem activities  
include reaching, unloading  
packing or shoveling.



# Common Causes of Back Injuries

Working in awkward, uncomfortable positions, (gardening, kneeling, tasks that require you to bend over for a long period of time).





# Common Causes of Back Injuries

Sitting or Standing too long in one position...  
(sitting can be very hard on the lower back).



# Common Causes of Back Injuries



It is also possible to injure your back during a slip or fall

# Common Causes of Back Injuries

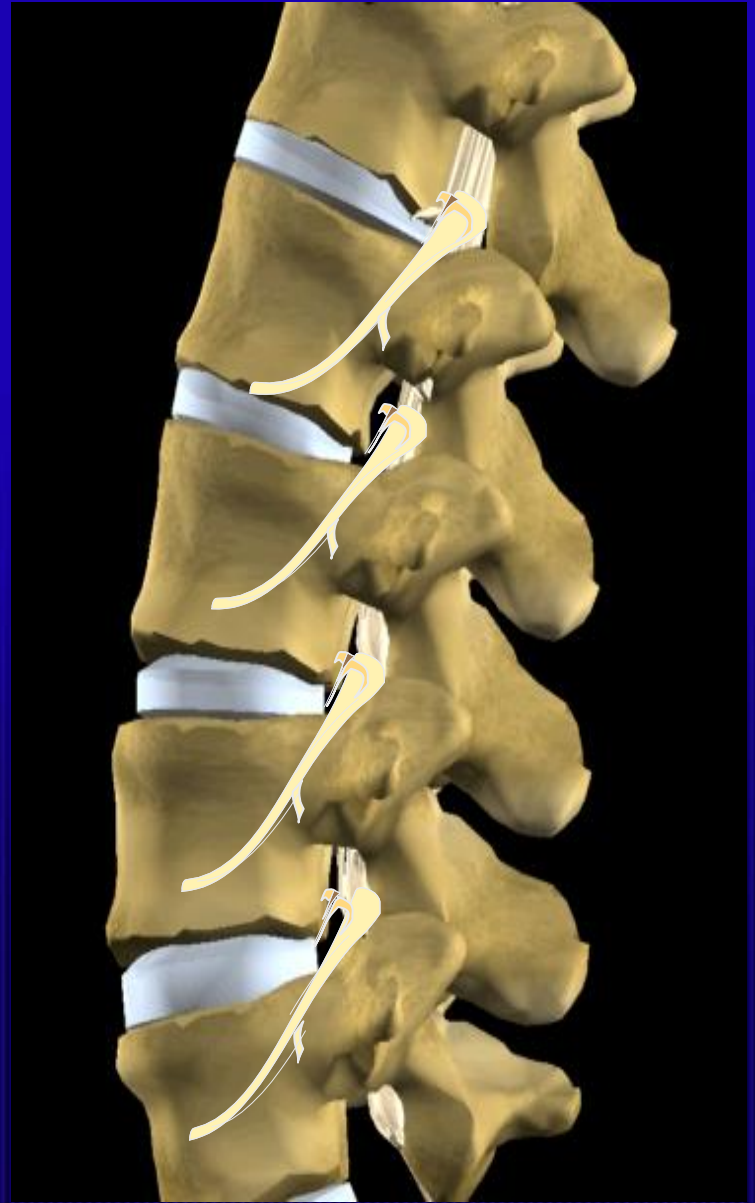
Subluxation...

In place...

Out!



# In Place



# Out of Place Subluxated



“You’re always better off with a  
bone in place... than out.”

# How Do You Prevent Back Injuries

The best way to prevent back injuries is to develop habits that reduce strain placed on the back.



# How Do You Prevent Back Injuries

Avoid lifting  
whenever you can!

Use lift assisting devices  
whenever you can

Use cart/dolly whenever  
possible

Raise objects off the floor

Raise or lower shelves



# How Do You Prevent Back Injuries

Avoid lifting  
whenever you can!

Use proper lifting  
techniques.





# Use Proper Lifting Techniques

Take a balanced stance.

Get close to the object and squat down

Use your palms... NOT your fingers to secure a grip

Lift gradually...

Avoid twisting

When putting objects down use the same techniques in reverse.



# How Do You Prevent Back Injuries

Avoid lifting  
whenever you can!

Use proper lifting  
techniques.

Good Body  
Management



# Good Body Management

Stretch...

Slow down

Sleep on a firm  
mattress



# Good Body Management

Stretch...

Slow down

Sleep on a firm  
mattress

Get in shape



# Get in Shape

Start walking!

“...women who walked 20 minutes, four days per week were much less likely to develop Breast Cancer.”



# Get in Shape

Start walking

Strengthen your  
abdominal muscles



# Get in Shape

Start walking

Strengthen your  
abdominal muscles

Loose a little weight



# Get in Shape

Start walking

Strengthen your  
abdominal muscles

Loose a little  
weight

Get your spine  
checked







Out



In Place



# Posture Tests



Head Level  
Shoulder Level  
Pelvic Level

# Posture Tests

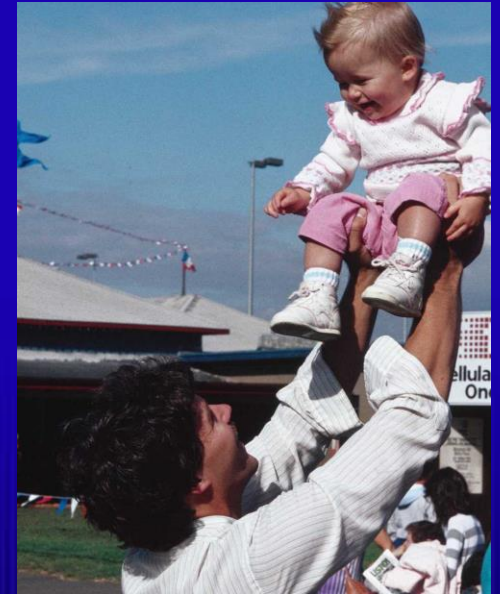


Head Level  
Shoulder Level  
Pelvic Level

A pair of hands is shown from the front, cupping a small, realistic globe of the Earth. The hands are positioned as if they are gently holding or supporting the globe. The background is dark, making the hands and the blue and white of the globe stand out. The overall image has a warm, glowing quality, particularly around the hands.

What Do Chiropractors  
Treat?

“You’re  
Always Better  
Off With A  
Bone in Place  
Than Out!”



# Typical First Visit

- ◆ complete consultation
- ◆ thorough chiropractic, orthopedic, physical, and neurological exam
- ◆ x-rays



# Follow-up

## Stretching Workshop

### Back Exercises



# Back Sense

**HS**

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**Chiropractic & Progressive Rehab™**



Dr. Katie Kearney-Bidwell