

Treat your own back  
and other joint, muscle,  
and nerve pain  
throughout the body  
without medication or  
surgery

Lorraine Lovejoy-Evans, MPT, DPT, CLT-Földi

Földi-Certified Swelling Disorders Specialist  
Physical Therapist

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Földi-Certified Edema Disorders Specialist

- ▶2017-present: Olympic Medical Home Health
- ▶2014-2017: Crestwood and Sequim Health and Rehab
- ▶2002-2014: Independence Through PT, Owner Sequim, WA
- ▶2006-2011: University of Puget Sound, Adjunct Faculty
- ▶2007: Clinical Excellence Award, WA State Physical Therapy
- ▶2006: Doctorate in PT, Univ of Puget Sound, Tacoma, WA
- ▶1997-2002: Swelling Disorders Clinic developed  
Olympic Medical Center, Port Angeles, WA
- ▶May 1999: Földi Clinic CDP Certification, Hinterzarten, Germany
- ▶1993: Masters in PT , University of Puget Sound, Tacoma, WA
- ▶1986: Bachelors of Music Therapy, Willamette U, Salem, OR

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Joint, muscle and nerve pain throughout the body raises blood pressure, causes irritability and makes dealing with life more difficult



# Learn to manage pain to:

- Reduce:
  - Discomfort
  - Blood Pressure
  - Stress/irritability
  - Depression
- Improve:
  - Motion, exercise, intimacy
  - Ability to sleep
  - Ability to focus on other issues
  - Tolerating positions: medical tests/procedures



# Lorraine's Past History

- 5 Car accidents (lousy passenger)
- Fractured L Tibia with thrombophlebitis (blood clots), 13 years old
- Sports injuries: basketball, volleyball, softball, tennis, hiking, biking, kayaking, roller skating, skateboarding, trampoline
- Back surgery discectomy L5-S1 1997
- Back and R leg pain/numbness & tingling resolved 😊
- All symptoms Returned one month later 😞

# Lorraine's Adventure Continues

- 12 different physical and massage therapists
- Ibuprofen and pain meds
- Traction, icing, heat, Ultrasound, electrical stimulation, massage
- Strain and Counterstrain
- Learning to use these techniques
- Completely free of back pain without any medications or appointments for back pain with health care practitioners in >20 years
- I am working with a physical therapist due to left knee pain due to weakness from laziness in 2020

# Lorraine's Happier Story

- Able to recognize any symptoms very early-stop and treat any pain that is  $>1/10$
- R Thumb pain 4/10 in Oct 2010 after bandaging four legs in two days
- Resolved to 0/10 after Horse and Thinker
- Able to do any physical activity without pain
- Despite x-rays that show arthritis in the knee and back
- With pelvic floor/inner core able to prevent any pain and lay in bed without need to use the BR at night for 8 hours



A spine (back bones) held into a forward bent or flexed posture-unable to get to neutral or bend backward

This spine will also likely hurt lying on stomach or on back with legs straight. Making it difficult to stand, walk, or sleep





1-8-07 Before  
Treatment  
Bent forward/flat back



1-8-07 After  
Treatment  
Straighter



5-3-07 @  
Discharge



Able to see the neutral curve of the back coming back after treatment







# Releasing Joint Restrictions Treatment Positions

# Variables

- By changing only one variable (one thing) at a time, you will be able to find out what works best for you.
- If you put salt and chili powder into soup what made it better or worse?
- Best to taste test after each one.
- If you only do the horse and thinker and you feel better, it was probably the horse and thinker that did it.

# Pre-test/Post-test

- Find some sort of movement or position that feels the worst for that specific joint
- What is the pain level 0-10/10 with 0 being none and 10 being the worst imagineable (going to emergency room)
- What is it in different positions/movements
- Make sure to test in the exact same position or movement after each treatment position
- Don't test in sitting and then compare standing afterward

# Pre-test/Post-test

- Where is your pain:
- What is your pain level 0=none/10=worst in:
  - Sitting
  - Bending head backward
  - Raising arms
  - Sit to stand
  - Standing
  - Marching in place
  - Stand to sit
- Will repeat post test after each treatment

# Side of Pubic Bone Horse and Thinker

- Loraine's Most Commonly start of care
  - Clinical experience-typically opposite side of body to location of pain
- Greatest ROM and functional gains throughout the entire body
- Bottom of the stack lined up will allow stack above to line up & give legs best option to achieve neutral alignment





# Maintain Movement Combination

- Remain in this position for 90 seconds
- Come out very slowly to neutral holding pelvic floor/inner core
- Reassess range of motion
- Reassess postures and position changes
- Note changes objective or subjective



# Daily Routine

- Do these positions 2 times a day and anytime the pain increases
- Learn to stabilize pelvic floor/inner core to help prevent pain from recurring

# Horse and Thinker

**FLEX:** Sit down

**HIP ABD:** Slide feet and bent knees as far apart as possible.

**FLEX:** Nose to knee



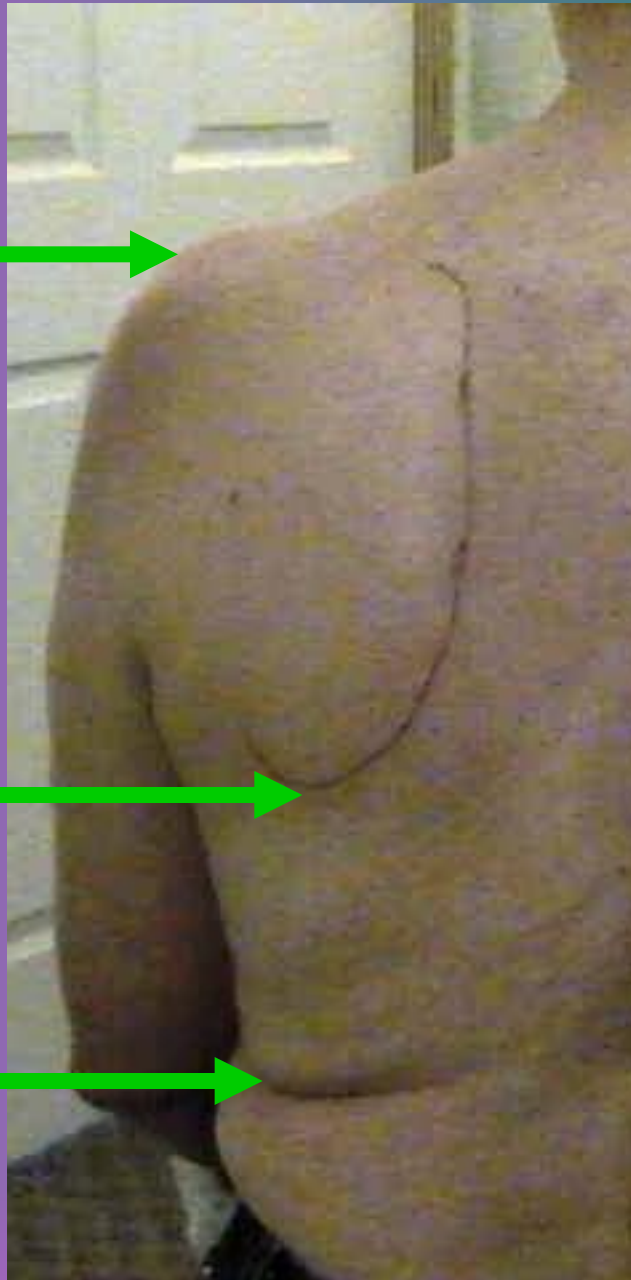
# Post-test

- What is your pain level in:
- Sitting
- Bending head backward
- Raising arms
- Sit to stand
- Bending forward and backward
- Standing
- Marching in place
- Stand to sit



Bony alignment  
shows abnormality





Skull to right of spine below

Left shoulder high

Left shoulder blade high

Skin fold on left is less deep than on the right

Left iliac crest top bone of pelvis where baby would ride is high



Right lower trunk skin fold deeper indicates right side bend of spine





- Back pain
- Restricted into forward bend or flexion at the low back
  - Unable to straighten up or bend backward
- Low back curve lost
  - Back flattened
  - Buttocks tucked under

HIGH LEFT:

Shoulder

Elbow

Iliac crest at  
top of pelvis





# TREATMENT

- Reviewed his subjective complaints
- Measured range of motion
- Reviewed treatment positions using RJR technique horse and thinker to the left-sided back pain of 3/10 reduced to 0/10; right-sided back pain .5/10.
- Repeat range of motion and note changes



Range of motion	1-16-07	After horse and thinker
forward bending	85 0/10	95 1/10
Backward bending	23 0/10	35 0/10







Before Treatment  
Lying on back  
Left leg long

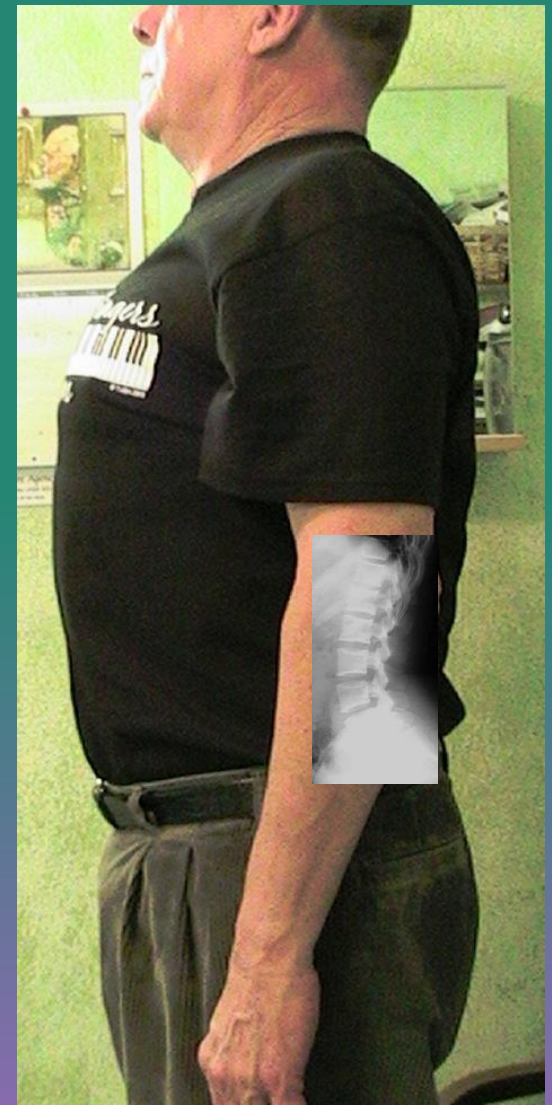
After Treatment  
Legs level



Before Treatment  
Back bent forward



After Treatment  
Back in neutral



Curve in back  
Returns





Before Treatment  
Left shoulder high



After Treatment  
Shoulder closer to level

# The Plot Thickens

- **11-13-07**                      **4:20-5:30**                      **CPT: 97110 x 5**
- **SUBJECTIVE:** Two days ago he slipped on mushrooms and mold walking to his generator and fell landing on the left hip and left hand.
- Yesterday after cutting 5 trees across the road from a windstorm that was blocking access to leaving their home, he noted left arm soreness.
- Last night he conducted a choir rehearsal and would start to use the left hand but had to stop due to pain. Unable to lift arm by late last night
- **OBJECTIVE:** At rest in sitting 1-1.5/10 at front of left shoulder. Palpation (pushing on) left biceps 10+/10.
-

After treating the pubic bone side and front and the front of the spine, his left shoulder range of motion increased by 75 degrees! An improvement of 10 degrees a week is considered good in therapy.

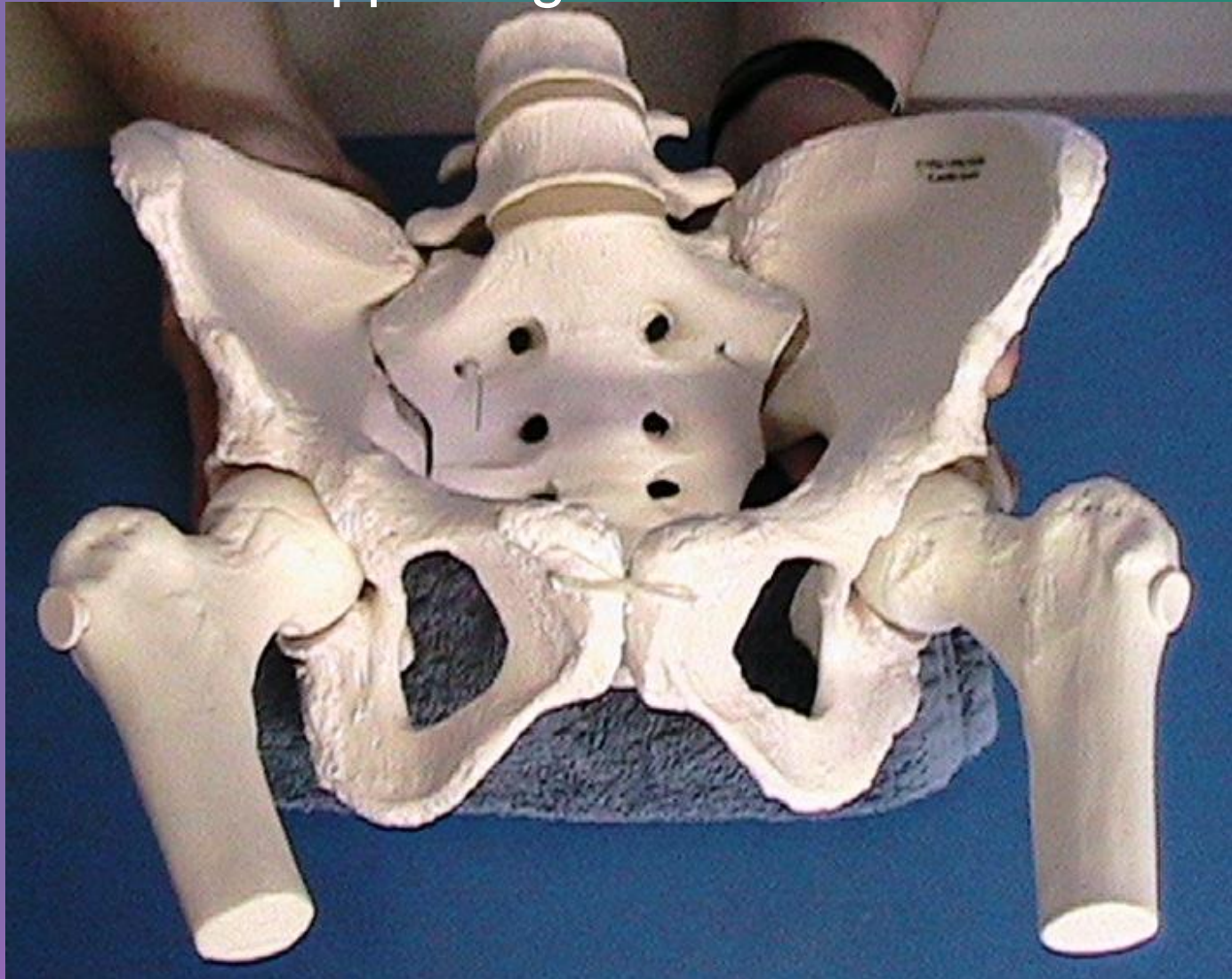
<b>L shoulder Range of motion</b>	<b>11-13-07 Before Treatment</b>	<b>RJR: Left horse and thinker</b>	<b>Rotating knees to left</b>	<b>Left Elbow to Left calf</b>
Flexion raising hand in front	105 10+/10	130 2-3/10	170 3/10 painful arc	180 1/10
ABDuction lifting hand out to side	97 5/10	135 1/10	180 1/10 painful arc	180 .5/10
Rotating out to side	45 2-3/10			70 0/10

# Herniated Disc

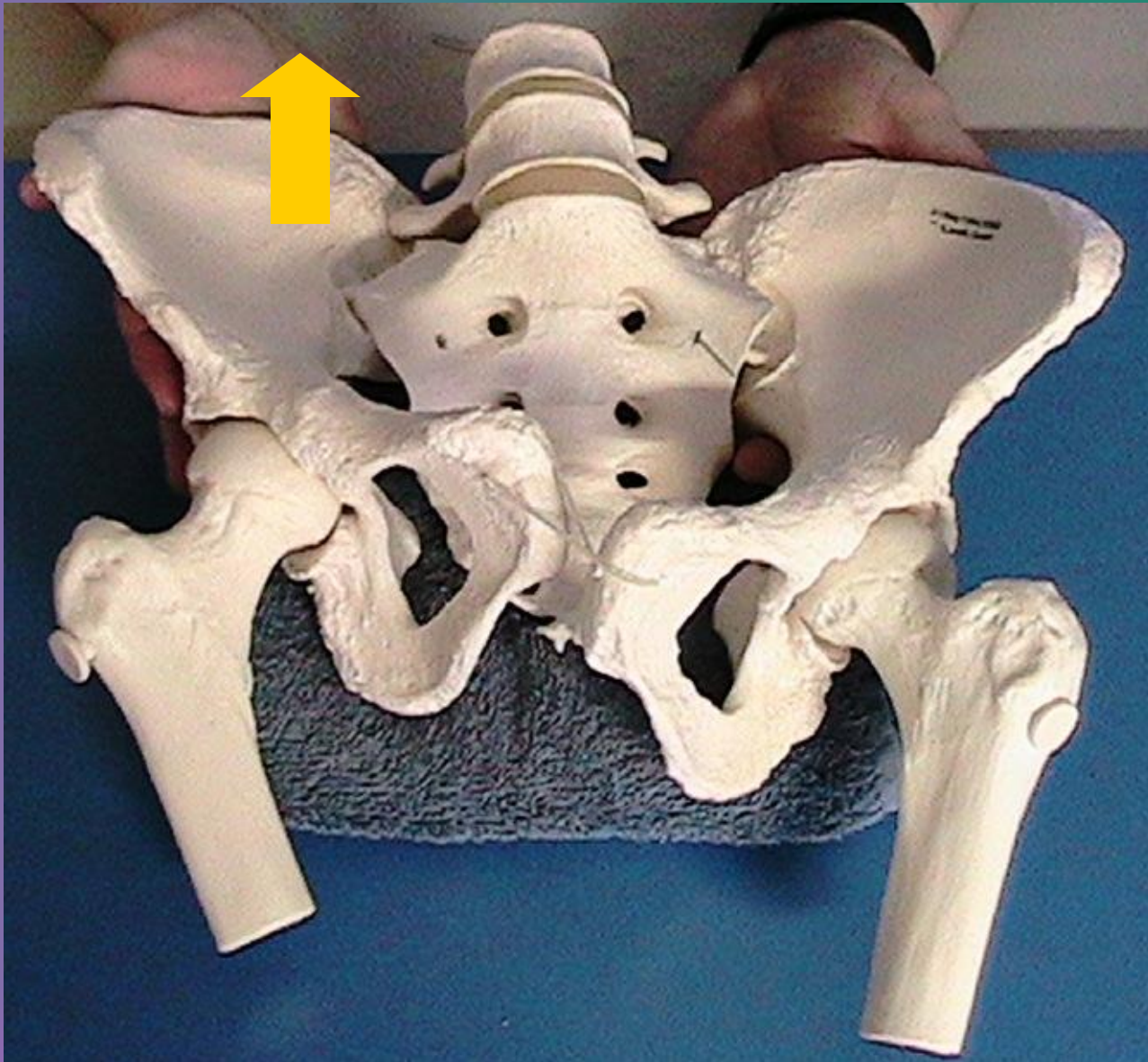
- After driving to Seattle (2 hour drive + 30 minute ferry ride one way) he developed right knee and thigh pain from a herniated disc
- Treated with horse and thinker and elbow to calf then he was able to control these symptoms independently



OBJECTIVE FINDINGS: Look past the skin/muscle  
Visualize what is happening at the bones



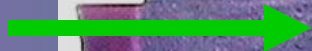
Bilateral Ili (Pelvic bones) with sacrum in neutral



Right ilia: Upslip (superior): Right leg short



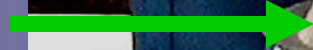
Skull



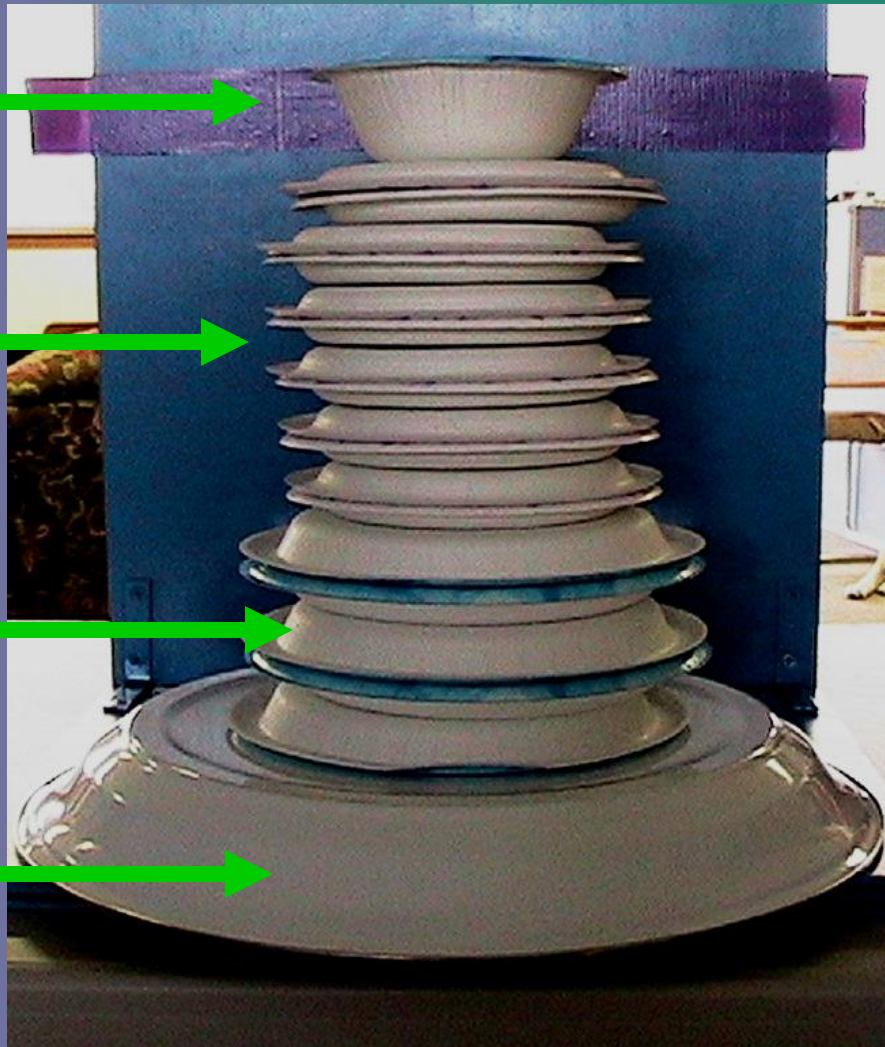
Cervical-  
thoracic  
spine



Lumbar spine



Pelvic girdle

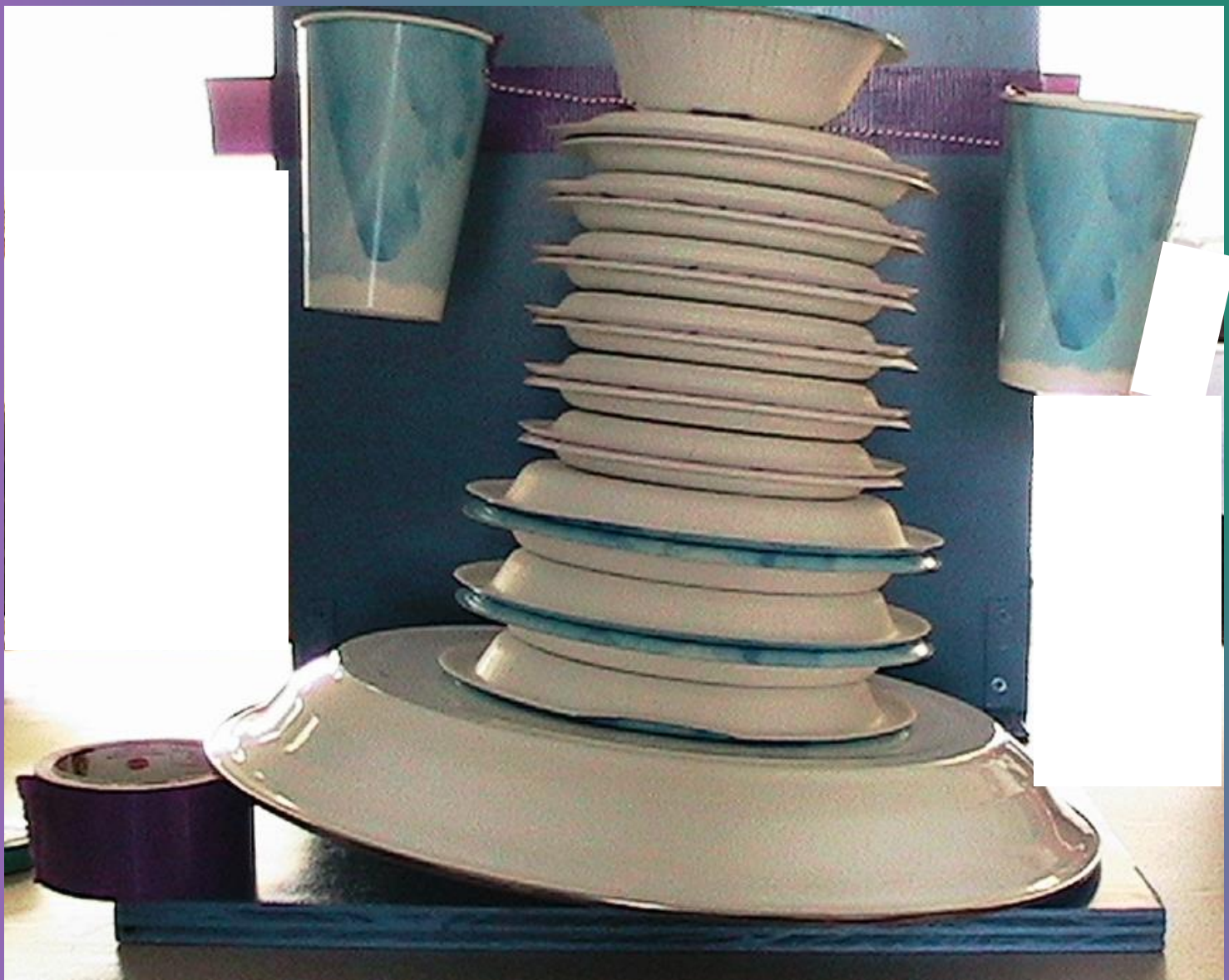


Consider the stack of plates as a spine



Adding clavicals and Upper Extremities  
collar bones and arms





The top can REALLY be effected by the bottom of the stack.  
This is why the pelvis must be treated in neck/shoulder pain



Quick, get a wheelchair!!!



Imagine:

- A pepper mill grinder
- Twisting each vertebra in opposite directions
- Produce spinal rotations

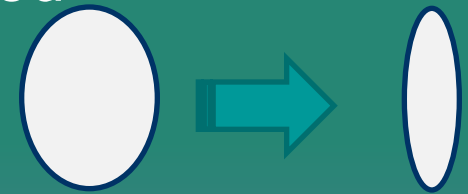






• Intervertebral foramen are the holes between the back bones which act like a tunnel for the nerve root

- Significant rotation maintained through the spine
- Size of hole reduces
- Squishes the nerve coming through this tunnel
- Like stepping on garden hose
- Nerve supply reduced
- Increases pain, electrical types of pain such as numbness and tingling
- Reduced function such as difficulty walking, sitting, sleeping, standing





- Iliopsoas muscle on front of back bones is held in a spasm so it is shortened
- Bones get pulled out of place so back remains side bent
- Increases disc pressure
- Disc moves to opposite side
- Nerve compressed gets pinched
- Pain

**Bulging disc pressing on nerve**



- A pattern of restriction
- Imagine a “knot” in the iliopsoas
- Holds the hip and lower back in flexion or bent
- Foot would be held off the ground





## Adding gravity

- Feet on ground
- Spine flexes or bends toward the fixed leg
- Spine restricted from neutral or extension
- Stuck in flexion or forward bend





# Cause of Alignment Abnormalities

# Nervous System

- The nervous system receives information from the periphery of the body
  - Through specialized nervous sensory receptors called proprioceptors
- Signals are then sent back out
  - Through efferent motor channels giving signals to the muscles to control movement



# Navy Aircraft Carrier

- Much goes into flight operations aboard today's modern Navy aircraft carrier
- Preparations for a launch very much resemble a well-choreographed ballet
- Members each have specific, clearly-defined roles, and are easily recognizable by the color of their jerseys



**Purple**  
Aviation Fuels  
[nickname: "Grapes"]



**Blue**  
Plane Handlers  
Aircraft elevator Operators  
Tractor Drivers  
Messengers/Phone Talkers



**Green**  
Catapult /Arresting gear crews  
Ground Support Equipment  
(GSE) troubleshooters  
Air wing maintenance  
Cargo-handling  
Hook runners  
Helicopter landing signal

# Control System

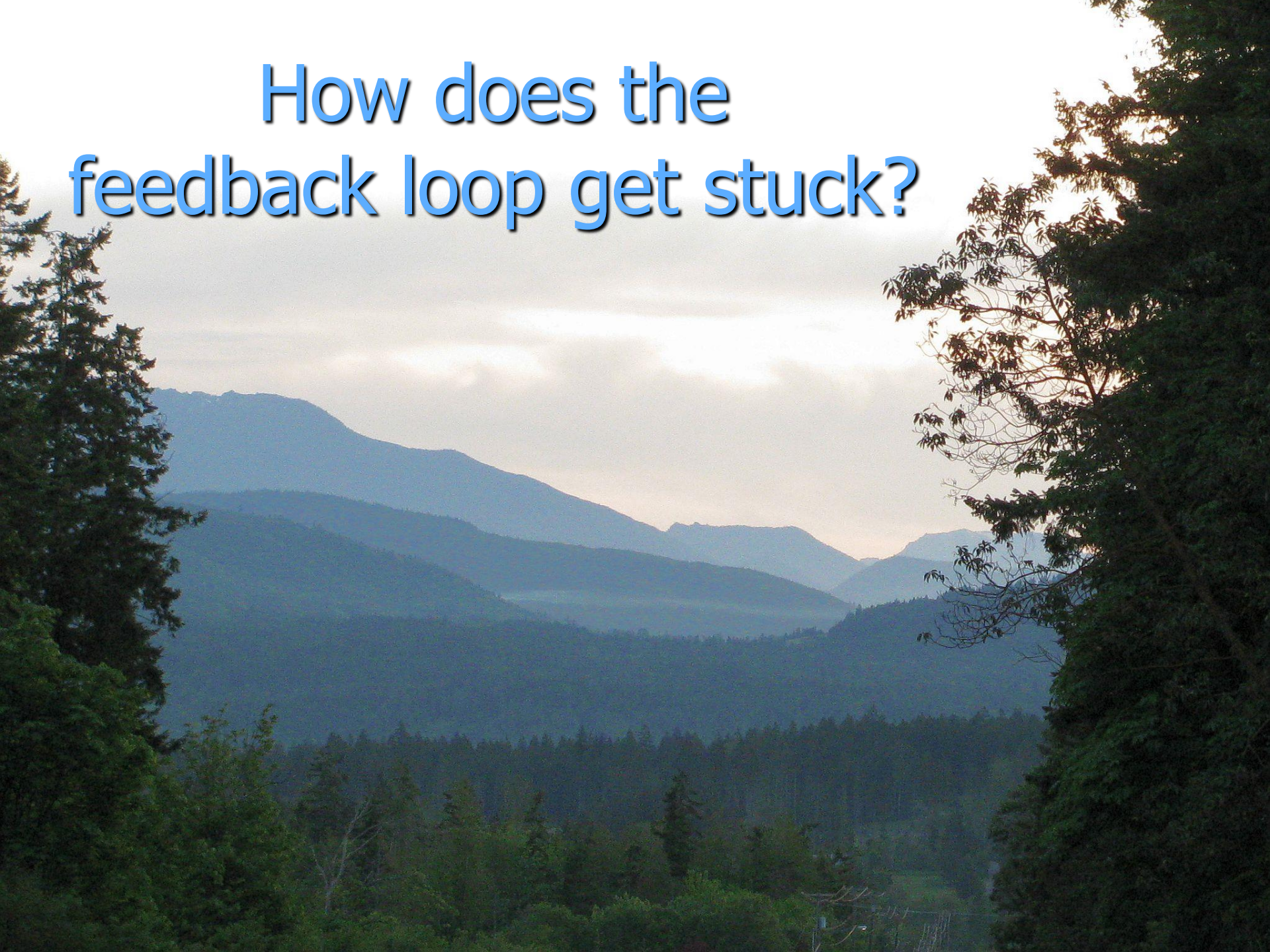
- Like the aircraft carrier deck crew the nervous system receptors have specialized jobs
- Each receptor type responds to a specific stimulus
  - Chemoreceptors=chemicals
  - Photoreceptors=light energy
  - Vestibular apparatus=movement in space
  - Mechanoreceptors = mechanical energy forces=touch, pressure, stretching, movement
  - Skin receptors=pain, touch, pressure, temperature
  - Interoceptors (body organs)=hunger and pain
  - Proprioceptors in joints, tendons, and muscles=changes in position of skeletal muscles and bones

# Proprioceptors

- **Location:**
  - Joints
  - Tendons
  - Muscles
- **Stimulus:**
  - Position changes of skeletal muscles and bones
- **Action:** Gives feedback about joint angle, muscle length, and tension
- **MUSCLE SPINDLE:** Specialized proprioceptor causing alignment abnormalities

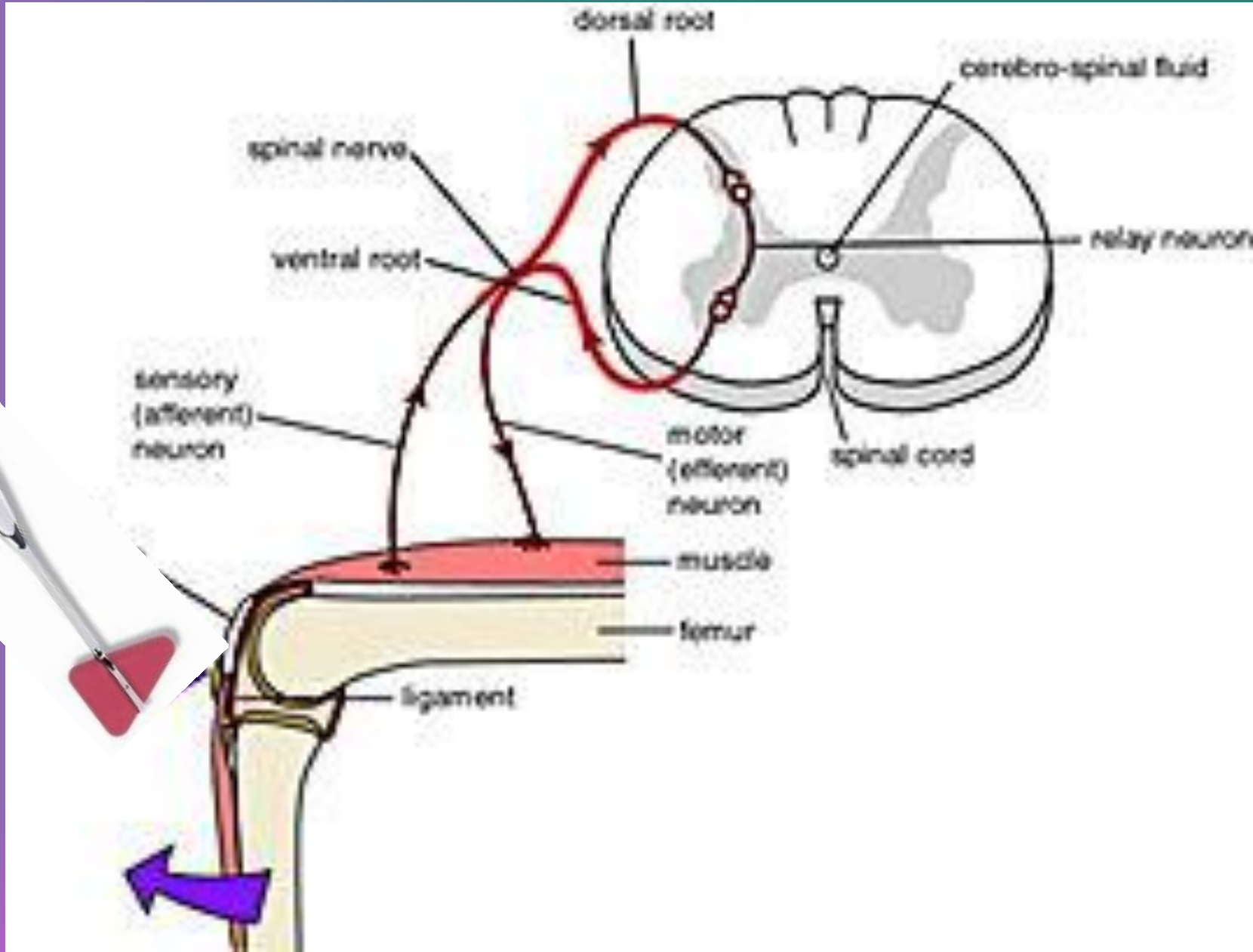


How does the  
feedback loop get stuck?





# Patellar Deep Tendon Reflex



# Action/Reaction

- Reflex hammer hit below the knee
- Stretches the quadriceps tendon
- Stretches the quadriceps muscles
- Muscle spindle detects and resists stretch
- Motor neuron (movement part of nerve) is activated
- Attempt to return to neutral or homeostasis
- Leg swings



# Benefit of Action

- Muscle Recruitment is a benefit of this quick stretch response
- Athlete gives a quick stretch just before increased recruitment is desired
  - Football/baseball pass ball behind back-triceps
  - Sprinting/swimming significant squat-quads
  - Football punter extends hip-hip flexors
  - Bowling flexes elbow-biceps
- This recruitment gives a little extra oomph to the maneuver

# Over-Reaction

This type of reaction from the Ia afferent nerve happens even if not intended with:

- Sudden rapid movement
- Alpha motor (movement) neuron fires
- Muscle contracts
- Gamma gain increases
- Feedback loop gets stuck in overdrive
- Muscle shortens-restricts from lengthening
- Bones pulled out of place
- Joint now restricted from moving to neutral

# Similar Reflex: Moro Reflex startle response

- Observed in newborn children when they think they are falling
- Or when they are startled by a loud or sudden noise
- ACTIONS:
  - Arms abduct
    - swing out to sides
  - Arms adduct
    - Tighten across body
  - Crying





# Crazy Commanding Officer

- Imagine the movement part of the nerve giving information to the muscle as if the nerve were the commanding officer giving an order to an enlisted personnel or muscle which follows the command and contracts
- Somehow need to get the officer (nerve) a new order to stop giving the same erroneous command. The nervous system needs a reboot
- Cut-off feedback loop between nerve and muscle and get new more appropriate orders in place
- The enlisted personnel (muscle) is given a new order to stand down and the muscle relaxes and lengthens
- Bones slide back to neutral: Joint alignment improves, nerve impingement and pain improve



# Releasing Joint Restrictions Treatment Concepts

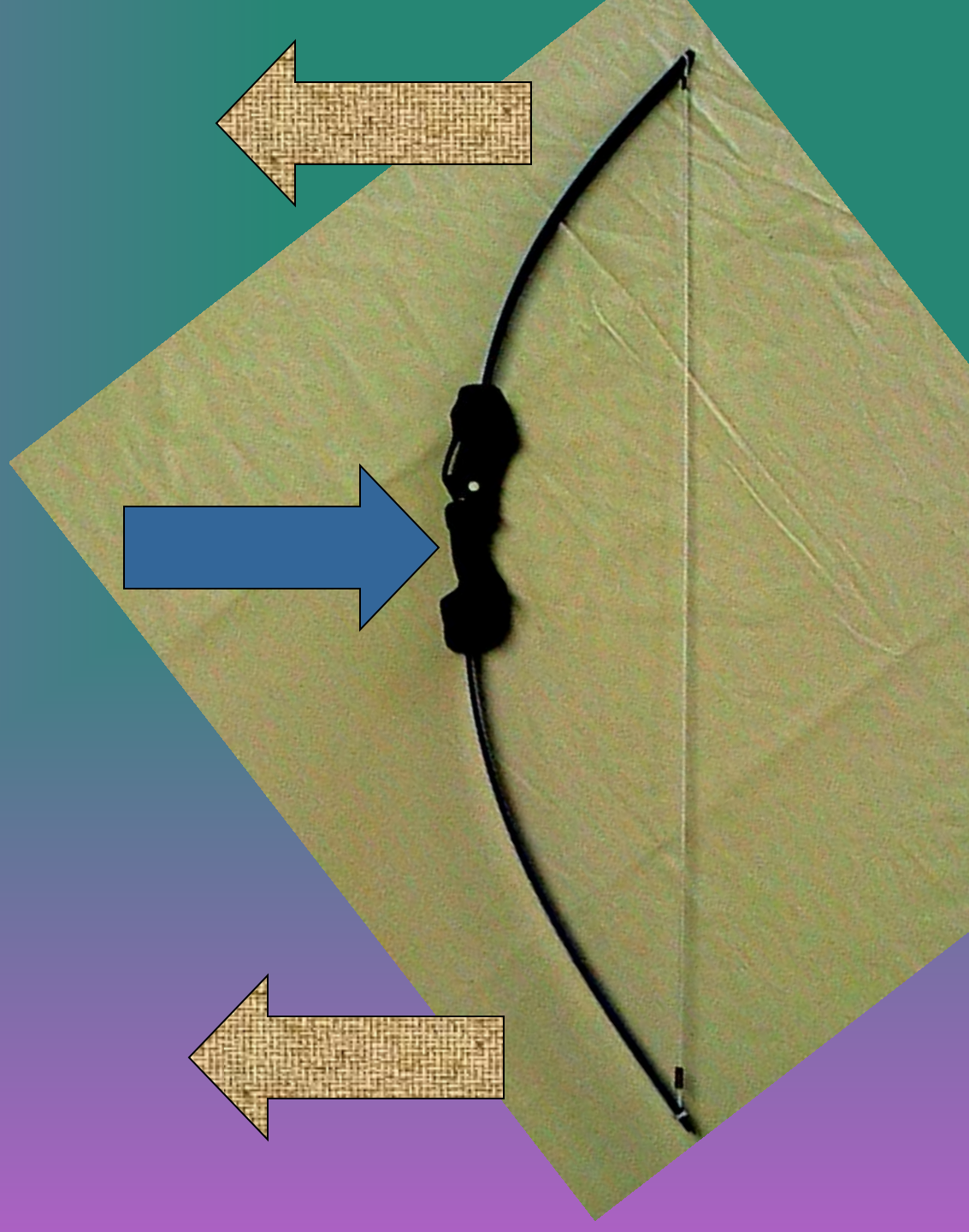


Stretching a muscle-the joint is stabilized while the two ends are pulled away from one another



Imagine trying to  
release a  
bowstring from a  
bow in this fashion

The two ends are  
pulled away from  
one another with  
the joint stabilized



Radical Idea: Stretch  
ANTAGONIST or muscle on the  
opposite side of joint





Why would this work?





- Bowstring pulls bow into bend

- To Release

- Bring two ends of the bow together

- Release tension from rigid frame

- Provides adequate slack





The bowstring is then released and achieves the 180° neutral position for full relaxation

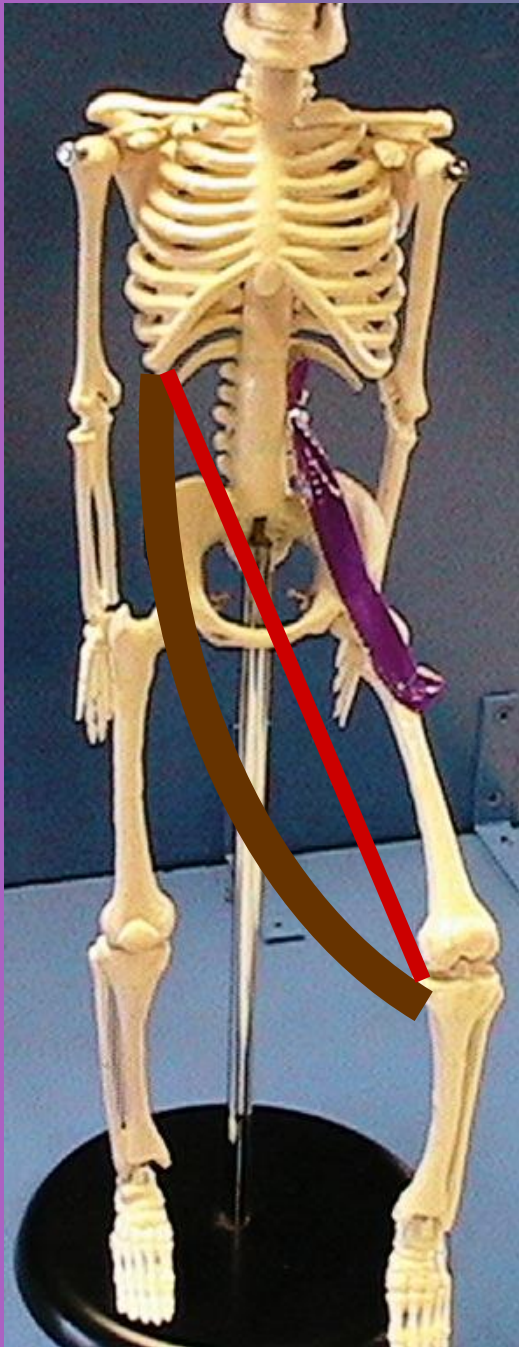
# Imagine Each Joint attempting Neutral

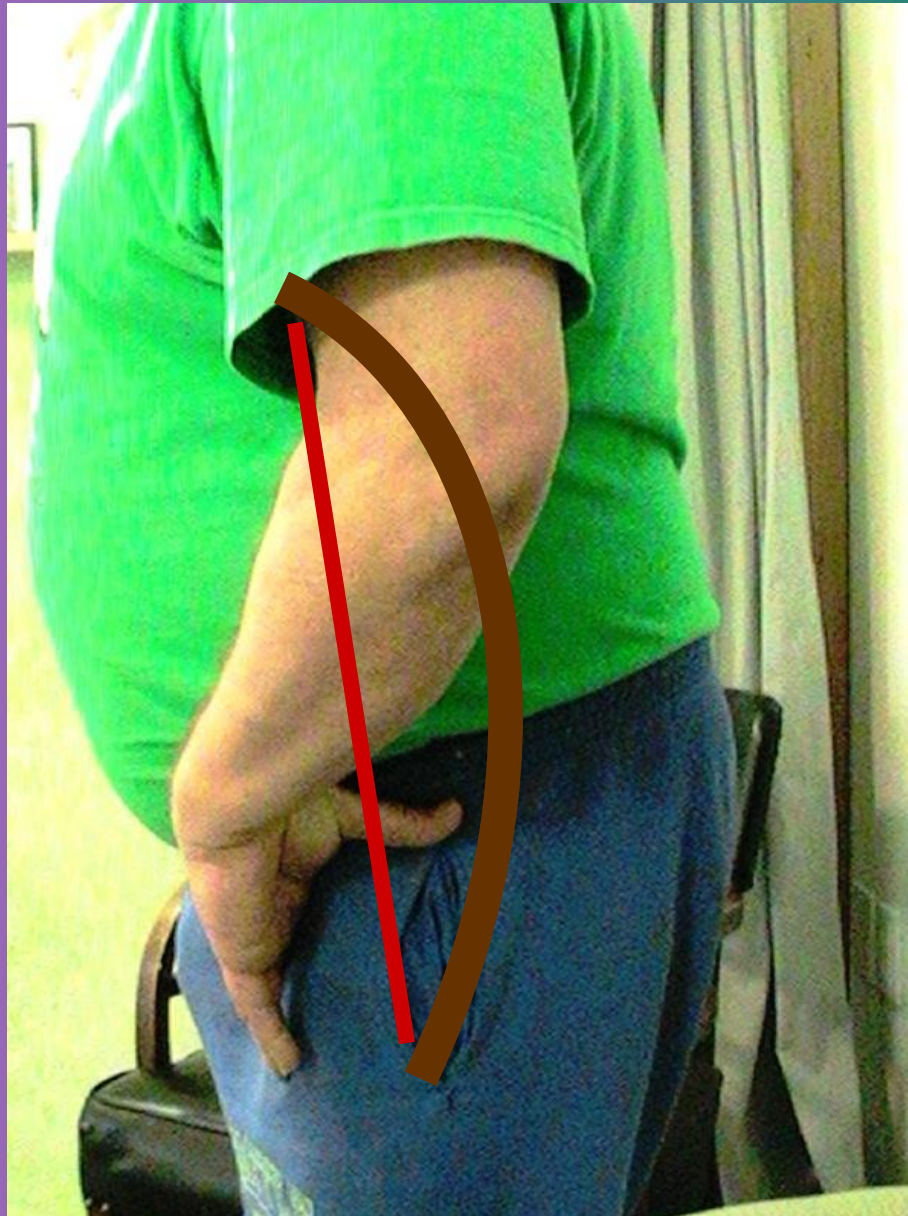
- If the neutral joint is unable to reach neutral
- Identify which direction the tight bowstring is pulling the bones
- Treat by shortening the angle for slack
- Hold for 90 seconds to loosen tension
- On Release ideally achieve or close to neutral



Visualize the tightened muscle as a bowstring

restricted from being able to reach neutral or move backward into lumbar spine or hip extension

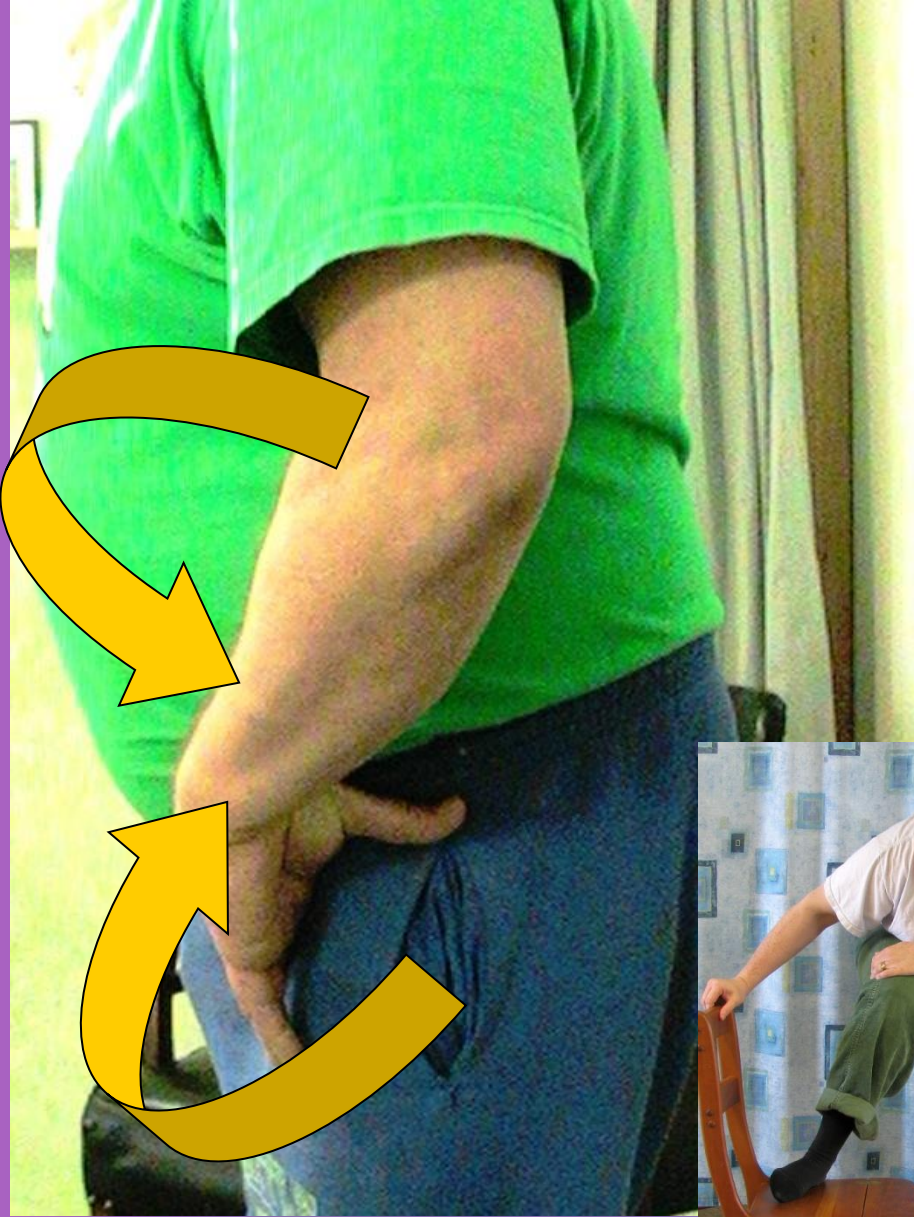




To release this restriction in a bowstring - the two ends of the bow have to be brought together to allow enough slack







- Release Joint Restriction:
- Bring the ends of the tight muscle together
- Slack the muscle in spasm
- Stretch the opposite side
- Stay 90 seconds to reset nerve



- Repeat Objective measurements of range of motion and positions of bones comparing sides
- Reassess pain



Before treatment



After treatment

# Before treatment    After treatment



Flattened back

Neutral spine

Curve is back





# More Treatments



# Pre-test

- What is your pain level in:
- Sitting
- Bending head backward
- Raising arms
- Sit to stand
- Bending forward and backward
- Standing
- Marching in place
- Stand to sit

Nose to hip/buttocks



**FLEX:** Sit

**Side bending:**  
Bring shoulder and  
nose down toward  
hip/buttocks

**Twisting:** Turn face  
shoulders toward  
hip/buttocks

# Post-test

- What is your pain level in:
- Sitting
- Bending head backward
- Raising arms
- Sit to stand
- Bending forward and backward
- Standing
- Marching in place
- Stand to sit





Elbow to calf

**FLEX:** Sit

**Side bending:**  
Bring elbow to inside  
of calf of same leg

**Twisting:** Turn face  
shoulders to other  
side point top  
shoulder toward the  
ceiling

# Post-test

- What is your pain level in:
- Sitting
- Bending head backward
- Raising arms
- Sit to stand
- Bending forward and backward
- Standing
- Marching in place
- Stand to sit



## Toothpaste Tube

**FLEX:** Sit curling into a tight toothpaste tube bringing nose to chest and top of head toward belly button

May need to put hand on bump on upper back and pull toward belly button



# Post-test

- What is your pain level in:
- Sitting
- Bending head backward
- Raising arms
- Sit to stand
- Bending forward and backward
- Standing
- Marching in place
- Stand to sit



Nose to armpit

**FLEX:** Sit bringing  
nose toward armpit  
keeping shoulders  
down toward hips

# Post-test

- What is your pain level in:
- Sitting
- Bending head backward
- Raising arms
- Sit to stand
- Bending forward and backward
- Standing
- Marching in place
- Stand to sit





The opposite is true  
for the extended or  
backward bent spine



- Spine held into extension
- Restricted from moving into flexion
- Unable to sit or forward bend fully or comfortably
- Will prefer standing/walking



- Identify the bowstring
- Help determine
- Pattern of restriction
- Treatment needed





- To unlock a safety pin
- Body in an extension or backward bent pattern
- Restricted from flexing
- RX: Increase extension-backward bend



- Spine extension
- Use gravity hang leg off bed
- Standing support wall for safety
- Stay 90 seconds after stretching antagonist
- Retest ability to flex-sitting







# Backward bending stretch



# Pre-test

- What is your pain level in:
- Sitting
- Bending head backward
- Raising arms
- Sit to stand
- Bending forward and backward
- Standing
- Marching in place
- Stand to sit



## Backward stretch

**Extend:** Sit to one side of chair dropping leg off of chair.

Lean back taking head toward shoulder blades

Turn and tilt toward leg off chair

Bring opposite arm overhead

# Post-test

- What is your pain level in:
- Sitting
- Bending head backward
- Raising arms
- Sit to stand
- Bending forward and backward
- Standing
- Marching in place
- Stand to sit



# It made me worse

- After unlocking one joint another one may call your attention
- You will need to determine the best sequence
- If you do the Horse and Thinker to the left and you feel better
- But then the Horse and Thinker to the right makes you feel worse
- Repeat the horse and thinker to the left
- You may have to start with the backward bend and end with the forward bending positions
- Start with the treatment position that makes you feel worse and end with the one that makes you feel best



Do not forget about  
the importance of  
posture



As bad as this  
is...the truth can be  
hidden by clothes





90-year-old



turns into 14-year-old by curling toes



Posture remarkably improves playing sax

# Home Program to prevent pain

- Do the positions 2 times a day and anytime you feel the pain increase
- Come out of the treatment positions slowly while firing the pelvic floor (Kegel exercise)
- Website: [doctorlovejoyevans.com](http://doctorlovejoyevans.com) shares the information in this presentation under the Pain Management tab.
- Learn to fire the pelvic floor under the Strengthening tab.



- The information presented in this lecture is based on the technique called Strain and Counter Strain by Lawrence Jones, D.O. For further assistance with this technique call your local physical therapy offices and find a therapist who practices Strain and Counter Strain or other manual therapy techniques

- For pain anywhere in the body always start with the horse and thinker
- Work your way through the exercises listed using pre-test and post-test
- You may need more specific positions
- Lorraine is working on adding more to the website under Pain Reduction tab

# Dr. Lovejoy-Evans's treatment protocol order:

- Reduce and resolve pain
- Stabilization of the pelvis and spine using the pelvic floor
- Manage swelling problems
- Build strength to maintain improved alignment and reduced pain
- Balance
- Cardiovascular conditioning
- Manage stress
- Her website is working on adding all of these concepts to teach people to manage independently and remain in their own homes



A sunset over the ocean with silhouettes of evergreen trees in the foreground. The sun is low on the horizon, casting a warm orange glow across the sky and water. The foreground is dark, with the silhouettes of several evergreen trees.

# Questions?

Thank you  
So much for your attention

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