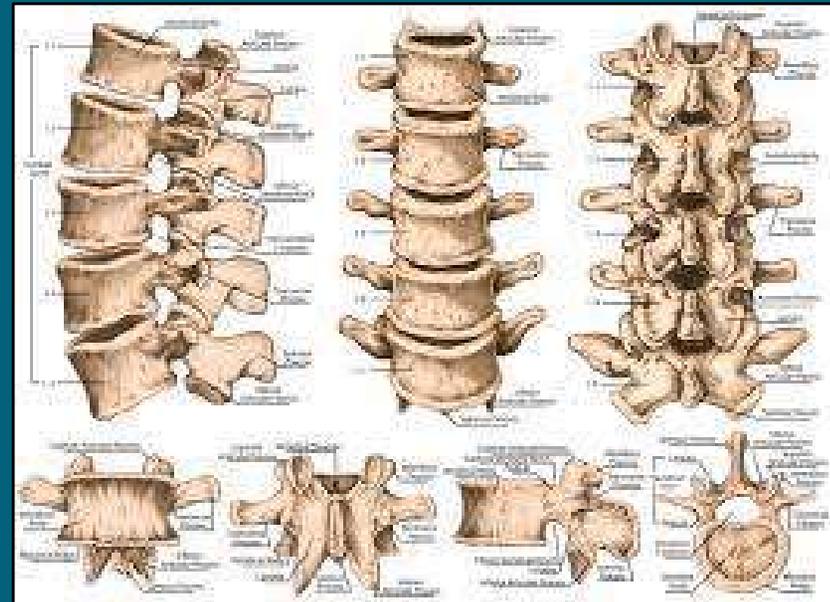
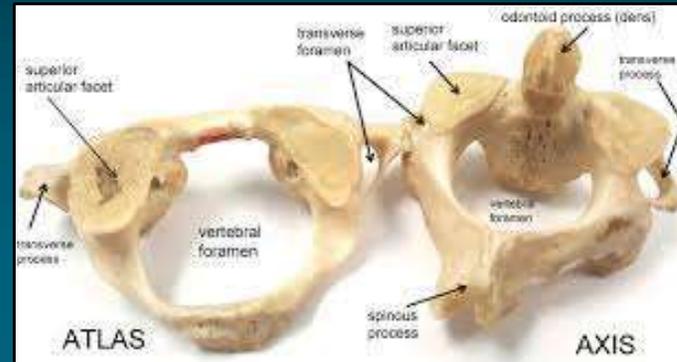


# Back To Chiropractic CE Seminars ~ Technique 4 Hours



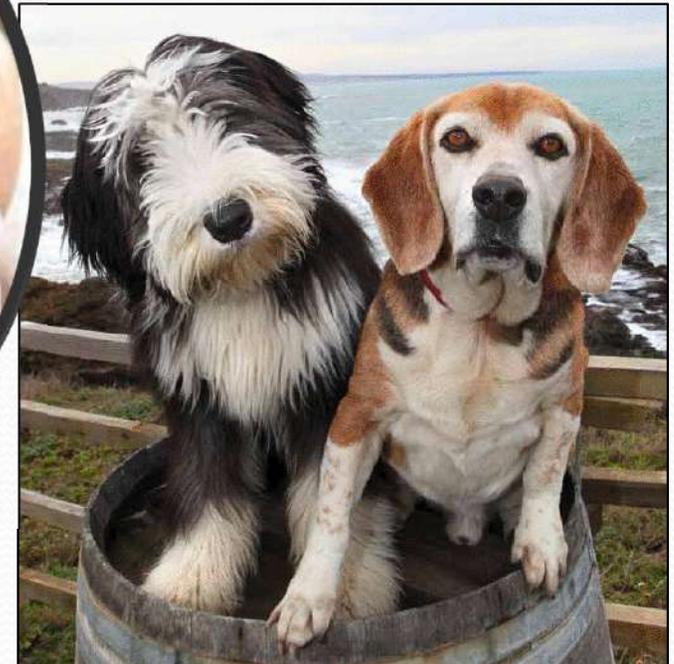
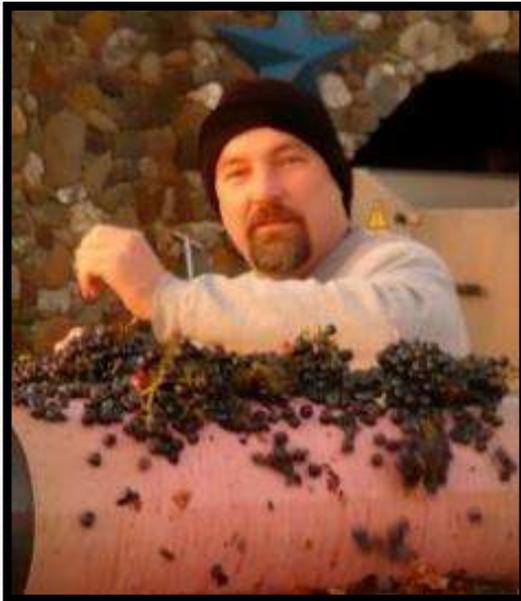
# **Marcus Strutz, DC**

**Life Chiropractic College West Graduate  
June 1996, Summa Cum Laude**

**Professor Life Chiropractic College West, 1997-2002**

- **Physiotherapy Rehab** (authored course manual)
- **Physiotherapy Modalities** (authored course manual)
- **X-Ray Physics** (authored course manual)
- **Philosophy I**
- **Philosophy V - Practice Management**
- **Microbiology Lab**
- **Spinal Biomechanics**
- **Systemic Physiology Lab**

- **Private Practice, 2000-2013 Mendocino/Ft Bragg, CA**
- **CE Seminars, 2002-present:**  
**Technique, Wellness (Pt Ed), Physiotherapy,  
History Taking & Physical Examination Procedures**
- **Ghost Writer Practice Management, 2007-2014**
- **National Board Review Instructor, 1999-2000**  
**Dr. Irene Gold & Dr. John Donofrio**
- **Middle School Teacher Math & Science, 1989-1993**
- **Racquetball Club Pro & Weight Trainer**  
**Walnut Creek, 1982-1987**
- **Father: Amuel Strutz DC Palmer Grad 1961**

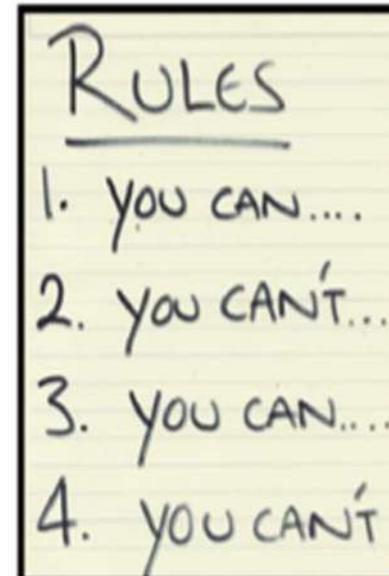


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# CE Certification NOTICE

In accordance with the Chiropractic Board of Professional Regulation/Rules/Statue for CE Credit for all states:

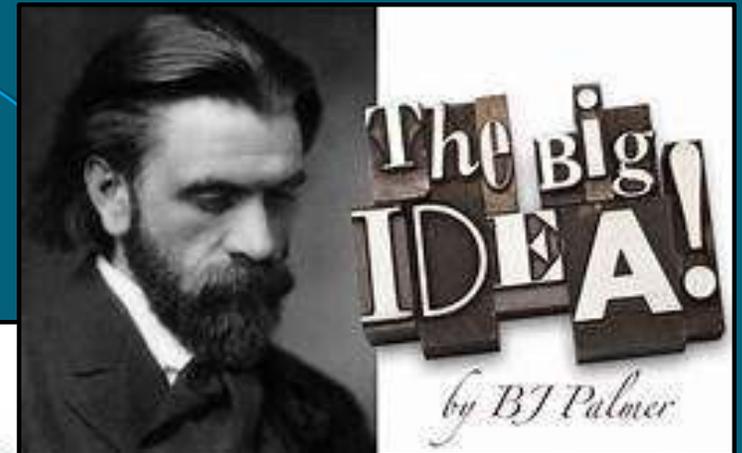
If attendee is **ABSENT** from the room during CE time for more than 10 minutes during any one hour period, **CREDIT FOR THAT HOUR WILL BE FORFIETED.**



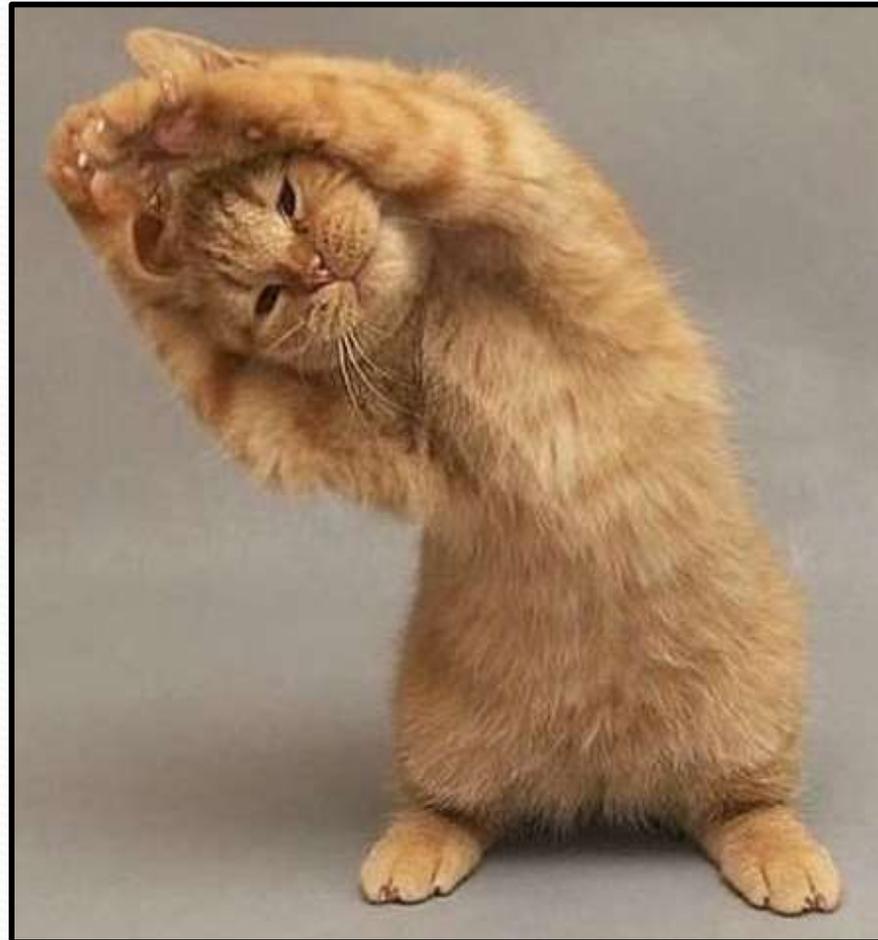
The Board of Chiropractic Examiners allows a maximum of 12 hours of CE to be completed in one day.

Please do not take Online CE during this Distance VC seminar as the Board will not give you credit.

# Concepts for Better Technique



# Proprioceptive Neuromuscular Facilitation With Adjusting



## PNF Gets Started?

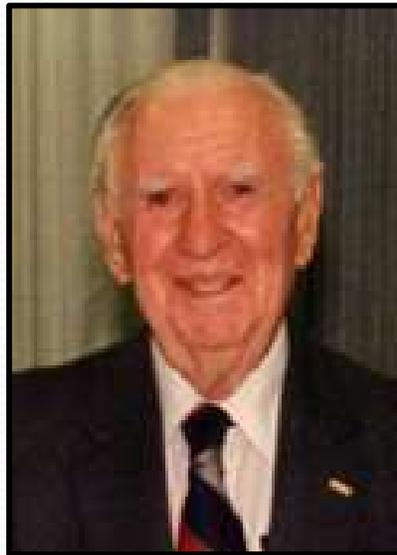


In the early to mid 1900s physiologist **Sir Charles Scott Sherrington** popularized a model for neuromuscular facilitation and inhibition. He received the Nobel Prize in Physiology or Medicine with Edgar Adrian, 1st Baron Adrian, in 1932 for their work on the functions of neurons. Prior to the work of

Sherrington and Adrian, it was widely accepted that reflexes occurred as isolated activity within a reflex arc. Sherrington received the prize for showing that reflexes require integrated activation and demonstrated reciprocal innervation of muscles, (Sherrington's law), yes reciprocal inhibition.

# Who Developed PNF?

**Dr. Herman Kabat** and **Maggie Knott** in the late 1940s and early 1950s used PNF as a means of rehabilitation for neurological disorders such as multiple sclerosis, cerebral palsy and poliomyelitis.



# My History With PNF

**I was first introduced to PNF in 1987 when I attended San Diego State in a kinesiology class. I was reintroduced to PNF in 1995, at Life West, by Dr. Carrie Picker. I then wrote the course notes and taught the Physiotherapy Rehab class from 1997-2002 at Life West.**

**They are still using those notes today.**

**It was during those years when I started applying PNF to the chiropractic adjustment. I discovered how much easier it was to adjust if I used the PNF protocols right before delivering the adjustment.**

**And that is what I will share with you today.**



**LIFE CHIROPRACTIC  
COLLEGE WEST**

# Why Use PNF?

The goal is simple: make the adjustment easier.

If the muscles surrounding the joint to be adjusted are relatively relaxed then the adjustment will be easier to deliver and more effective.

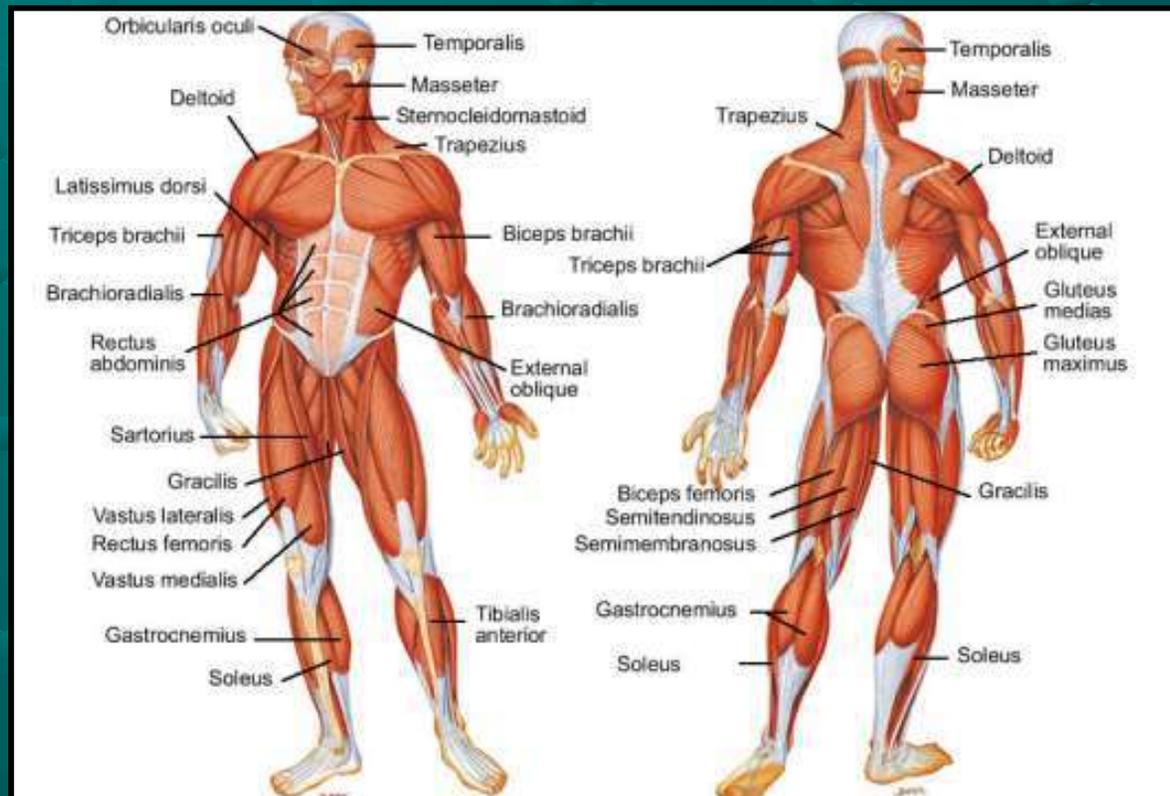
**Try this: Have your partner standing. Have them bend their elbow into flexion and contract their bicep. Try pulling their arm down. It's difficult. How come? Simple answer: the muscle is contracting and is restricting joint motion (in this case the elbow joint). Now have them loosely contract their bicep and then pull their arm down. Much easier! Why? The muscle is not contracting as much. So any time we can decrease the contractility of a muscle we know that it will be easier to increase joint motion.**

So now apply this to an adjustment. I'm about to adjust a patient's low back in side posture or adjust a patient's shoulder. We know the muscles are in a contracted state restricting proper joint motion, (that is why we are adjusting it). What would make this adjustment easier? Yes, decreasing the contractility of the involved muscles **BEFORE** the adjustment. And this is where the PNF comes in. Now lets review the principals & protocols of PNF.

Yes this is the same stuff you saw in my general technique courses, as the PNF can be applied to all adjustments!

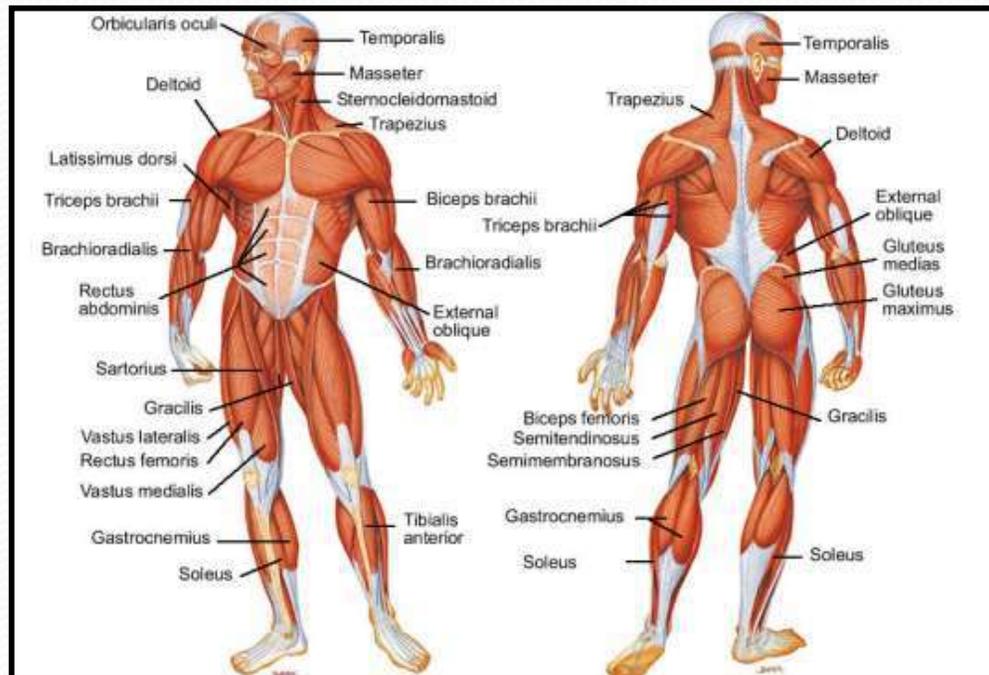
# Muscle Rules

1. Muscles are rarely 100% on or 100% off.
2. Ex. when performing a bicep curl what muscles fire?  
Most muscles in your body will fire as they need to act as stabilizers. So at some level they are all contracting.



# What Muscle Is Contracting?

When performing a bicep curl what muscles contract? The primary mover is the biceps & brachioradialis (going through a full range of motion). But most muscles in your body will contract isometrically as well. Your forearm flexors & extensors are acting as primary stabilizers, along with the shoulder girdle muscles (deltoids). Your postural muscles throughout your body will also be contracting at some lower level acting as secondary stabilizers, allowing you to perform the bicep curl. So at some level they are all contracting. The point being, most muscles are usually in a partially contracted state.



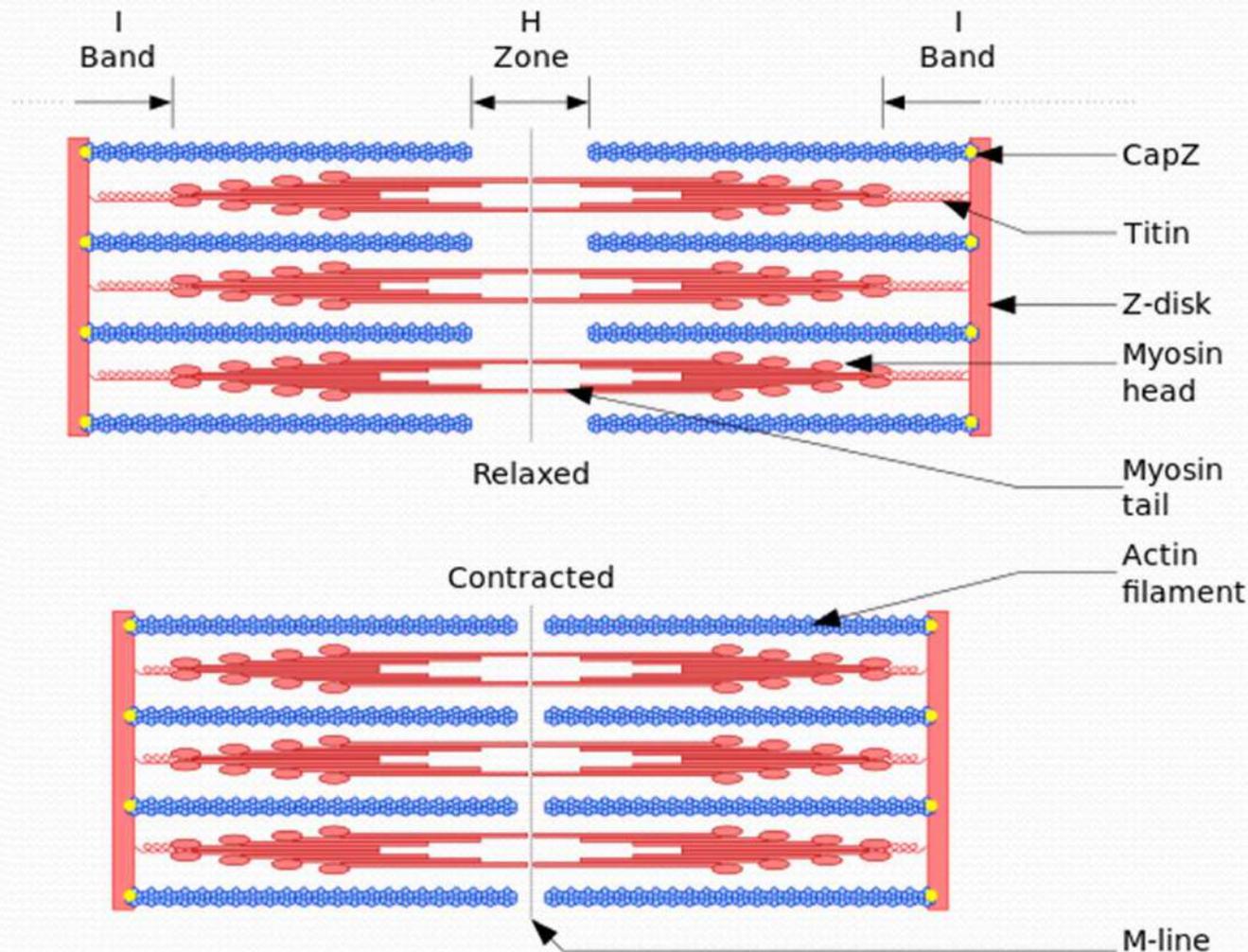
# Sarcomere Complex

Muscle contraction is NOT an on-off switch, all or none phenomenon.

Muscles are rarely 100% on or 100% off.

Muscles most often are in a partially contracted state.

So think of a dimmer switch where the muscle can be partially contracted.

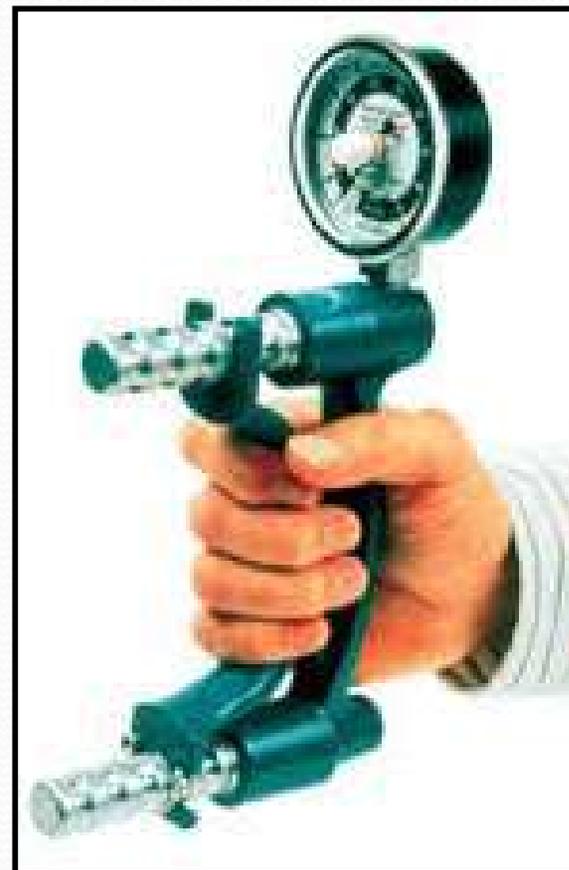


## The Dynamometer Effect

Ever wonder why a pt is not the strongest on the first squeeze on a dynamometer? When a pt squeezes typically the strongest is the 2<sup>nd</sup> or 3<sup>rd</sup> squeeze.

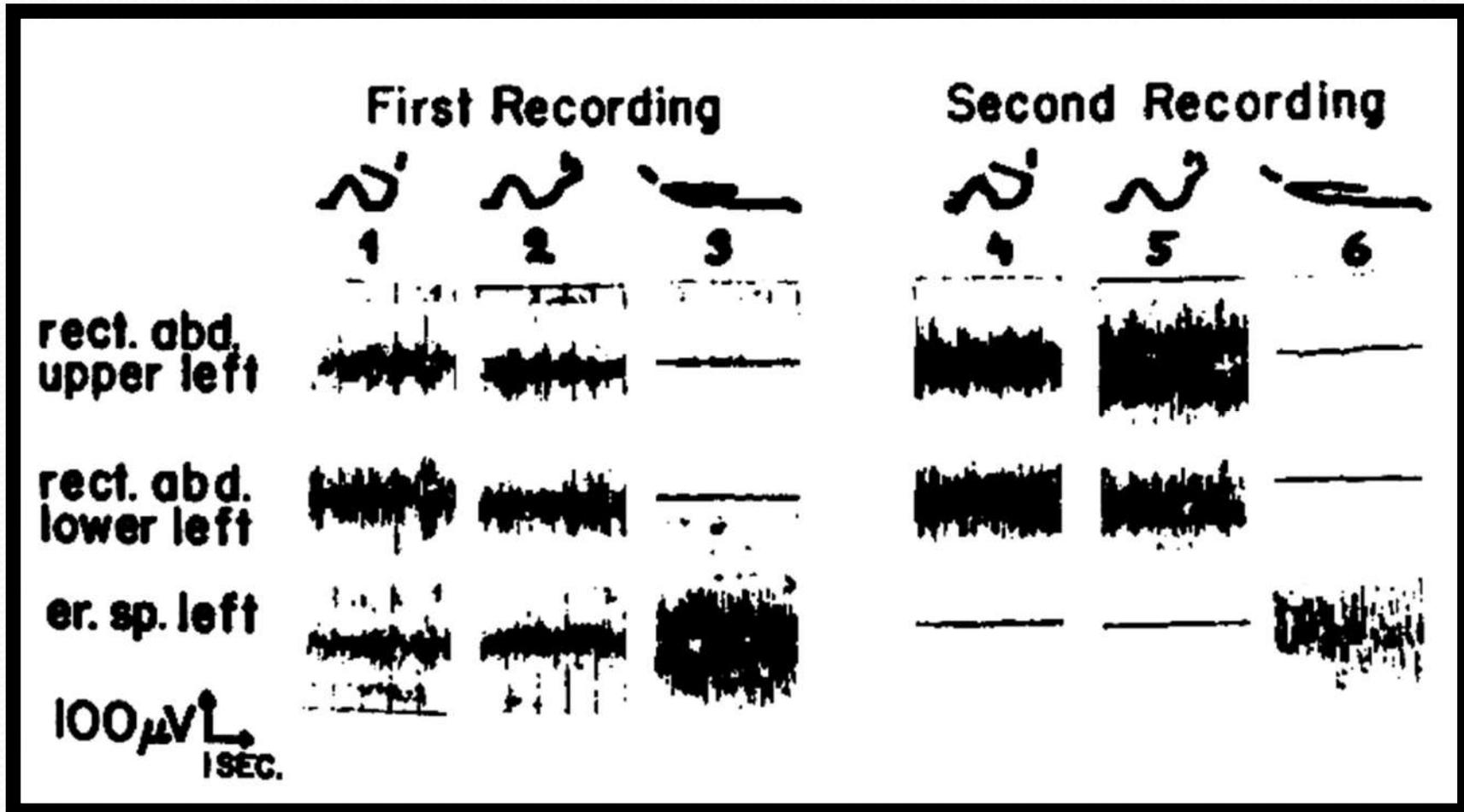
Why?

On the 1<sup>st</sup> attempt the forearm muscles are already in a shortened state & can NOT fully contract. During the 1st attempt the muscle contracts & then relaxes and becomes longer. On the 2<sup>nd</sup> attempt the muscle can contract through a more complete ROM, recruiting more muscle fibers, thus having more power. This will repeat for the 3<sup>rd</sup> attempt depending on the state of the muscle, so again increased strength and then on further attempts the muscle will begin to fatigue. This same phenomenon will occur during weight lifting as well. Weaker on the first rep and stronger on the next 2 or 3 and then the slow decline of strength from muscular fatigue.

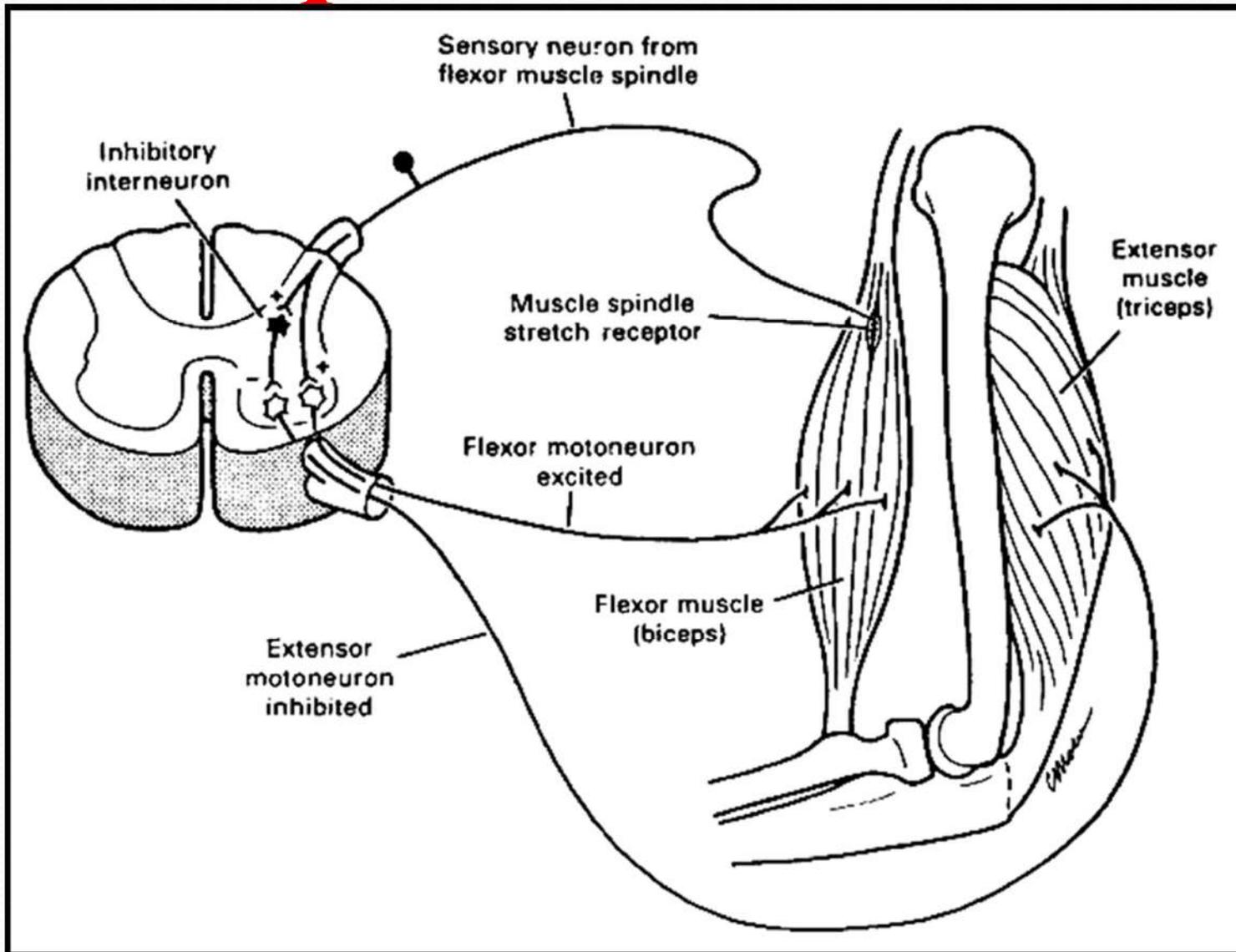


# EMG Before & After PNF

Korr IM, Neurobiologic Mechanisms in Manipulative Therapy, 1978



# Reciprocal Inhibition



# The Rules of Reciprocal Inhibition

## 1. Anterior Muscles vs Posterior Muscles

When an anterior muscle contracts then the opposing posterior muscle will relax.

When a posterior muscle contracts then the opposing anterior muscle will relax.

## 2. Left Lateral Muscles vs Right Lateral Muscles

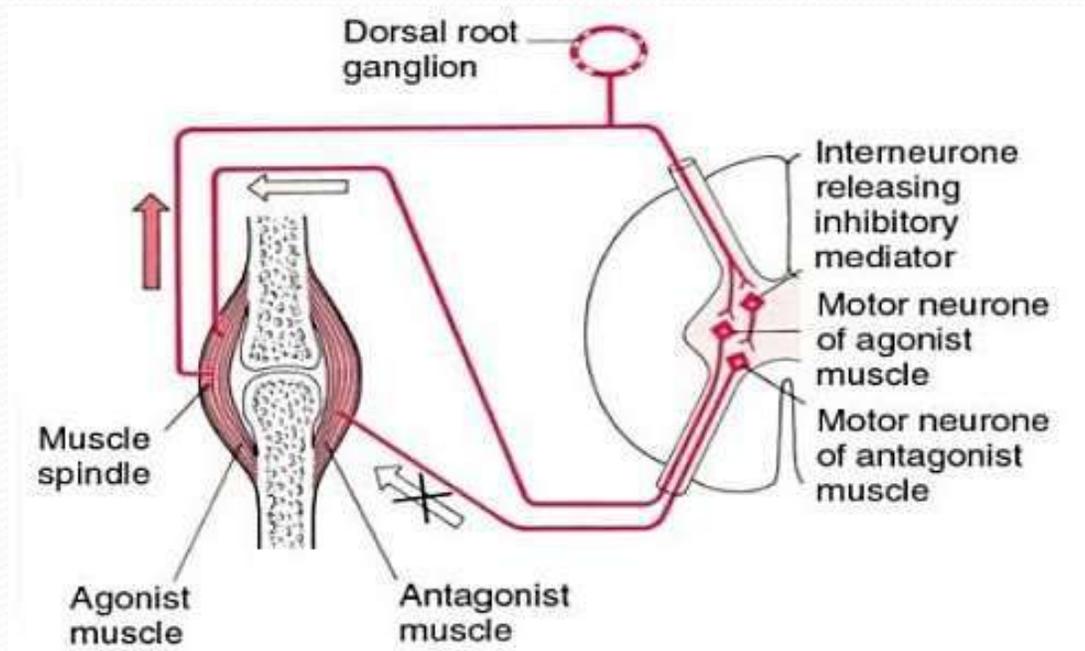
When a left lateral muscle contracts then the opposing right lateral muscle will relax.

When a right lateral muscle contracts then the opposing left lateral muscle will relax.

## 3. Left Rotational Muscles vs Right Rotational Muscles

When a left rotational muscle contracts then the opposing right rotational muscle will relax.

When a right rotational muscle contracts then the opposing left rotational muscle will relax.



# Cross Cord Muscle Pairings

The best way to remember this is the gait pattern of walking or running. Below you can see the anterior muscles of the left upper extremity are firing, while the posterior muscles of the right upper extremity muscles are firing. In the lower extremity, the left posterior muscles are firing and the right anterior muscles are firing. Then in the next stride the opposite is true. You can use these rules in a rehab situation or working out in the gym, just keep in mind what muscles fire at the same time.

**Right posterior group firing**

**Left anterior group firing**

**Left posterior group firing**

**Right anterior group firing**



# Cross Cord Muscle Pairings

The best way to remember this is the gait pattern of walking or running. Below you can see the anterior muscles of the left upper extremity are firing, while the posterior muscles of the right upper extremity muscles are firing. In the lower extremity, the left posterior muscles are firing and the right anterior muscles are firing. Then in the next stride the opposite is true. You can use these rules in a rehab situation or working out in the gym, just keep in mind what muscles fire at the same time.

Right posterior group firing

Left anterior group firing

Left posterior group firing

Right anterior group firing



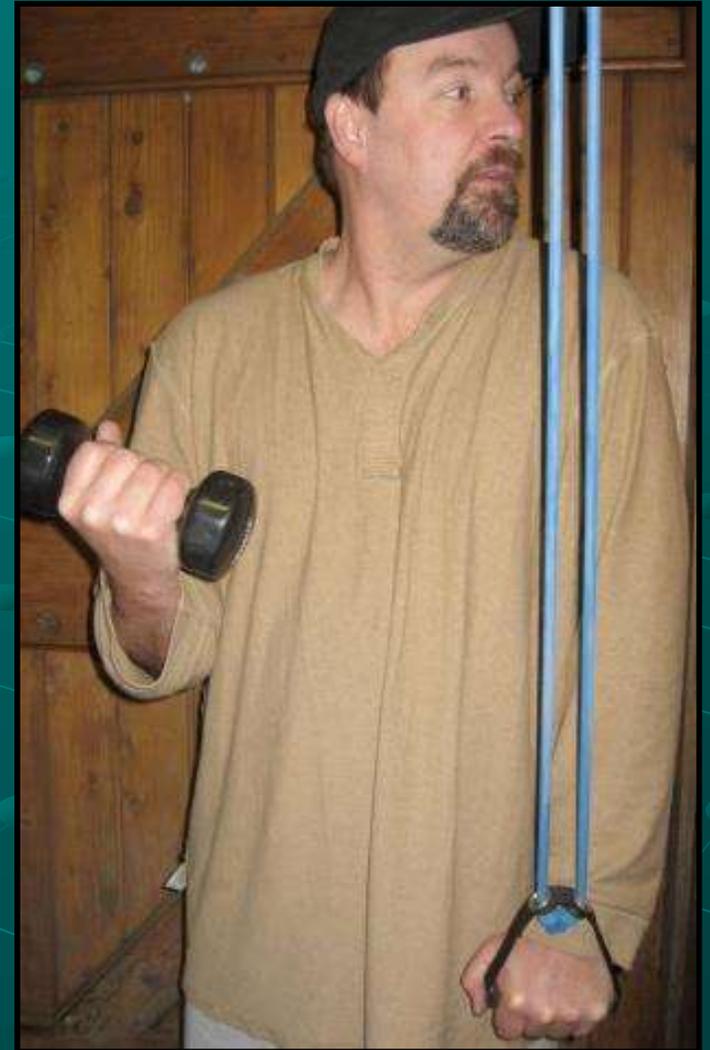
# Cross Cord Walking



# Cross-Cord Training

If you hold an isometric contraction with the triceps, the biceps performance will improve 10-20%.

Looking to the triceps side elicits the posterior tonic neck reflex, which will also improve performance.



# PNF: Shoulder



# PNF: Shoulder Towel Stretch

Have the patient pull downward on towel with his right arm for 2 to 5 seconds first. Then stretch by pulling upward with the left arm.



# Shoulder Adjustment



## **PNF Protocols ~ Worst For Last**

**Start with the least involved area of the injury (likely the furthest away as well) and worked towards the most involved area.**

**Ex 1: Pt has plantar fasciitis, start with: the low back, then the pelvis, then behind the knee to the popliteus, and then the calf muscles. This will resolve any compensatory issues and will also allow you to get into the bottom of the foot easier.**

**Ex 2: Pt has a frozen shoulder, start with the least restrictive motion first and work toward the most restrictive motion last.**

## **PNF Protocols**

**Always start with an isometric contraction or series of isometric contractions for safety reasons. The isometric contraction put the least load on the joint and surrounding soft tissue, so it is the safest of the three. This also serves as one last safety check, in case there is a hidden injury.**

**Step 1 Isometrics**

**Step 2 Partial Range of Motion**

**Step 3 Full Range of Motion**

## **PNF & Results**

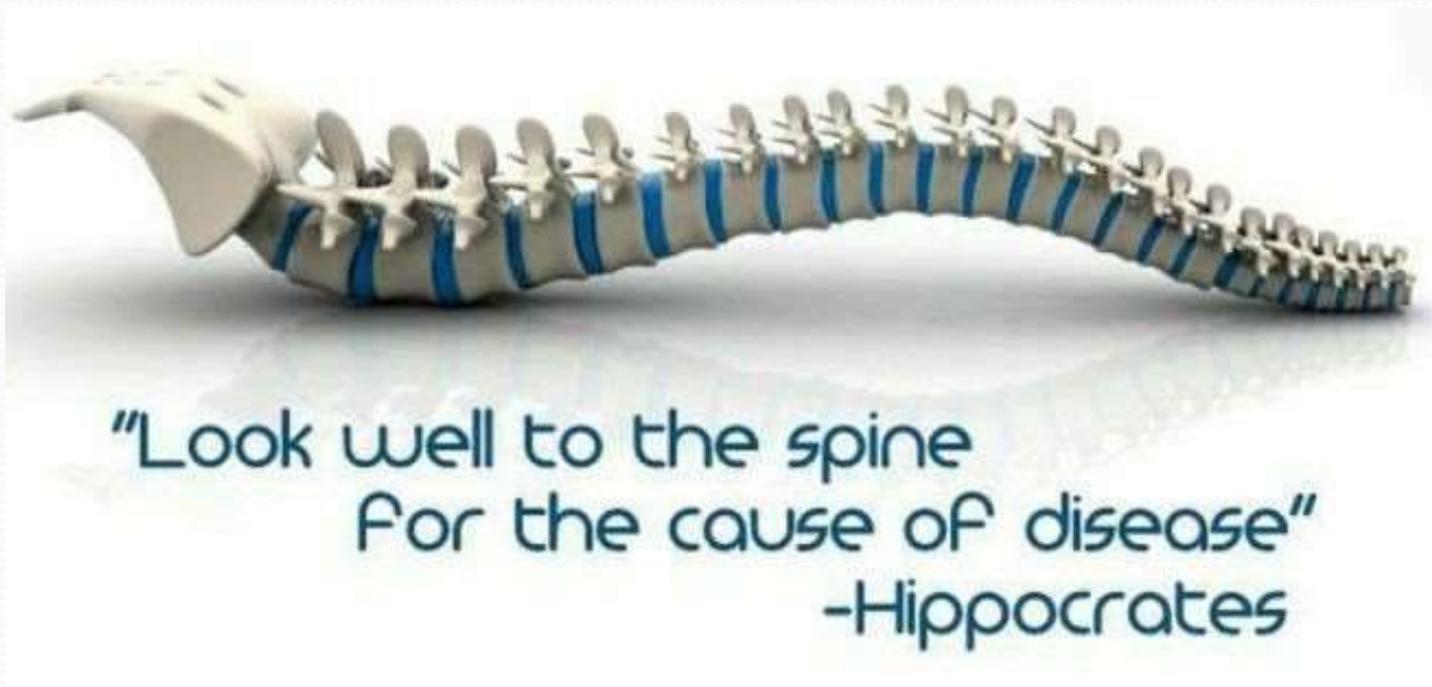
**Expect Results How much change, limitations**

**Will It Work On Acute & Chronic Conditions?**

**How Long Will The Results Last?**

**The PNF will work well if it is a one time injury vs. a repetitive injury. If there are no obstructions, permanently damaged tissue, or surgical procedures that cause restriction then the results will also last longer.**

# Chiropractic Adjusting



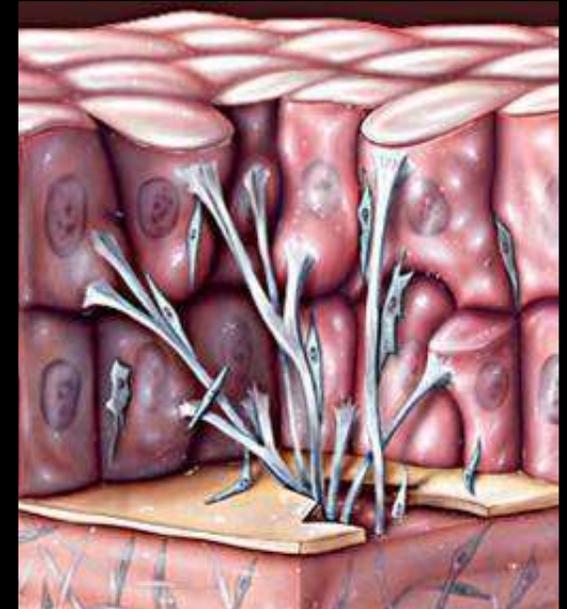
# What's Going On?



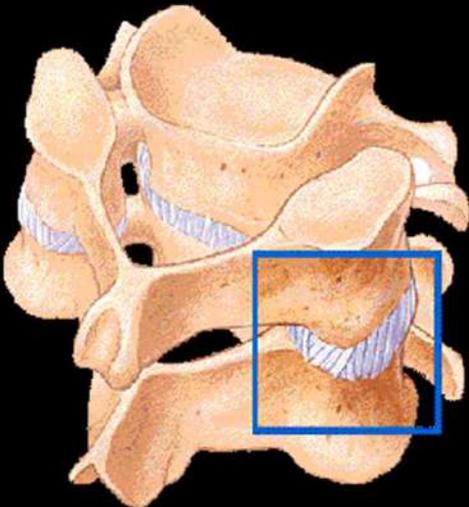
Muscle Spasm



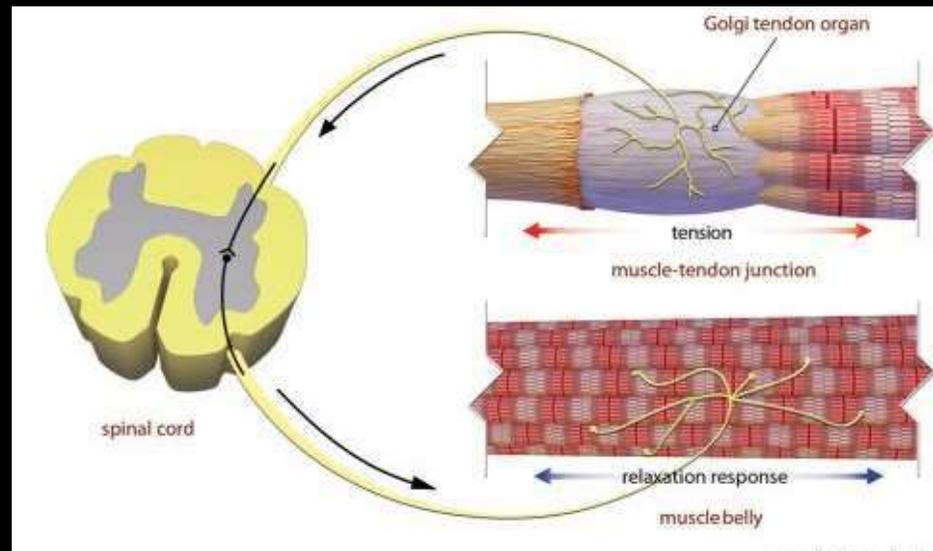
Acute Inflammation



Soft Tissue Adhesions



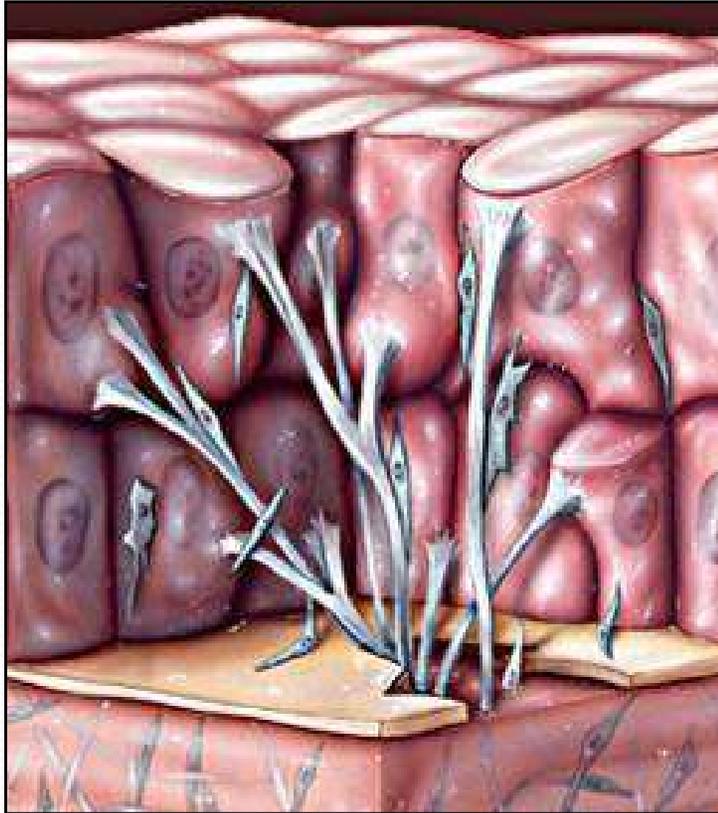
Facet Joint Complex



Spinal Cord Reflex Arc



# Adhesion Formation



**Fibrin deposits  
result in chronic  
inflammatory  
conditions.**

**Spine, 1987**

**Adhesions begin to form in 4 days microscopically  
It is likely they start forming right away!**

# Adhesion Formation

## Muscle Strain Injuries

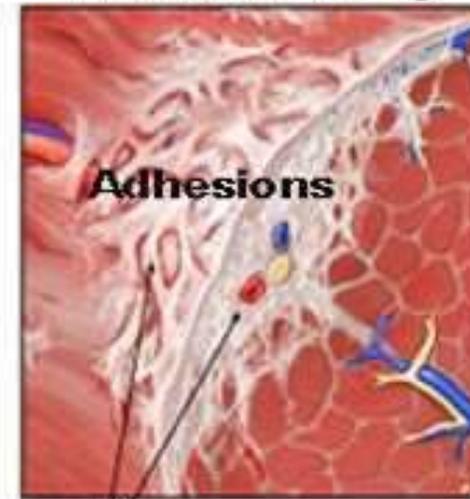


**Excessively Stretched Muscles**



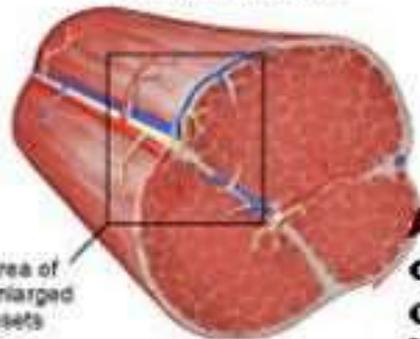
Microtears and swelling impinge upon nerves and vessels

**Excessively Stretched Muscles After Healing**



Adhesions and scar tissue entrap nerves and vessels

**Normal Muscle**



Area of enlarged insets

### Symptoms:

- Radicular pain down both lower extremities.
- Radicular pain in both arms and hands.
- Pain in neck and lower back.
- Burning sensation in back.
- Pain between scapulae.
- Difficulty swallowing.

**Adhesions can lie in any direction and therefore can restrict range of motion in the muscle.**

# Adhesion Formation

## How Scar Tissue Forms In Muscles

### 1 Muscle Tears



An Injury like Whiplash  
Or a sporting Injury



The body senses the tear  
and repairs the break with  
scar tissue

### 2 Micro-Tears In Muscles

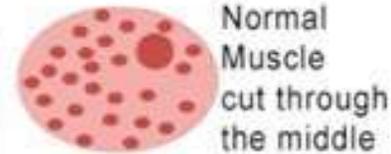


Repetitively using a muscle  
resulting in small tears of  
the muscle fibres

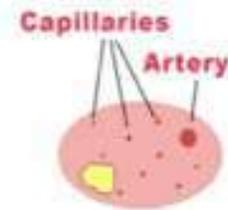


The body senses the  
micro-tears and repairs  
them with scar tissue

### 3 Sustained Contraction



Muscles held in tension  
for long amounts of time  
e.g from bad posture or  
working on a Computer

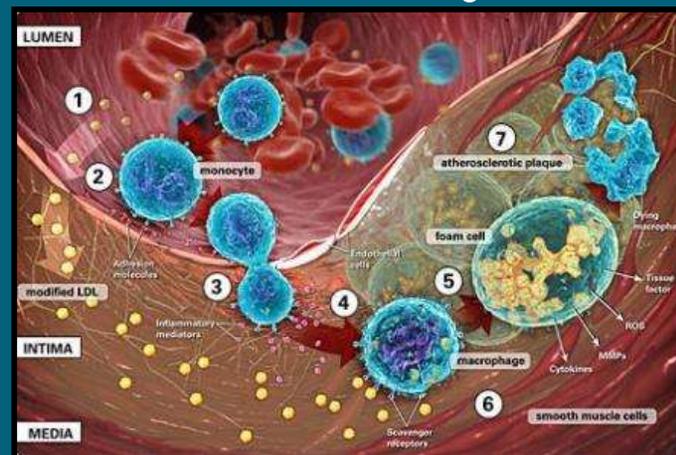


Because the muscle is  
held tight blood can't get  
to all the parts of the  
muscle. The part that  
doesn't get enough  
Oxygen dies and scar  
tissue forms.

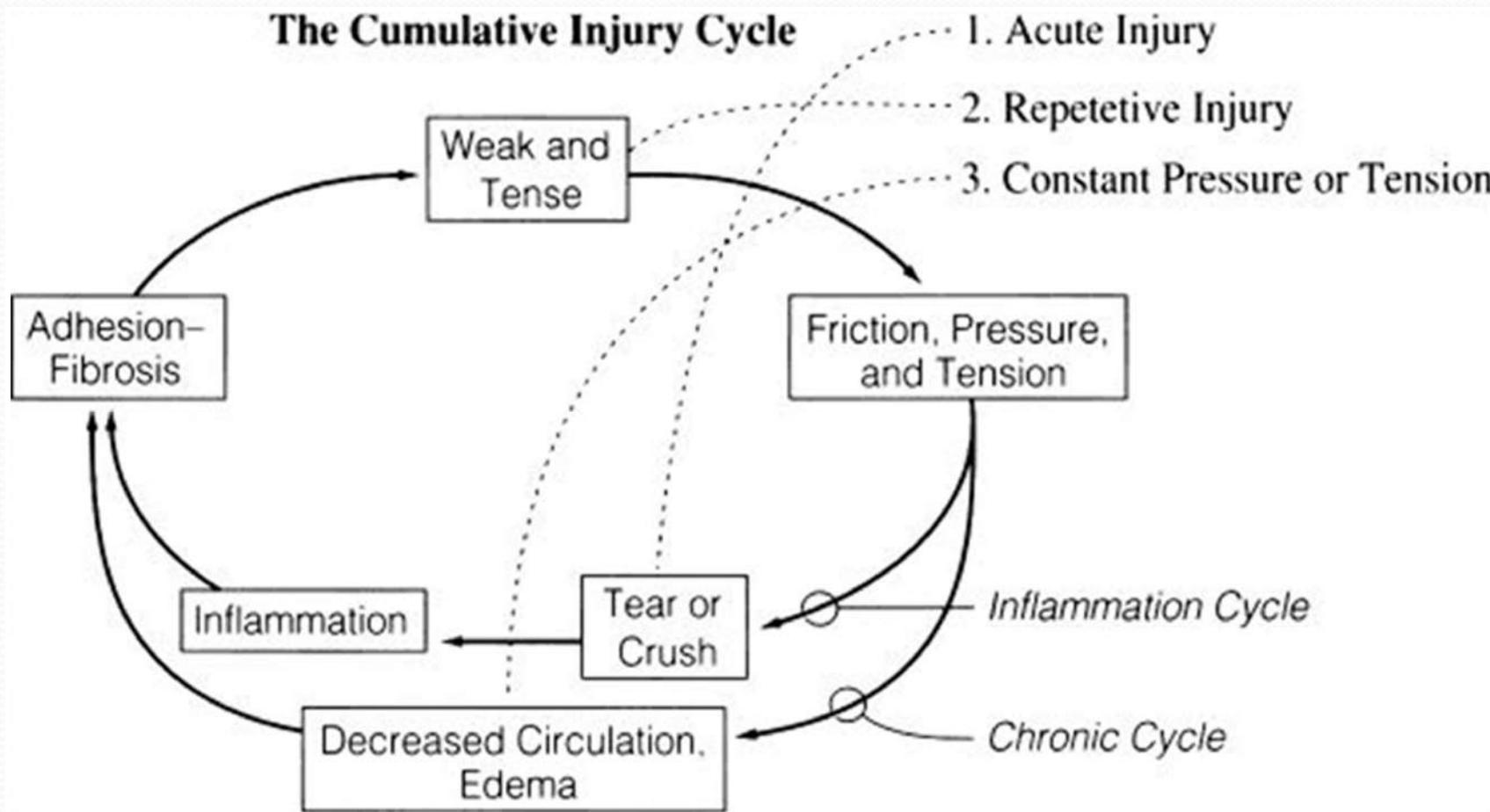
# Clinical Decisions ~ Inflammation & Pain

**To Adjust or Not Adjust! That is the question!**

1. Assess the injury and determine if the inflammation is acute
2. Determine if it is mild or severe.
3. If severe; refer if needed or follow your PRICES protocol and DO NOT adjust.
4. If moderate or mild then you can adjust even in the first 72 hrs.



# Injury Cycle



# The Keys to Great Adjusting!

1. Speed ~ quickness
2. Light touch on set-up & tissue pull
3. Broad, non-specific setup vs specific
4. Correct biomechanical line of drive
5. Use multiple biomechanical components
6. Use correct biomechanical sequence
7. Get depth on the adjustment
8. Be confident, assertive & have no fear
9. Practice skills with DCs outside pt care



# The Keys to Great Adjusting!

## 1. Speed ~ quickness

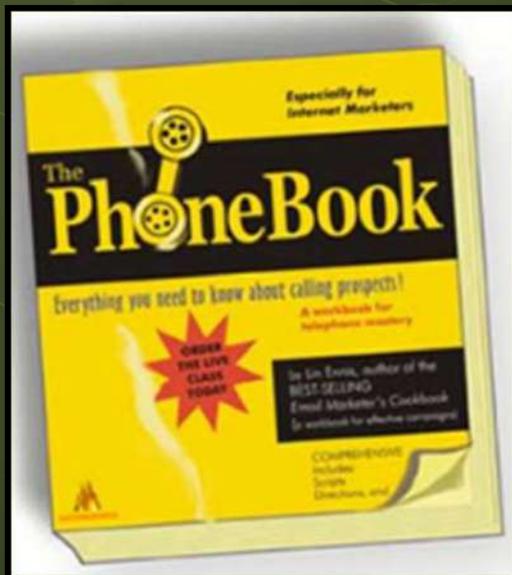
Speeder board, drop table practice,  
into an old tire or pillow



# The Keys to Great Adjusting!

## 2. Light touch on set-up & tissue pull

Touch your forearm, the first time palpate firmly, the second time palpate lightly. Which way can you feel the most detail? Remember the hair in the phone book drill. Now try that with your spinal palpation skills! The lighter your touch is, the more comfortable the pt is & the less the pt's muscles will tighten, for an overall better experience!



# Light Contact

Use a light contact as if you are touching a child.

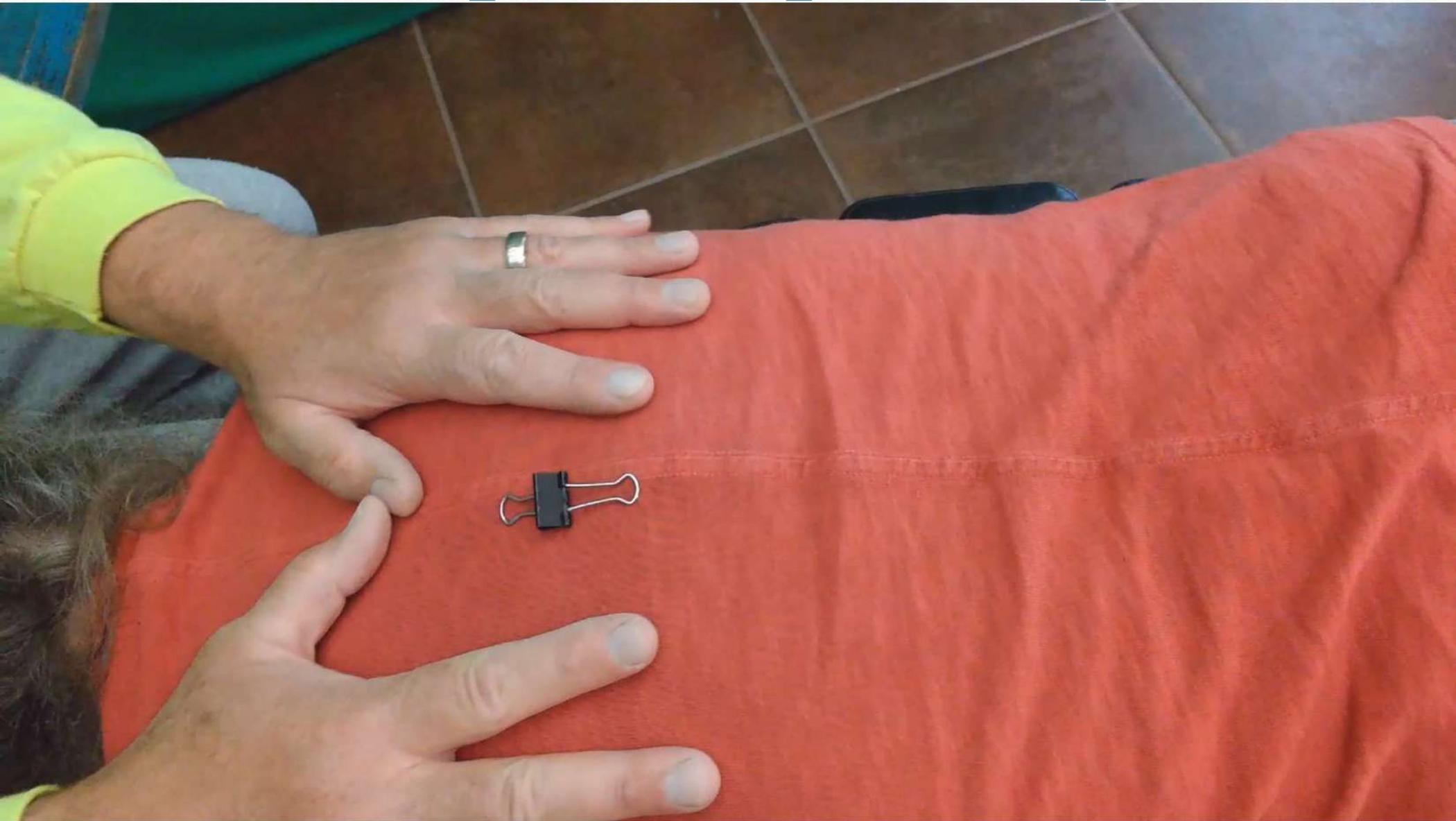
Your hands should be hovering around the pts body, not stabbing in.

Watch for aggressive contacts!

**No digging your pisiform into the pt as the pt will become tense!**



# T Spine Paper Clip



# The Keys to Great Adjusting!

## 3. Broad, non-specific setup vs specific

**Specificity:**

**Touch your pisi**

**Flat hand demo equal pressure**

**Pin point vs flat hand vs not touching**

**Don't need to have your hand on the pt**



# Pinpoint vs Broad Touch

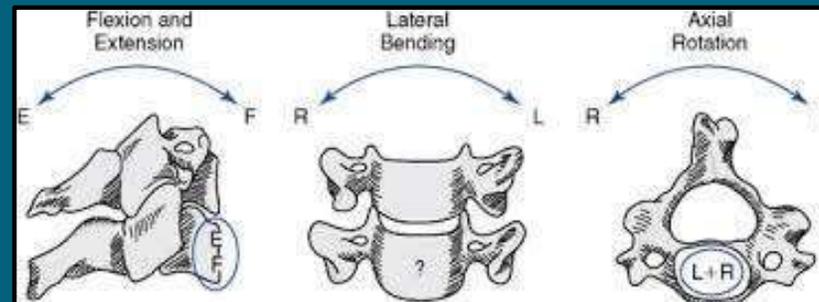
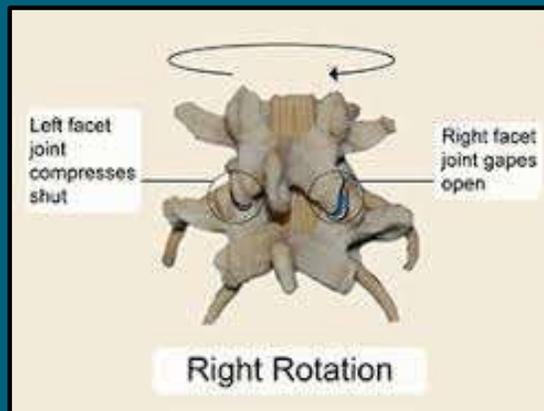
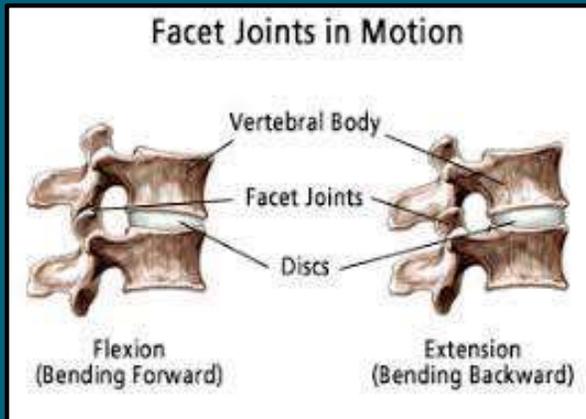


# The Keys to Great Adjusting!

## 4. Correct biomechanical line of drive

Find the restriction (subluxation) & then push (adjust) through the path of joint motion (least resistant path). **Reading the joint.**

**Dr. John Caponio**



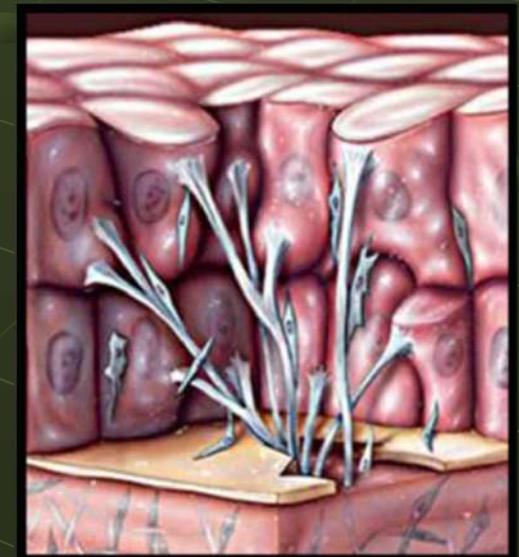
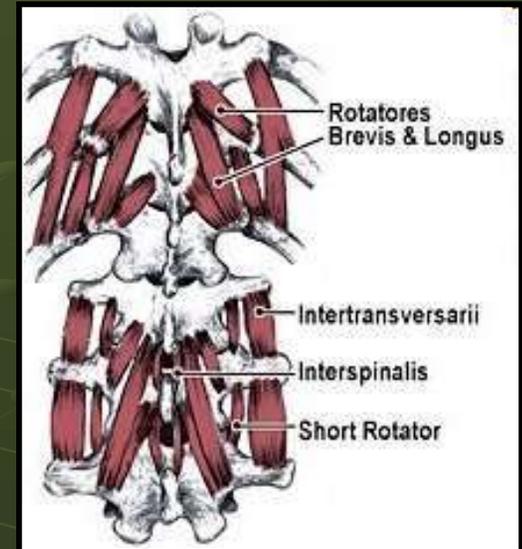
# The Keys to Great Adjusting!

## 5. Use multiple biomechanical components

The more vectors and/or torque you can include in your adjustment the easier the jt will release.

This is true because of the biomechanics of the bony jt & that the muscle fiber angles vary for a given joint. Using multiple directions maximizes GTO firing in the highest number of muscle fibers. Also maximal adhesions are broken and/or stretched & the pt is more relaxed & comfortable.

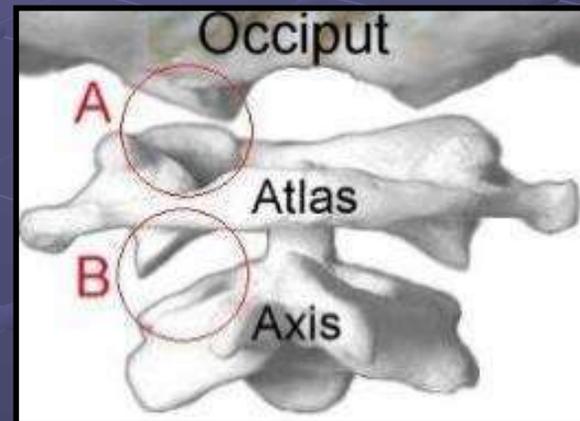
**Why do muscles have multiple actions?**



# The Keys to Great Adjusting!

## 6. Use correct biomechanical sequence

incorporate multiple motions in the **correct sequence** to insure that the jt opens as efficiently as possible.



AVERAGE SEGMENTAL RANGE OF MOTION DEGREES AT EACH SPINE LEVEL

Level	Flexion	Extension	Lateral bending	Torsion
Occ-C1	13	13	8	0
C1-C2	10	9	0	47
C2-C3	8	3	10	9
C3-C4	7	9	11	11
C4-C5	10	8	13	12
C5-C6	10	11	15	10
C6-C7	13	5	12	9
C7-T1	6	4	14	8
T1-T2	5	3	2	9
T2-T3	4	4	3	8
T3-T4	5	5	4	8
T4-T5	4	4	2	8
T5-T6	5	5	2	8
T6-T7	5	5	3	8
T7-T8	5	5	2	8
T8-T9	4	4	2	7
T9-T10	3	3	2	4
T10-T11	4	4	3	2
T11-T12	4	4	3	2
T12-L1	5	5	3	2
L1-L2	8	5	6	1
L2-L3	10	3	6	1
L3-L4	12	1	6	2
L4-L5	13	2	3	2
L5-S1	9	5	1	1

# **The Keys to Great Adjusting!**

## **7. Get depth on the adjustment**

**Why depth? To maximize:**

**muscle relaxation**

**proprioceptive firing**

**breaking/elongation of adhesions**

**fluid flow**

**Depth is achieved by doing 1-6!**

**1. Speed ~ quickness**

**2. Light touch on set-up & tissue pull**

**3. Broad, non-specific setup vs specific**

**4. Correct biomechanical line of drive**

**5. Use multiple biomechanical components**

**6. Use correct biomechanical sequence**

# The Keys to Great Adjusting!

8. Be confident, assertive & have no fear

9. Practice skills with DCs outside pt care

**The best way to learn something is to teach it.**

**Work on skills with another DC.**

The goal is to be able to have your set-up feel exactly the same to your adjusting partner at least 5 consecutive times.



# **Are You An Amazing Adjusting DC?**

**Do you routinely adjust transitional regions? +10**

**Are your pts rarely sore after an adjustment? +20**

**5% or less of your patients guard. +30**

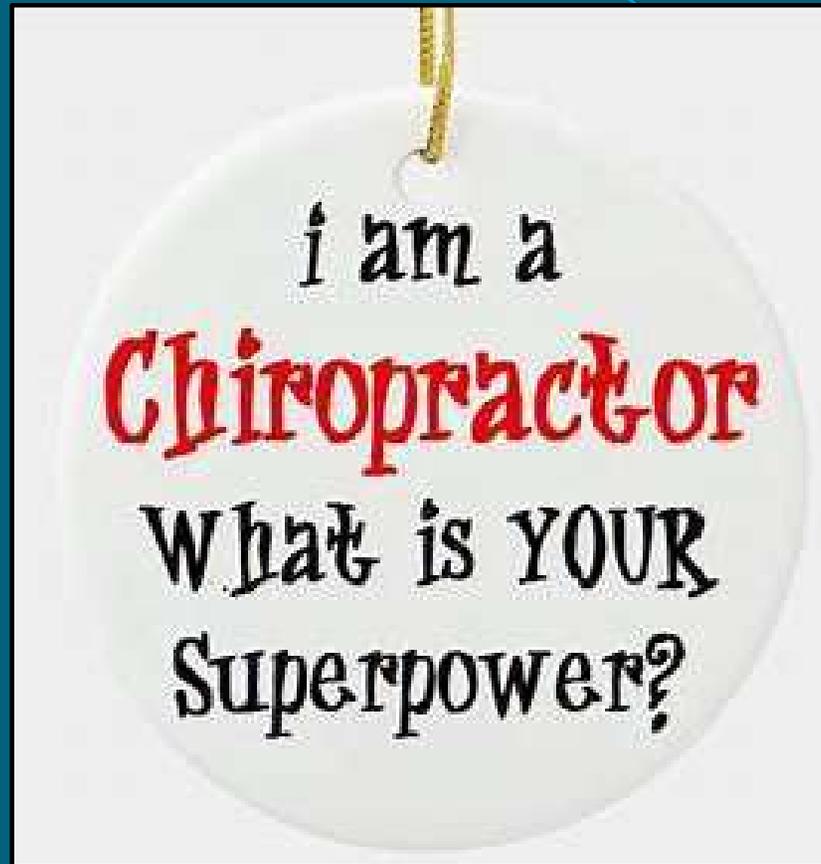
**Pts tell you no other DC has moved that segment! +40**

**You fix something no health care provider could! +50**

**You prevent 4 or more surgeries a year! +100**

**You amaze yourself once a month or more! +100**

# Demonstrations for Better Technique

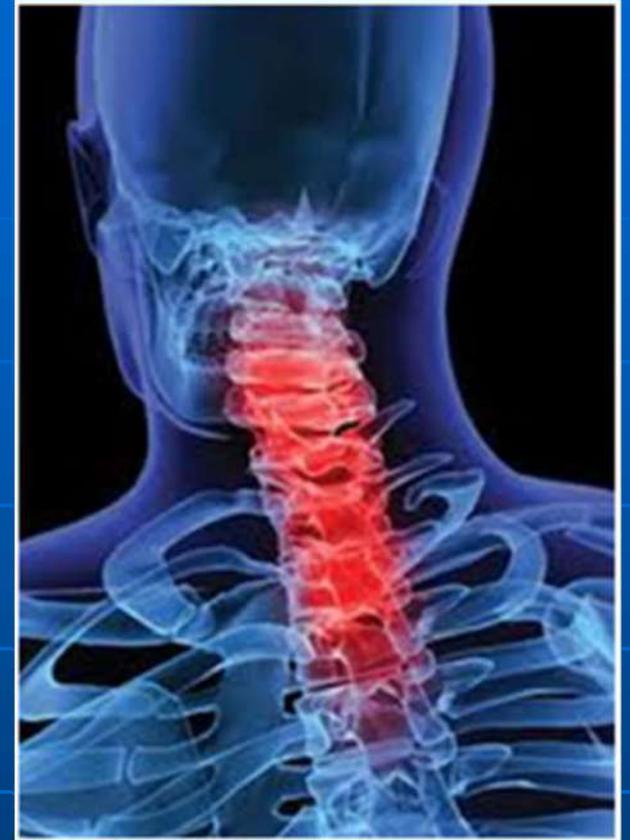


# Cervical Adjusting



# Neck Adjustment & The Guarding Pt

Your pt wants to move their head & won't relax. 1st make sure they are not scared of the neck adjustment. Explain to them how safe the adjustment is, what the audible is, etc.



# **DON'T Lift The Pt's Head!**



If you lift the head to get flexion the pt will likely tighten & guard. You can see the pt's (to the left) anterior muscles contracting. Also if you lift the head & hold it up too long you may begin to shake, as your muscles fatigue! Now the pt thinks you're nervous.

**Not good!**

**Challenge: at the end of your set-up can you take your adjusting hand off the pt? If not there is likely a lot of pressure going into the pt's neck. Check it out next time you adjust.**

# Coupled Motion Of The Neck: Demo

**Try all 3 possibilities, see which one feels best!**

1. first rotate & then laterally flex
2. first laterally flex & then rotate
3. rotate & laterally flex simultaneously

The neck moves easiest when both motions are done at the same time, **try it.**

This is due to the concave & convex nature of the facets. Adjust with this motion & the pt will have a much better experience & the jt will open more efficiently.

# Cervical Adjusting & PNF

1. In a neutral position tap the pt's face on the side you are going to adjust.
2. Ask the pt to bring their ear into your hand - they get to move their head & **can't guard!**
3. Use your hands as "guides", pushing the pt's head & neck into proper coupled motion.
4. Once the neck reaches the end ROM the pt stops contracting & their muscles relax.  
**This is PNF! The pt contracts & then relaxes.**
5. At that instant you adjust.

**This works great! Try it!**

# Cervical Spine ~ Contact



**Super light!** With the contact & tissue pull we are only trying to get the loose skin, slight layer of fat & loose superficial muscles out of the way. Any more than that & we are digging in, causing the pt to be apprehensive & guard.

# DC Hand Motion & The Set-up

Upon setting up **DO NOT** push in toward the midline of the pt's neck. This causes jts on that side to jam & the pt will likely tighten. **Instead:**

1. find the vertebra you want to adjust
2. fulcrum pt's neck & head over your adjusting hand
3. Set-up hand should glide **AWAY** from the midline

**Try it. This causes no stress to the pt's neck.**



# Tissue Pull: Demonstration

Just move the loose tissue out of the way.

No digging as the pt will become tense!

We are **NOT** trying to get bone-on-bone contact!



# Cervical Spine ~ Sequence



The sequence is critical, follow the steps in this order:

1. Have table/pillow hold head in flexion, **Don't Lift It**
2. Traction the neck out I-S to open the facets
3. then laterally flex & rotate simultaneously

**This biomechanical sequence maximizes gapping the facets & pt comfort, as there is no jamming.**

# Head & Neck In Flexion?

To keep flexion in the adjustment without having the pt strain their neck muscles use a support, (pillow or towel), or use the headpiece on the table. This allows the pt to have relaxed anterior compartment muscles & gaps the facet jts **before** the adjustment.



# Rotation Only?

**This will cause a cavitation, but without coupled motion we only get muscle fibers & adhesions that are elongated in that rotational direction. We do NOT affect fibers that are oriented in other directions. Pure rotation often causes pt soreness & increases chance of stroke!**



# Center That Nose ~ Proper Position



**Keep the nose centered, so it lines up with the sternum. This allows for maximum patency of the vertebrobasilar artery & better facet motion!**

# Neck PNF & Set-up



# Neck Tug



# What The Heck?



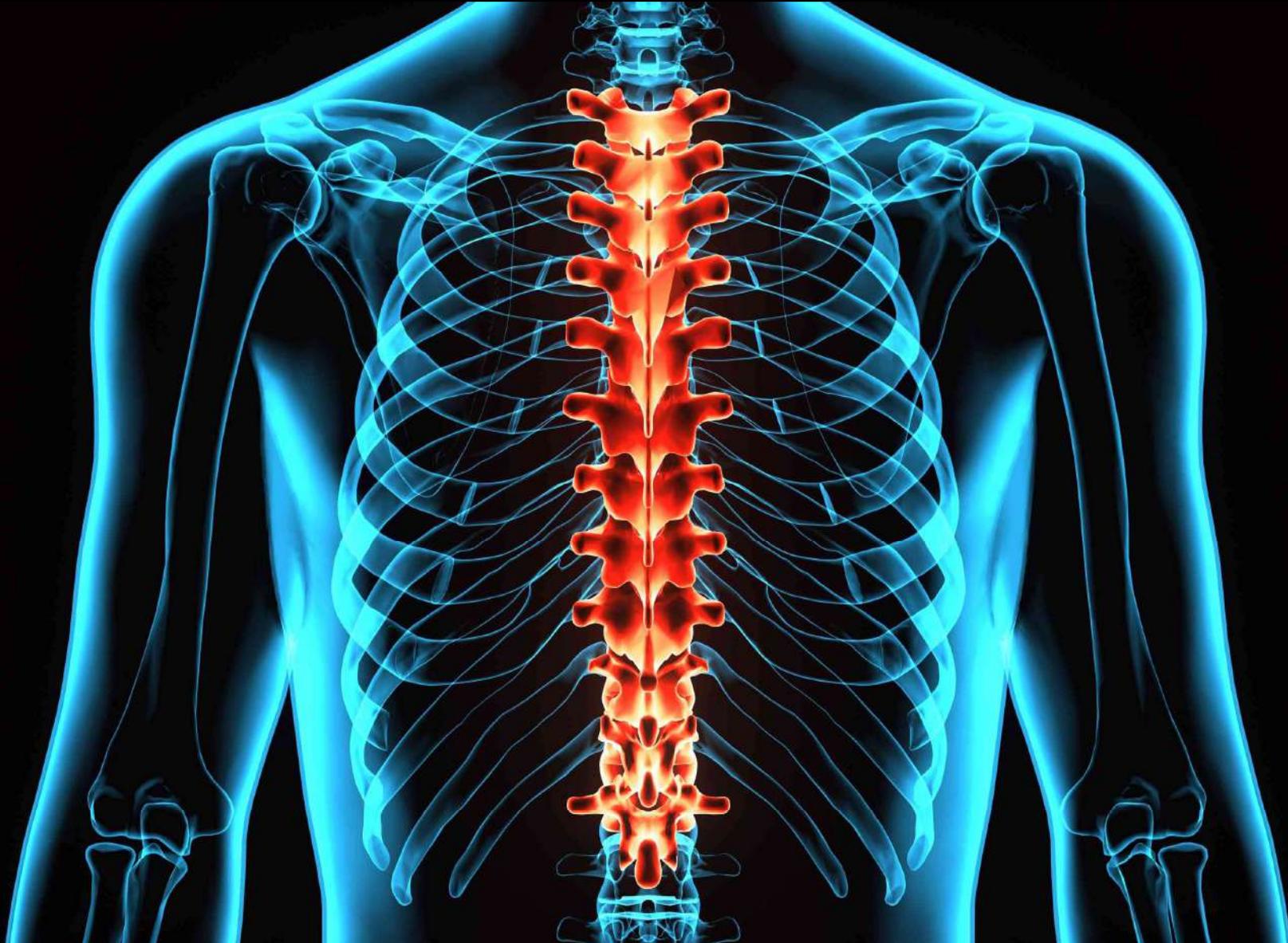
# What The Heck?



# What The Heck?



# Thoracic Adjusting



# **PNF in Thoracics**



**Before you adjust the pt, place your hand on their back where you are about to adjust. Apply downward pressure & have the pt inhale. This will force the muscles of inspiration to contract & then relax, (PNF). You will actually notice that the pt breaths better after this. So the pt will be more relaxed. Now adjust.**

# PNF: Thoracic Spine



# PNF: T Spine



# PNF: Thoracic Spine



# PNF: Thoracic Spine Single Hand



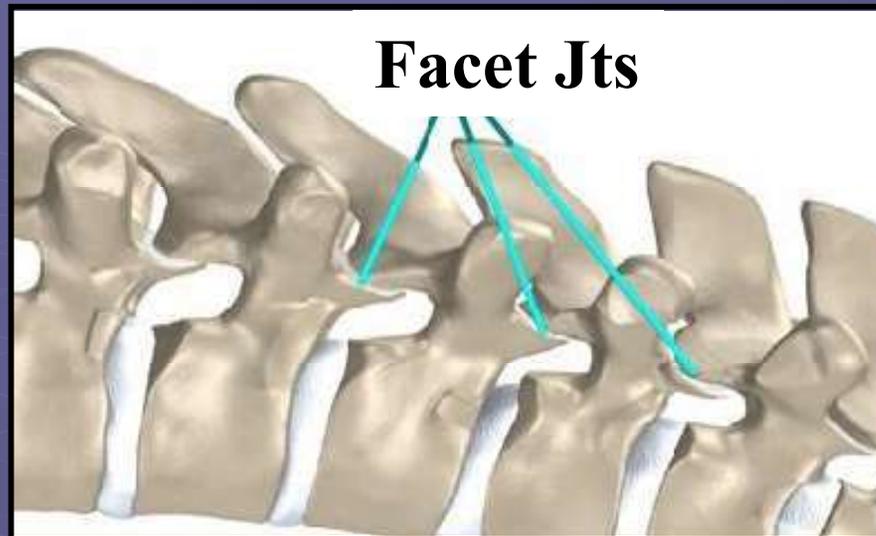
# PNF: Thoracic Spine Single Hand



# PNF: Thoracic Spine Single Hand



# Thoracic Spine ~ Sequence



The sequence of the line of drive is critical.

It **MUST** be:

1. I to S up the spine
2. then rotation
3. and finally P to A

This biomechanical sequence maximizes gapping the facets & pt comfort as there is no jamming.

# Thoracic Spine Line of Drive



# Thoracic Spine ~ Contact



Traction up the pt's spine to open facets.  
Use a double knife edge & **NON-specific set-up** to allow for maximal pt breathing & comfort.  
Then torque the proper direction & finish P to A.  
Bridging the table (seen above) will open the jts **BEFORE** you adjust.

# DC Position



1. Stand on side of pt by their pelvis.
2. Use double knife edge.
3. DC should then lunge into pt using their entire body, instead of just upper extremities.
4. DC should have their back leg kick up acting as a long lever to gain energy.

# Thoracic Spine: Lunge



# Thoracics In Side Posture?



**Yes! Why? The thoracics allow for a lot of rotation. So to adjust them effectively you want to use that rotational component. If the pt is prone or supine you limit the rotation losing a major part of the jt motion!**

**Try it, maybe as high as T6!**

# Thoracics In Side Posture?



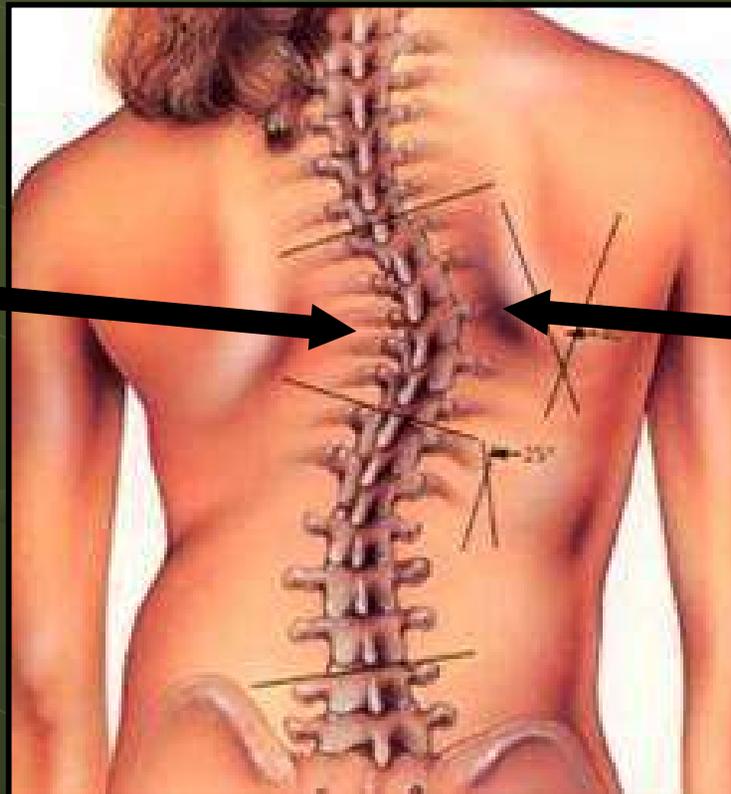
**Yes! Why? The thoracics allow for a lot of rotation. So to adjust them effectively you want to use that rotational component. If the pt is prone or supine you limit the rotation losing a major part of the jt motion!**

**Try it, maybe as high as T6!**

# PNF & Scoliosis

Always contract the overly contracting muscle group first. In this case contract the muscles in the concavity first. This allows them to be stretched more effectively **AND** the muscles on the convex side to be strengthened

**First contract  
the muscles in  
the concavity**



**Then strengthen  
the weaker  
inhibited muscles  
on the convex side**

# Lumbar Adjusting



# Lumbar Spine ~ Sequence



The sequence of the line of drive is critical.

It **MUST** be:

1. S to I down the spine
2. then into posterior pelvic tilt
3. and finally lumbar spine rotation

If you rotate first you jam the lumbar facets.

# Lumbar Spine ~ Prone Stretch



# Lumbar Spine

## Side Posture: PNF Stretch



**This position uses a nice longer lever.**

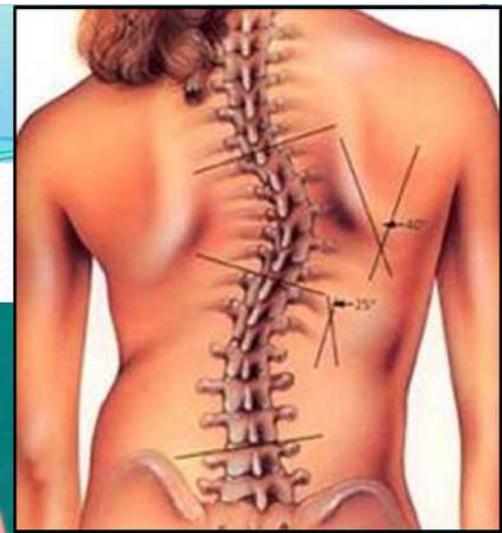


## Side Posture: PNF Stretch



Use PNF protocols to help pt relax before and/or after an adjustment. First have the pt contract their low back muscles by pushing into your hand. These muscles are the overactive group so this will help them relax. You can also have the pt push their knee up toward their chest against resistance, (isometrically or full ROM), to relax the hip flexors. Now you can have the pt contract the abs as the abs are now less inhibited & this will help shut off the low back muscles even more. Now adjust the pt.

# PNF: Side Posture



# Lumbar Spine - Seated PNF Release



Have pt extend back into your hands providing resistance. Works well to shut off spasms before or after an adjustment. Have pt go through all the 6 ROM's. For best results use a full ROM if the pt can.

# PNF Low Back Seated





**Correction: Pts bottom arm needs to be bent up towards their head not down by the pt's ribs. This allows the pt to roll under the DC without the DC having to touch or push the pt under their body, **AT ALL!****

# Lumbar Spine ~ Pt Rolls

Having the pt roll under you avoids you having to push on the pt & injuring your wrist, elbow, shoulder & low back.



# Lumbar Spine ~ Contact



Traction down the pt's spine to open facets.  
Slide your pisiform to segmental contact position.  
You now can have a specific contact without  
bending your wrist & jamming your pisi into the pt.  
So it will **NOT** look specific, but it is. Pt is more  
comfortable & you are not killing your wrist.

# Side Posture Pelvic Rebound



# Side Posture Forearm Traction



# Lumbar Spine Arm Drag and PNF



# Low Back The Fish Hook



# Low Back The Fish Hook



# Side Posture

## Lower Arm & Knee Reach



# Lumbar Spine

**Lift back leg  
& use as a long lever.  
The inside of the DC's thigh  
should be up against the  
backside of the pt's thigh.  
Now just drop your body  
down & around following  
the natural opening  
mechanics of the facets of  
the lumbar spine!  
Often moves with set-up!**



# Fire Hydrant ~ Kick Move



Grab the back of the pts thigh with the inside of your thigh to get the proper lumbar spinal flexion & pelvic rotation. Do **NOT** go straight down the seam of the pt's pants as that only jams their thigh into the table & jams the hip jt.

# Side Posture Thoracics



# Side Posture Thoracics



# What's Wrong With This Picture?

Please list as many things as you can that this DC is doing wrong.



# What's Wrong?



# Side Order?



# **Special Moves**

**Adjust opposite the listing**

**Shoulder Mobilization**

**Migraines: cord tethering & sacral pump**

**Lateral Rib Move**

**Hip Joint Sliders**

**Hip Joint Tug**

**Knee Extension**

**Thoracic: Side Posture**

**Ear tugs & Jaw thrusts**

**TMJ Super slider**

**Cervical Spine Distraction Tug**

# Shoulder Mobilization



# Migraine Headache Cork Screws



# Lateral Rib Adjustment



# Hip Tug



# Knee Adjustment



# Sacral Pump



# Sacral Pump S to I View



# SCM



# PNF before the Ankle Adjustment



# PNF for the Hip Joint



## Special Cases

**Acute Torticollis SCM Spasm Protocol**

**Quadratus Lumborum spasm**

**Unstable Spondy ~ Hot Disc**

**Scoop move**

**Thanks So Much For Being Here Today!**



**Hope To See You Soon**  
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