

**Back To
Chiropractic
CE Seminars
Technique**

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Back To Chiropractic CE Seminars ~ Technique Presented by Marcus Strutz, DC

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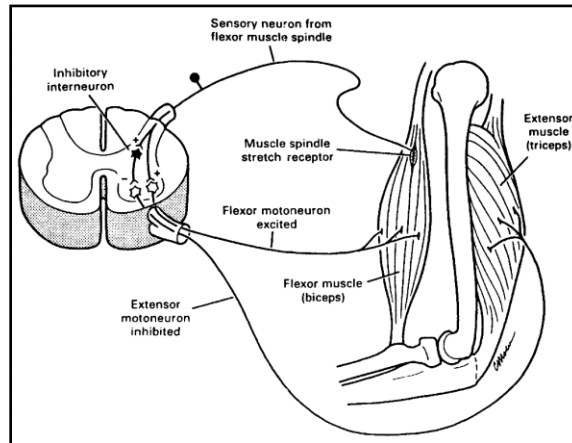
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Proprioceptive Neuromuscular Facilitation Stretching



Reciprocal Inhibition

The Rules of Reciprocal Inhibition

1. Anterior muscles work opposite posterior muscles
2. Left lateral muscles work opposite right lateral muscles
3. Left rotation muscles work opposite right rotation muscles

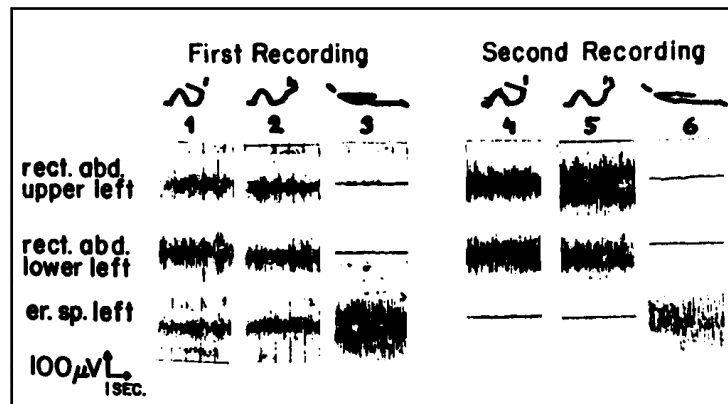
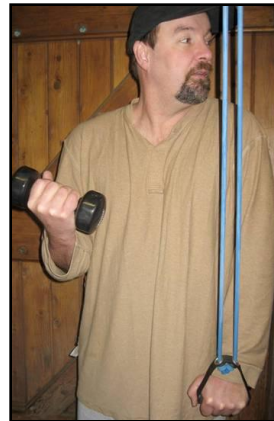
The best way to remember this is the position of walking.

You can use these rules in a rehab situation or working out in the gym.

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.



EMG Before & After Stretching

Korr IM, Neurobiologic Mechanisms in Manipulative Therapy, 1978

Best Results: Strengthening

1. Always stretch the agonist & antagonist before strengthening.

Ex 1: If strengthening the upper back muscles, first stretch the chest muscles & then the upper back muscles to optimize muscle firing.

Ex 2: If strengthening the abdominals, first stretch the low back muscles & then the abdominals to optimize muscle firing.

Best Results: Stretching

1. Always contract the antagonist & then the agonist muscle before stretching.

2. or simply contract the agonist muscle & then stretch.

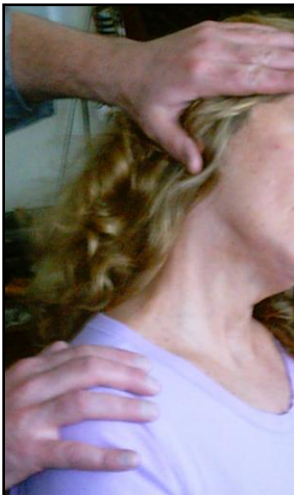
Ex 1: If stretching the hamstrings, contract the quads & then the hamstrings, then go into the stretch.

Ex 2: If stretching the calves, dorsi-flex your foot & then plantar-flex your foot, then stretch the calves.

PNF Stretching Protocols: backtochiropractic.net/mstrutz

Stretching Images

Lateral Flexion



Neck Extension Stretch



Fulcrum neck
over fingers of all
vertebrae.
Stretches anterior
tissues &
mobilizes the
neck.

Right Lateral Flexion



Left Lateral Flexion



Right Neck Rotation



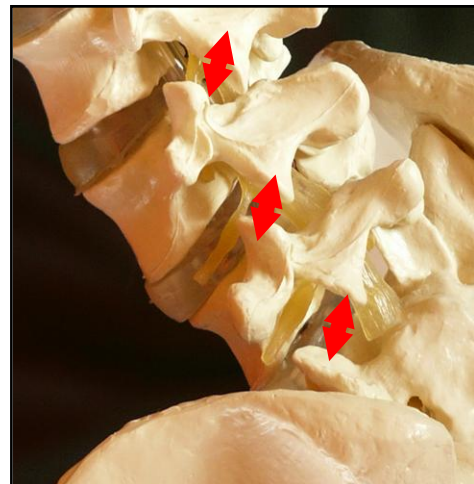
Left Neck Rotation



Low Back Seated Stretches ~ Pt is seated, joints are jammed



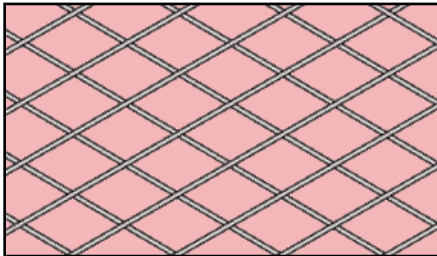
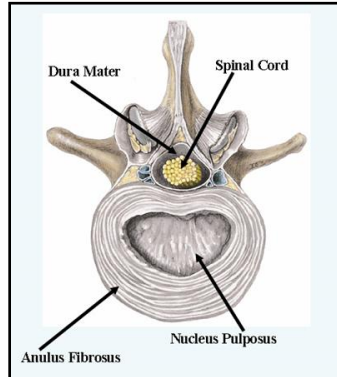
Low Back Side Stretch ~ Pt is on their side & rotated, the joints open.



Bad Stretching



Bad stretching position.
No isolation & leaning over is always hard work for the back.
Two rubber bands demo.
We Learned That In School?



Annular Fibers: Relaxed



Annular Fibers: Under Stress

The annular fibers are at a 30° angle, as you lean forward & rotate only half the fibers hold, making them susceptible to injury.

Shoulder Traction While Lying Down

Traction move for frozen shoulder.



Shoulder ~ Pendulum Exercises

Allow arm to dangle & have pt move shoulder through all ROM's or spell the alphabet. Great for frozen shoulders.

Shoulder & Scapular Stretch



Chest Stretch ~ Lean through doorway supporting your body. Great stretch for pec major & pec minor, allowing for better breathing.

PMS Cramping ~ Works great for cramps. Cross stretch held, no thrust. Add a hot pack across the cramping region.

Fibrin deposits result in chronic inflammatory conditions. Spine, 1987

Hypomobility results in degenerative changes & adhesions around the facet joints. Adjusting gaps the joint & breaks up adhesions, re-establishing joint motion. JMPT, 2004

Scattered toothpicks, shrink wrap or a spider's web are all examples of the pattern of adhesion formation.

Soft Tissue ~ TMJ



Using thumb in a downward motion, work thru the adhesions in the SCM & scalenes



Using thumb in a downward motion, work thru the adhesions in the masseter muscle.

The idea is to break up the adhesions & cause inflammation; thus starting the healing process in the muscle.



Soft Tissue - Forearm

For most wrist, elbow & forearm conditions, deep adhesions have formed & need to be broken up. This is aggressive & the pt will be sore afterwards. No ice, we want the inflammation.

Wrist - Radial/Ulnar Sheath Shimmy

The sheath between the ulna & radius can also form adhesions. Aggressively shaking the bones up & down will assist in mobilizing the tissue.



Wrist - Open Hand Stretches

Great stretch for flexor muscles & tendons. Hand is splayed on wall with shoulders perpendicular to wall. Rotate head away to help stretch neck as well.

Popliteus Release



Working the popliteus muscle behind the knee can give relief for radiating pain & locking knees.

Soft Tissue – Calves

Calf adhesions can be broken up using thumbs or forearm. Always push toward the heart.



Calf - Stretch: Dorsiflexion while raising your bottom off the table & pulling your toes toward your body will stretch the calf.





Feet - Stretching

Squatting on toe tips can provide a stretch for the plantar fascia.



Soft Tissue - Feet

For Plantar fasciitis dig aggressively through the bottom of the foot with a tennis ball. This breaks up adhesions & causes inflammation helping the tissue heal. No ice afterwards.



Soft Tissue - Feet

For Plantar fasciitis dig aggressively through the bottom of the foot. This breaks up adhesions & causes inflammation, helping the tissue heal. No ice afterwards.

Iliopsoas Stretch: Various positions to perform the iliopsoas stretch.
Use PNF protocol, works well with many low back cases.



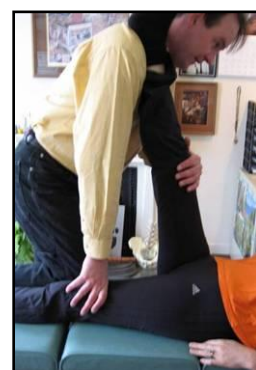
Iliopsoas Stretch: Stretch done off the side or end of the table.



Quad Hip Flexor Stretch: Lean back to stretch quadriceps.



Hamstring Stretch: Use PNF protocol to stretch the hamstrings. Works well in cases with radiating pain.



Abdominal Strengthening Crunches are great for core strengthening. Great for pts with chronic low back problems. Raise scapulae off table slowly, 3 sets of 10. Also can curl pelvis toward chin or push knees toward the ceiling.



Was BJ Wrong?

Watch for:

His posture low back problems long term

Elbows, wrists & shoulders

Line of drive

Idea that bone is “out”

Concept of spinal cord & nerve root

Ligament properties

Would you want that adjustment?

Chiropractic Adjusting

Reverend Samuel H. Weed, selected two Greek words, ‘cheir’ and ‘praktikos’, meaning when combined, “done by hand” Chiropractic

What Is The Public Perception? Chiropractors perform many exams that pts have not seen, be sure to explain as you go! (verbalize your routine spinal assessment ~ AK, leg checks, palpation etc)

Do You Believe?

62% of US adults used complementary & alternative medicine CDC National Health Statistics, 2004

43.0% prayer for one’s own health

24.4% prayer by other’s for one’s own health

18.9% natural products

11.6% deep breathing exercises

7.6% meditation

7.5% chiropractic care

5.1% yoga

5.0% massage

3.5% diet-based therapies

How Is Everything? Why Do Some Pts Come In Only Once?

Complacency. Doctor: “This is no big deal.” Patient: “It is to me.”

“It’s just a simple operation. Routine. Boring. I’m only doing it for the money.”

Outrageous Claims? How many Blind or Deaf Pts can you cure?

Chiropractic Diversity: Good or Bad?

“United we stand, divided we fall.” - Patrick Henry, 1799

***Subluxation**

1. Myopathophysiology
2. Neuropathophysiology
3. Kinesiothophysiology
4. Histochemical Changes
5. Pathophysiology

“Minuscule amounts of pressure on a nerve root (10mm Hg, equal to a feather falling on your hand), resulted in up to a 50% decrease in electrical transmission.”-Seth Sharpless PhD & Marvin Luttges PhD

“Subluxations are very real. We have documented it to the extent that no one can dispute their existence. Vertebral subluxations change the entire health of the body by causing structural dysfunction of the spine and nerve interference. The weight of a quarter on a spinal nerve will decrease nerve transmission by as much as 60%.” -Chang Ha Suh, PhD

Patient Education:

(public has no idea what we are selling)

Marketing Ideas: backtochiropractic.net/mstrutz

Religion & Pluto Shifting Paradigms

1% keep their New Year's Resolution for the year. 93% blow it by Jan 12th!

How Many Visits Does It Take To Shift The Patient's Paradigm?

Talk Over The Patients Head. Impress the pt on that initial visit. Let them know you are highly educated & DID NOT just attend a weekend course. How smart do you sound on a routine visit?

Chiropractic Education vs Medical Education: backtochiropractic.net/mstrutz

Patient Education ~ Subjective Range of Motion: Neck

Have your pt go through all 6 neck motions. Ask them if they move symmetrically, smooth, with no obstructions or pain. Remember The Flip: You want pts to ask to be adjusted, instead of you telling them.

Patient Education ~ Pain Relief & Blood Flow

Squeeze your forearm & let go. Ask the pt why the skin turns white. Ask your pt what they think happens when their muscles are tight. That's right - decreased blood flow & trapped chemicals which cause pain.

Wellness: Respiration & Cardiovascular Health

Have your pt sit-up straight & breathe. Then have them hunch over & breathe. Ask them the difference - it's obvious. Let them know chiropractic helps maintain proper breathing & explain the importance of oxygen. You can also perform a pre/post adjustment breathing test, or use a spirometer.

Posture is #1 Posture affects & moderates: spinal pain, headache, mood, blood pressure, pulse, respiration, sympathetic function, homeostasis, autonomic regulation, breathing, hormone production.

American Journal of Pain Management, 1994

Sit-up Straight! Loss of proper joint structure & function (due to poor posture) ↑↑ adhesion formation in spinal soft tissue. Grieve, Common Vertebral Jt Problems, 1988

“Better than 90% of the energy output of the brain is used in relating to the physical body in its gravitational field. The more mechanically distorted a person is, the less energy available for thinking, metabolism and healing.” - Dr. Roger Sperry, Nobel Laureate

Don't Believe Me? Take A Look Have your pts observe the posture of people over 50. Typically people with good posture appear healthy & people with bad posture look ill.

Wellness: Nervous System ~ AK Posture Check. Stand up straight & put your arm out at 90° to your side then have someone push down on it. It should be strong. Now slump over (anterior head translation & flexion) with bad posture & push down again, your arm should be weak.

Why Don't You Die When You Sleep? Autonomic Nervous System

Myth Buster ~ I don't need a Chiropractor, my pain is gone. Pain is often the first thing to go in the healing process; think broken arm. Cancer can develop for 7 yrs before you're aware of symptoms. If you're feeling good couldn't you feel even better? Think dental care, oil change & proactive health! Wellness care, adjusting areas that don't hurt?

Patient Education: Sprained Ankle Patients often have a hard time understanding a sprained low back or neck, so use a sprained ankle as an example.

Patient Education ~ Urinary Bladder Analogy Think about your urinary bladder for a moment. If you DON'T have to pee, is there urine in your bladder? Probably, but just not enough to give you that urge. This is true for inflammatory chemicals in your muscles as well. Your tissue always has some build-up of chemicals, but often not enough to cause pain or muscle tightness. To prevent excessive build-up, maintain proper fluid flow with an adjustment.

Pt Education: It may hurt! Inform pt after an adjustment they may be sore regardless of the stage of healing. This can last 1-3 days & is NORMAL. Why? During the acute stage due to ↑ inflammation, during the chronic stage by releasing trapped chemicals & starting new inflammation. This chemical flow (old-out, new-in) is essential for tissue healing. If you don't explain this, pts will leave thinking you hurt them.

Inflammation & Pain: Good or Bad? Remember the acute inflammatory process is what helps heal the tissue. Have pt pinch themselves then release. Severity of pain does not always correlate with severity of injury.

No Frankenstein! Don't "freeze" the body after an adjustment. Our goal is to: increase or maintain motion

Acute Inflammation Protocols: backtochiropractic.net/mstrutz

Stages of Tissue Healing: backtochiropractic.net/mstrutz

Patient Education ~ Demonstrations Trapezius Tension Have your pt palpate your traps as you pretend to: drive, cook, brush your teeth, use a mouse, read, etc.

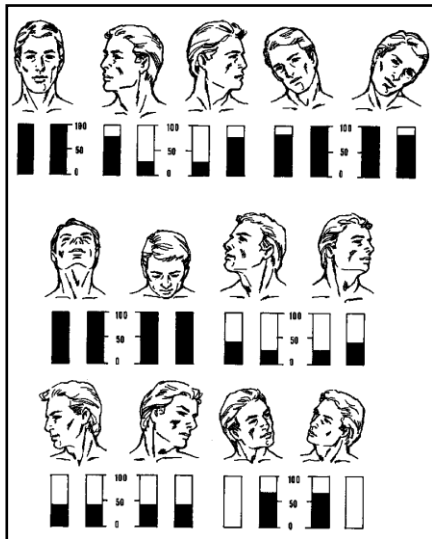


Patient Education 10 lb demo. Fact: the average head weighs 10-12 lbs. For every inch of anterior translation your muscles hold an additional 10-12 lbs. **Demo:** have your pt palpate your bicep as you move the weight from over your shoulder to our in front of you. The bicep will go from loose to tight. This is the same as the trapezius muscle which holds your head upright all day.



Myth Buster ~ I can crack my own spine so I don't need to go? When you self adjust you're moving the joints that are easy to move or hypermobile. Typically you aren't adjusting the correct joint, it feels good for a moment (endorphins release & muscles relax) but you'll have to repeat the process multiple times in a day. **Fact:** DC's choose to get adjusted by another DC instead of doing it themselves.

Stroke Risk: Rotational manipulation of the upper cervical spine is most likely to cause a stroke.



Vertebral Artery Obstruction

Lateral flexion, flexion & extension maintain patency best. Avoid rotating the nose away from the midline, as this decreases vertebral artery patency.

Billboards If we put up billboards for each medical malpractice lawsuit lost, between LA & New York, you would see one every 735ft (17,696 lost, 2462 miles). If we put up billboards protesting drugs for every pt who had a "serious adverse drug reaction" in a year, that would add 2,216,000 billboards or one every 6 ft.

Tennessee Titans' Albert Haynesworth gets adjusted by trainer John Takahashi. The Tennessean June 22, 2003

VBA Strokes? There is no evidence of excess risk of VBA stroke with chiropractic when compared to primary care. The ↑ risk of VBA stroke is likely due to pts with headache & neck pain from VBA dissection seeking care before their stroke. Spine 2008

If you adjust 100 pts/wk or 5000/yr, it would take 80 practice years (using 1 in 400,000) to cause a stroke & 800 practice years (using 1 in 4 million) to cause a single death. Why is chiropractic malpractice insurance is so low?

What are the risks of neck adjustments? The risk of death due to stroke caused by cervical spinal manipulation is 1 per 4 million. 40-50 strokes occur in the US per year & a dozen deaths.

What Insurance Companies Say 20 strokes per 43,000,000 office visits or one stroke per 2.15 million cervical manipulations. NCMIC 1994

Is It Safe? Canadian Medical Association Journal, 2001

The likelihood that a chiropractor will be made aware of an arterial dissection following cervical manipulation:

- 1 in 8.06 million office visits
- 1 in 5.85 million cervical manipulations
- 1 in 1430 chiropractic practice years
- 1 in 48 chiropractic practice careers

This is significantly less than the estimates of 1 in 500,000-1 million cervical manipulations calculated from surveys of neurologists.

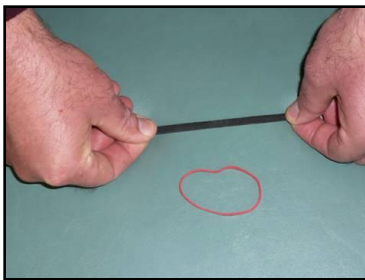
Risky Business

- 30% ADE in hospitalized pts
- .00002 - .00008% Death due to lightning in US
- .00001 - .00003% Serious neural complications due to cervical adjustment
- Cauda equina lumbar SM 1 in 100,000,000
- Death plane crash 425 miles 1 in 4,000,000
- Death MVA driving 14.5 miles 1 in 4,000,000
- Stroke/serious neurological injury from CSM 1 in 1-5,000,000Tx 1 in 100,000 Pts

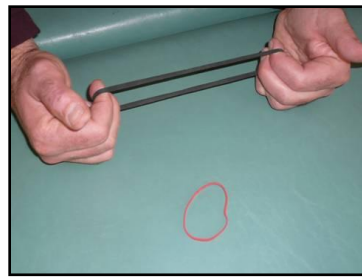
Blood Flow & The Adjustment Cerebellar hypoperfusion may occur after an adjustment, explaining why certain people experience headache, dizziness or nausea. Erik Barbaix, MD; Rudi Dierckx, MD, PhD

Tissue Properties of The Joint Complex

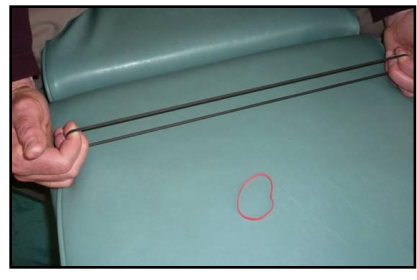
Rubber Band Demonstration



Relaxed, no tension



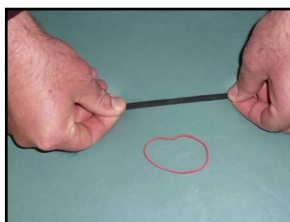
Normal tension



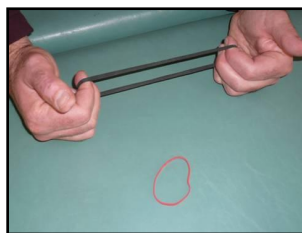
Excessive tension, band will fatigue & become lax

Elasticity: the springiness or resilient property of a tissue that causes it to resist deformation by recovering the original shape & size without permanent deformation. Ask your patient what happens when you pull the rubber band apart and let go once vs 1,000 times.

Plasticity is the property of a tissue that allows it to maintain elastic properties, but is not able to return to its' normal length. Permanent deformation has occurred.



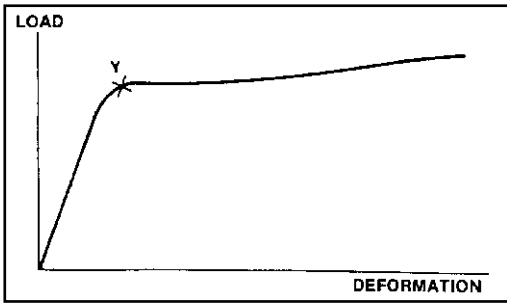
Neutral Zone



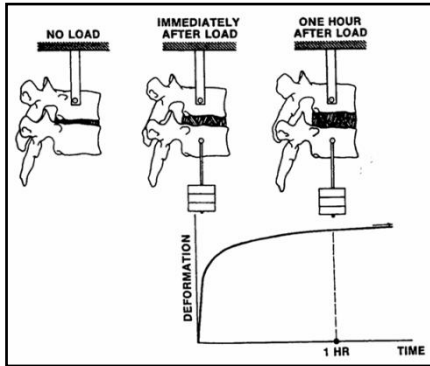
Elastic Zone



Plastic Zone



Yield Stress the point where the curve becomes nearly horizontal, after that the damage is permanent (plastic deformation).



Viscoelasticity is a time dependent property of tissue sensitive to loading rate. All tissues (bone, ligaments, discs, tendons & passive muscles) have a loading rate where a slow, gradual pull will produce considerable deformation before fracture.

I was tying my shoes and... If you tie your shoes every day & your back goes “out” once, then it can’t be from tying your shoes- otherwise it would happen every day. What happened? Your muscles slowly fatigue over time from routine activity, inflammatory chemicals build-up & muscles go into spasm. It’s the “straw that broke the camel’s back”.



Patient Education: Water Balloons Pretend the water balloon is the disc or joint capsule. As it inflames it will restrict motion & ↑ pressure on all surrounding structures, including nerves. The soft tissue will then constrict ↓ motion. A chiropractic adjustment is an excellent way to ↓ the inflammation.



Patient Education: The Sponge

A dried-up & wet sponge are good examples of fluid flow & dehydration of the disc.

Imbibition for the Discs Swaying back & forth is great to prevent back stiffness & pumps the discs.

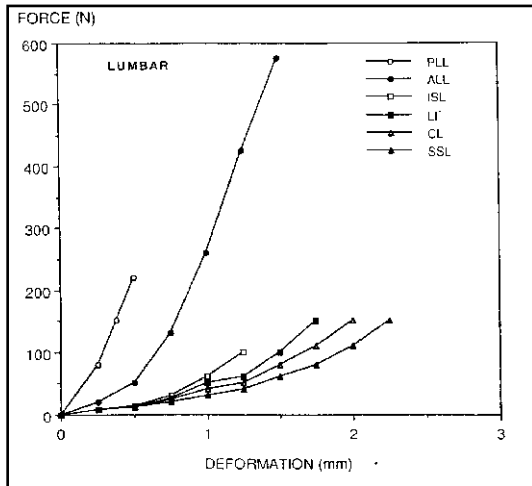


Myth Buster ~ My back is out, can't you just put it in?

Backs *DO NOT* go in & out. Chiropractors don't realign the spine, we increase the range-of-motion. An x-ray would show your spine in the exact same place before & after an adjustment. Why? The spine is held together with strong ligaments - without them you could easily become paralyzed by a simple fall. Chiropractors adjust "stuck" joints - which allows them to move through a free range-of-motion.

Watch What You Say! "I got it", "it moved", "it's in", all these imply that the bone moved from here to there. In fact, the joint can now move through a more complete range of motion. The bone has not moved to a new location.

Rubber Ball Demonstration Both look the same but one bounces & the other doesn't! Why? The balls are made of different materials that have different properties.



Force-deformation curve of the spinal ligaments

Forces exerted during an adjustment, (short duration) are not sufficient to cause a change in the viscoelastic component of the ligaments. To do this requires sustained forces: muscle tone, gravity or traction.

NFL Players X-rays are identical before & after games!

**Bend Your Finger & Then Let Go, Does It Stay Misaligned? Why Not?
Crack all your knuckles. Do they become misaligned?**

Are All Ligaments Created Equal?

How Long Does It Take To Lengthen A Ligament? Or For You To Do The Splits?

Motion Studies. Why are motion studies performed after a MVA?

Misalignment on X-ray

- Which area is most likely subluxated?
- Which area are you most likely to adjust?
- Which Pt is in the most pain?



Motion vs Realignment Are we moving the bone?

If we adjust this vertebra to the right what happens?

1. It stays to the right
2. It goes to neutral, (realigned)
3. It returns to where it started

It depends on what's causing the misalignment:

1. Shortened ligaments
2. Chronic muscle contraction
3. Inflammation
4. Acute muscle contraction
5. All four

* Many pathologies can also cause the misalignment

If the misalignment is only caused by shortened ligaments, then the vertebra will return to the original position due to the viscoelastic properties of the ligaments. It takes a sustained adjustment (traction) to change the length of ligaments, according to the Harrison's research 20 mins/day for 3 months. An example of this is scoliosis. If the misalignment is caused by a chronic muscle contraction, then the vertebra is less likely to return to normal as the muscle will have adhesions in & around it. The ligaments probably have shortened.

If the misalignment is caused by acute inflammation (swollen disc, joint capsule, muscles, etc.) the vertebra can return to a neutral position once the swelling is gone.

If the misalignment is caused by an acute muscle contraction, then the vertebra can return to a neutral position & be "realigned". A good example of this is acute torticollis. The pt is obviously misaligned due to the sudden onset of a muscular spasm.

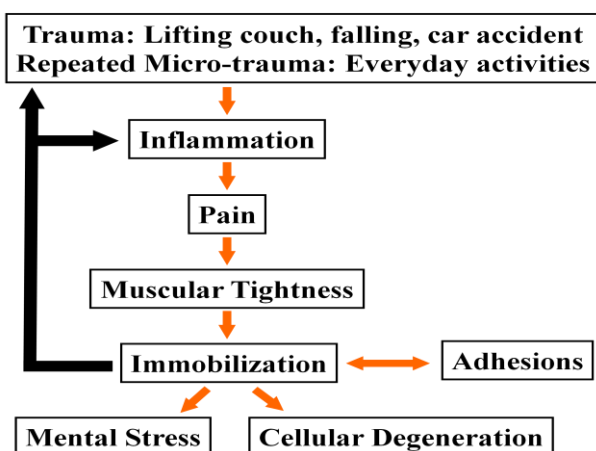
Acute Muscle Spasm Protocol

1. History, X-ray & exam to rule out fracture & torn tissue
2. O'Donoghue's Test to DDX muscle vs ligament, also to calm pt down
3. Ice, spray & stretch, ischemic compression on attachment site away from pain
4. PNF stretching
5. Adjustment (don't miss)

Upper Cervical Techniques? We can see realignments on upper cervical films because the tissue is often in acute spasm. The upper cervical ligaments are more elastic than the rest of the spine due to a higher concentration of elastin fibers. They are designed to allow more motion relative to the rest of the spine.

Unstable Spondy? In this case we have lax ligaments that allow the vertebra to shift. Muscles can easily go into spasm causing pain & other symptoms. This vertebra will move on film, similar to a flexion-extension x-ray study of a whiplash pt.

Physiological Response To A Chiropractic Adjustment



Benefits of Chiropractic in Asymptomatic Pts

Studies reported improvements in neurocognitive function, visual field blind spot analysis, visual acuity, salivary cortisol levels, muscle strength & savings in health care costs.

Improved: ROM, muscle strength, surface EMG, immune response, endorphin levels, BP, heart rate & spirometry.

Significant changes: agility, balance, kinesthetic perception, power & speed reaction in asymptomatic athletes.

The Benefits of Adjustments: backtochiropractic.net/mstrutz

All tissues of the back: muscles, ligaments, jt capsules & discs - respond & heal well when adjusted.

1. Restores motion - symmetry & ROM
2. Normalizes biomechanics & load distribution
3. Pumps out waste products & edematous fluid
4. Improves discs & articular cartilage nutrition
5. Relaxes tight muscles
6. Normalizes proprioception
7. Stimulates sensory-motor reflexes improving dynamic muscular stabilization of jts
8. Accelerates healing - as movement:
 - ↑ metabolic rate
 - ↑ collagen & protein production
9. Improves alignment of new connective tissue

Malik Slosberg, DC

Negative Effects of Immobilization-Deconditioning Syndrome ~ Craig Liebenson, DC backtochiropractic.net/mstrutz

Benefits of Chiropractic in Patients with Symptoms or Pathology

Studies found: Journal of Vertebral Subluxation Research, April 2004

- * ↑ in immunoglobulins
- * ↑ CD4 cell counts in HIV+ subjects
- * ↓ triglyceride levels
- * ↓ BP
- * improved cardiac function
- * remission of duodenal ulcers confirmed by endoscopy

Your Results May Vary! backtochiropractic.net/mstrutz

Your condition is common but NOT normal. Normal is NOT common.

Myth Busters ~ Once you go, do you have to go forever? NO! ~ Only as long as you want the benefits of Chiropractic. Analogies: exercise, diet, dental care, tune-up your car. Chiropractic isn't just about eliminating symptoms, it's about maintaining health.

Choosing The Right Type Of Care For You: backtochiropractic.net/mstrutz

Patient Education: Water Balloons

Green: Tissue is normal, relaxed & no swelling.

Yellow: Inflammation has gathered, but not enough to cause pain.
This is where maintenance care comes in, to prevent excess chemical build-up.

Red: Excess build-up of chemicals.
Inflammation is so bad that it causes pain.
Put your phone number on the balloon.

“People increasingly see conventional medicine not as health care but as disease care. People want more than that. It's irrational to always wait until one develops a problem to pay attention to one's health.”
-Larry Dossey, MD

Myth Buster Isn't that "popping" sound bad? Synovial fluid in your jts contains oxygen, nitrogen & carbon dioxide. When you adjust a jt you stretch the jt capsule, ↑ the volume by 15-20%. This creates a partial vacuum & the gas rapidly releases due to the pressure change. (Boyle's Law, 1662) The gas is about 80% carbon dioxide & takes about 20 mins to return to the synovial fluid. There are no studies that suggest "cracking" your knuckles will cause arthritis.

The Missed Adjustment Pts feel like you failed if the joint was not gapped far enough to cavitate. Not only did they not hear the "pop" they also did not get their free high from endorphins being released. Let them know the joint still moved & muscles did relax. Typically a simple active ROM exam will demonstrate this.

Critical Factor: Speed A fast stretch of sufficient speed fires GTOs inhibiting alpha motor neurons ipsilaterally. Insufficient speed fires low threshold muscle spindles resulting in excited alpha motor neurons, perpetuating ↑ muscle tone.

Cavitation, activator & drop table all add enough speed to result in high threshold GTO discharge.
 Dan Murphy, DC, DABCO AM J of Clin Chiro, 1997



Speed Drills! Using your drop table, simply pop it up & thrust quickly to simulate an adjustment. Do 10-20 a day with your left & right hand.

Osseous vs Activator

<u>Factors</u>	<u>Osseous</u>	<u>Activator</u>
Speed		✓
Gapping of Jt	✓	
Specificity		✓
Pt Comfort		✓
Adhesions Broken	✓	
Muscles Inhibited	✓	
Safety		✓
Ease on DCs Body		✓
Hardest To Do	✓	

Research \$ Harvard University will receive \$700 million from the NIH this year for medical research. Chiropractic research has received less than \$20 million in 100 years!

Back Pain & Health Costs

- 80% of adults have back pain at some point
- \$30.3 billion spent
- \$4.5 billion spent on prescriptions
- For those with any expense for back pain, per person cost was \$1,589

Agency For Healthcare Research & Quality, 2010

Does It Work? Chiropractic for low back pain:

- 5.2 visits
- \$302 per case
- intake VAS 6.2
- discharge VAS 1.9
- 95% of pts rated care as excellent

JMPT, 2011

Insurance Says Chiropractic Helps JMPT, 2005

For low back & neck pain, using chiropractic benefits resulted in reduced rates of: inpatient care, surgery advanced imaging & plain-film x-rays

Medical vs Chiropractic Management JMPT, 2007

Chiropractic care decreases: in-hospital admissions 60%, hospital days 59%, outpatient surgeries & procedures 62%, pharmaceutical costs 83%

DC's Safer! Compared to chiropractic:

You are twice as likely to become disabled from physical therapy treatment & 60% more likely to become disabled from medical care. Journal of Occupational and Environmental Medicine, 2011

Muscle Relaxants Spine, 2004

- 63% of pts who saw an MD took a muscle relaxant for back pain as compared to only 23% of DC pts
- Pts using muscle relaxants recovery time was 2x as long: 32.4 days

Chiropractors are in a perfect position to consult on diet, exercise, smoking, drinking & other health issues as part of a wellness plan.

The Chiropractic Experience: backtochiropractic.net/mstrutz

Technique: Hands-On

“Practice Does Not Make Perfect. Perfect Practice Makes Perfect!”~ Vince Lombardi

Light Touch: Demonstration 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!

Contact: Demonstration Light contact as if you are touching a child. Your hands should be hovering around the neck instead of a firm contact. No digging as the pt will become tense!

Broad Non-Specific Contact vs. Specific Contact With a broad contact the pt does not tighten up.

As you go to adjust simply move your hands so you have a specific contact.



No Specificity? As you give the adjustment your hands shift from a non-specific to a specific contact.



Tissue Pull: Demonstration Just move the loose tissue out of the way. No digging as the pt will become tense! We're NOT trying to get bone-on-bone contact!

For a light touch: move your contact hand away from the bone & midline. On set up, use slight traction & then drape the neck over your contact point rather than pushing in, as this jams the joint.

Reading the joint! Which way do you adjust, the way the bone moves the easiest or the hardest? If the vertebra is subluxated or fixed on the left. We would adjust from the left. What is our line of drive? It has to be with the plane line of the facets, which is the direction that allows the most glide. Push in several times so you can "feel or read" that glide. This is especially important on a flexible pt & on that first adjustment.

Coupled Motion of the Neck: Demo

Try all 3 possibilities, see which one you like best!

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

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

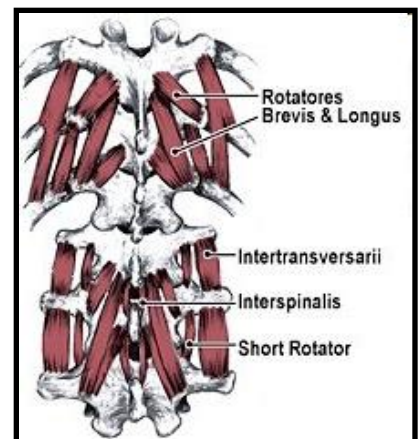
Coupled Motion ~ Proper Position



Have the nose centered in line with the sternum, which allows for maximum patency of the vertebrobasilar artery & better facet motion!

Multiple Vectors & Torque

The more vectors and/or torque you can include in your adjustment the easier the joint will release. This is true because of the biomechanics of the bony joint & that the muscle fiber angles vary for a given joint. Multiple directions maximizes GTO firing in the highest number of muscle fibers.





Visualize!

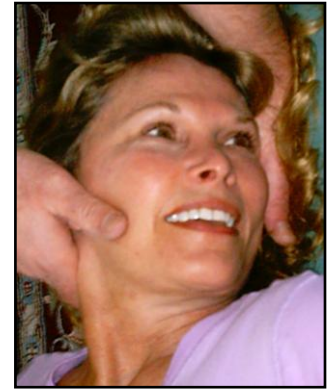
You should see in “your mind’s eye” the mechanics of the spine.

Practice setting up without looking.

Does the pts head end up in the proper position?

Your eyes & brain will only distract you from what you are feeling.

Please No Neck Rotation



Raise The Head Piece!

To keep flexion in the adjustment without having the pt strain their neck muscles.

The Car Wash For The Guarding Pt. Your pt wants to move their head & won't relax. Tap their face & ask the pt to bring their ear into your hand - they get to move their head. Use your hands as “guide rails”, pushing them into coupled motion. Once the neck reaches the end ROM the pt stops contracting. At that instant you adjust. This is PNF; the pt contracts & then relaxes. This works great!

Mock Thrusts To distract the pt pretend to adjust & give a fake or mock thrust. The pt thinks the adjustment is over & once you feel them relax, then thrust. This move turns off the muscle via GTO firing.

Double Thrusts If you adjust & “miss”, don't set-up again, just thrust again immediately. This can work well as the tissue is now inhibited & you will likely catch the pt off-guard.

Occipital Bridge



Press finger tips into sub-occipital triangle muscles at the base of the skull & allow the patient's head to fall into your hands as the muscles relax.

Straight Tug A short quick tug can help release a facet joint. Keep the neck in slight extension. The distance that you tug should be short as you can tear meningeal fibers.



The Shimmy-Shake, Breath Mint Adjustment

For the pt who tightens up at the last second. Find the segment you want to adjust & take your tissue pull. Once you have the contact point, move & shake your hands around to distract the pt. This also fires the GTO's, inhibiting the involved muscles. The pt will have a much smoother, more comfortable adjustment.

The 6' 4" Adjustment

Try not contacting the pt until they have taken a breath. This decreases pt tightening & low back stress for the Doc!



Thoracic Spine ~ Knife Edge Curl Fingers

Curl fingers throughout thoracic region, especially effective in upper thoracics.



“V” Hands at T1-T3

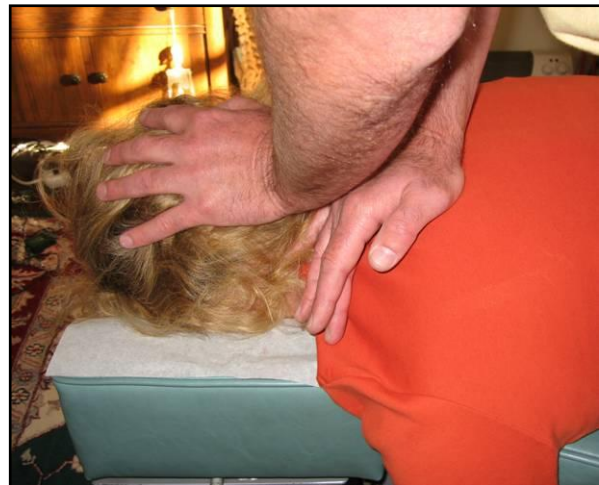
Helps avoid the occiput during the thrust.

Thoracics ~ Single Hand Works well from T1-T3, for deep sets.



Thoracics ~ Single Hand

Tilt The Head & Traction Neck ~ Works well from T1-T3

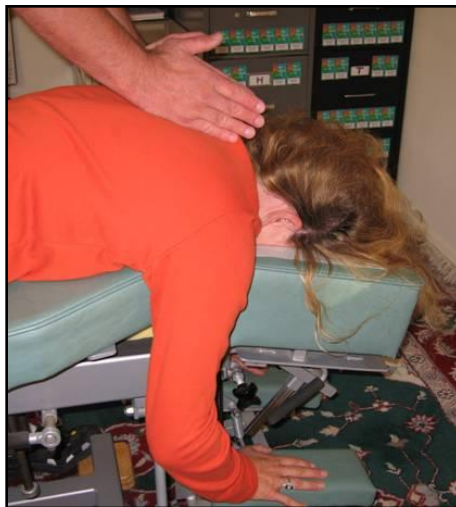


Thoracics ~ Thumb Move ~ Works well from T1-T3



Thoracics ~ Tilt Headpiece or Raise Drop

Works well from T1-T3

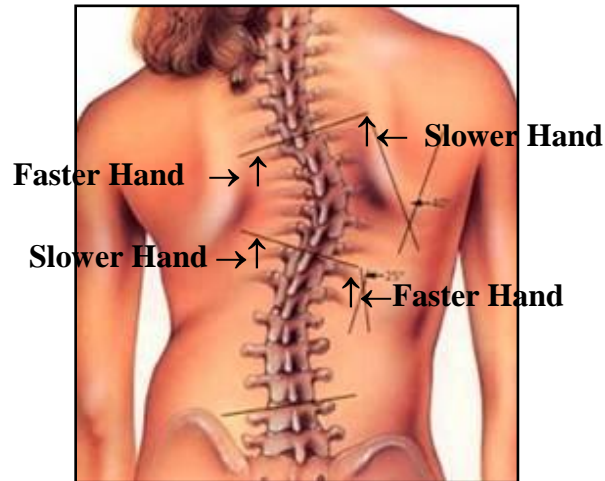


The Pickle Jar Adjustment Which way to adjust? Can we adjust opposite the listing? The vertebra will not stay in that position. Ligaments are causing the misalignment & adjusting the wrong way may ↑ the motion. Think of loosening a jar lid, if you twist the wrong way first it may help loosen the lid. Gained motion far outweighs any aberrant neurological input.

Torque Move For Scoliosis: Torque upward on the concave side of the curve.



Riverboat Adjustment: (relative motion) Instead of using torque on a rotated vertebra, thrust straight I-S & P-A using a double knife edge contact. On the side the vertebra is rotated “I” have that hand travel fastest & furthest. The other hand on the side rotated “S” will travel slower & not as far. This takes the rotation out & opens the joint I-S & P-A.

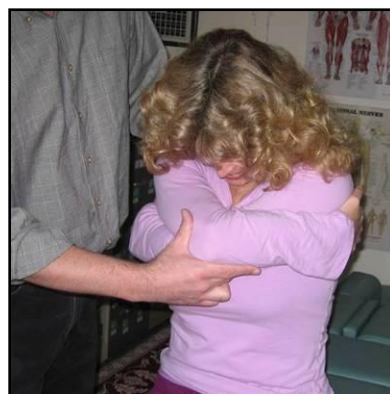


Lower Transitionals



Have the pt push their pelvis downward. Pt takes a breath & holds it, then you apply a quick short thrust. Lock the drop piece, the pelvis rotates posteriorly, opening the transitional area. Works well in the T10-L2 region.

Anterior Dorsals



Anterior Dorsals Push elbows in opposite direction to tighten the spine. Make sure pt tucks chin thru the entire adjustment to tighten the thoracic spine.

Anterior Dorsals Can be done in the thoracic or lumbar spine.

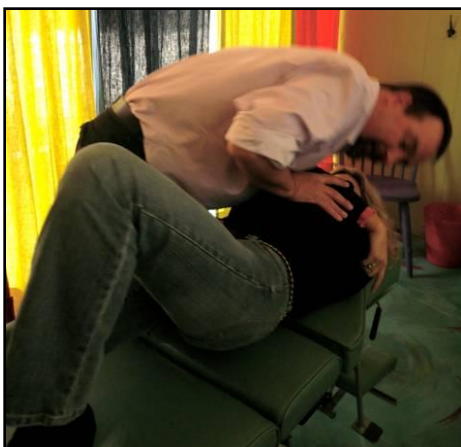


Anterior Dorsals Lower pt keeping them rolled & chin tucked.



Anterior Dorsals

To get more leverage swing your back leg up as you rock the pt back.



Anterior Dorsals Upper Thoracics

Have the pt lift their pelvis off the table.
This helps direct the force into that region.

Low Back Warm-up Cross stretches before & after an adjustment.



Lumbar Spine Rotational Stretches

Have stabilization hand on the same side of the spine as the stretching hand.

Can be used for long & short lever stretching.



Lumbar Spine ~ Side Posture: PNF Stretch

Use PNF protocols to help pt relax back before and/or after an adjustment.





Lumbar Spine
Side Posture: PNF Stretch
This position uses a longer lever.



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 a full ROM if possible.



Lumbar Spine
Side posture: use the drop piece to provide more energy.

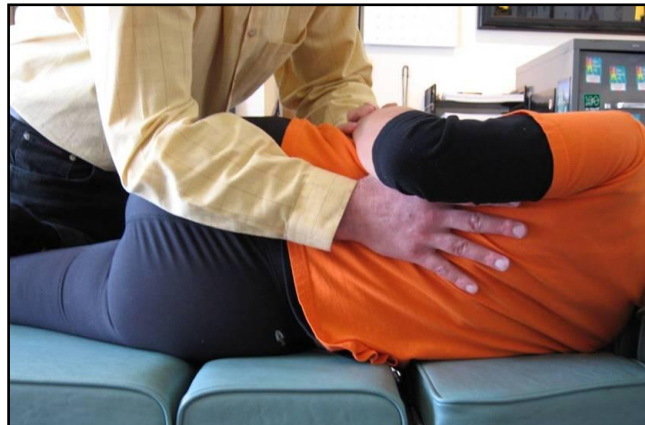


Lumbar Spine
Have pt place their bottom hand up. This allows the pt to roll.



Lumbar Spine

Lift back leg & use as a long lever.
DC's thigh should be up against pts thigh.

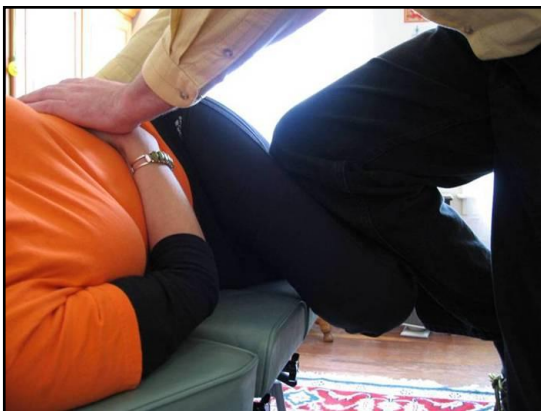


Lumbar Spine

Side posture: forearm move.
Use your entire forearm to traction the pelvis down & around. Then use your regular drop. Works well on tough to adjust patients & for general mobilization.

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.



Lumbar Spine

Side posture: modified kick.
Slide your knee down the patient's thigh to increase your leverage.



Lumbar Spine

Crawl up on table & use your chest to adjust. Easier on DC's back & easier to control. Please debrief pt on this one.



Lumbar Spine

Easy way to traction out the low back & can be used to relieve a pt with an anterior spondy.



Hip Tugs: Internal Rotation & Straight
Great for hip joint & piriformis release.



Hip Thigh Tugs: Int/Ext Rotation, Straight

Grasp around upper thigh, can tug in any direction. Great for hip, SI joint & low back.

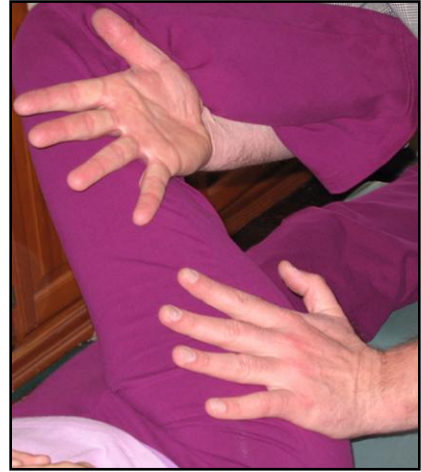
External Rotators



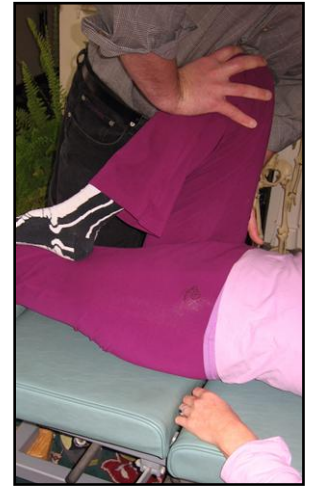
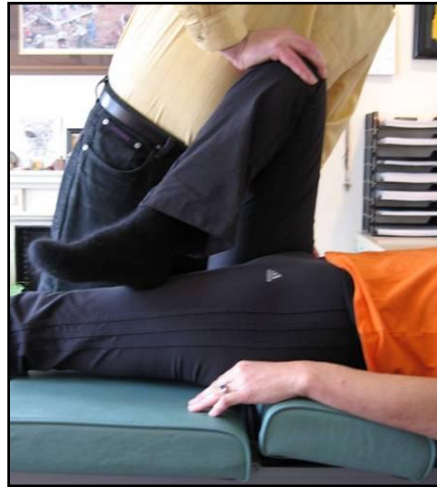
Hip - Slide Moves

Gentle hip joint release for hip rotators.
Hand on hip joint slides off trochanter 3x.

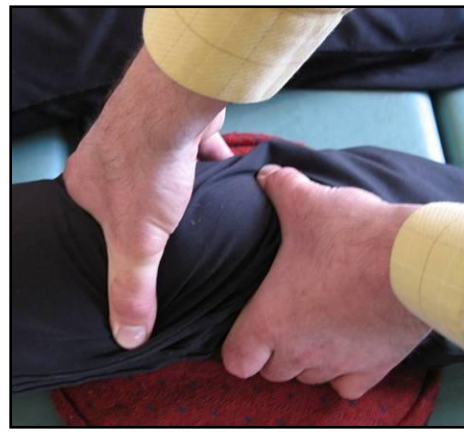
Internal Rotators



Hip - Drops Int/Ext Rotation or Straight. Use drop piece in all ROM's



Knee - Tugs & Set Rotate femur externally & tibia internally to "reset" knee joint.



Shoulder Tugs: AI-EX Moves.
Great for releasing rotator cuff & frozen shoulder.



Shoulder Drops: AI & EX Moves

Shoulder Drops “Y” Position:

Pec Minor Use drop table. Doctor pushes in direction of fibers or direction arms are hanging.



*Thanks so much for attending today's seminar.
Marcus Strutz, DC*