

Osteopathic Approach to Common Office Complaints

Fast and Easy Treatments to Help Your
Patients Get Better Faster

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Tucson Osteopathic Medical Foundation 2014



Outline

- Introduction
- Headache/Neck Pain
- Chest Wall Pain and Respiratory Illness
- Low Back Pain
- Upper Extremity: Shoulder Pain and Carpal Tunnel
- Lower Extremity: Piriformis syndrome, Knee Pain and Sprained Ankle



Why do we care?

- Musculoskeletal complaints make up 30% of family doctor visits
- Of the other 70%, how many of those problems have a musculoskeletal component?
- 60% of our body is bone, muscle, fascia, tendons and ligaments



Basic Musculoskeletal Manipulation Skills:

The 15-Minute Office Encounter



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Somatic Dysfunction in Osteopathic Family Medicine

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THE 5-MINUTE OSTEOPATHIC MANIPULATIVE MEDICINE CONSULT

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Headache/ Neck Pain




THE ORIGINAL CREATION

TA! RA!
RA!

BOOM
DE AY!

As Sung by
Miss Lottie Collins

in
Miss Helyett.



BROMO-SELTZER CURES
all HEADACHES and NEURALGIA
TRIAL BOTTLES 10¢ SAVED EVERYWHERE

Common Etiologies

- Cervicogenic
- Cluster
- Migraine
- Tension
- Sinus
- Preparing lectures



Variable	Cervicogenic	Migraine	Cluster	Tension
Female/male ratio	F>M to F=M	F>M	M>F	F>M
Laterality	Unilateral without sideshift	Unilateral with sideshift	Unilateral without sideshift	Bilateral
Location	Occipital to frontoparietal and orbital	Frontal, orbital, hemicranial, temporal	Orbital, Temporal	Frontal, occipital, circumferential
Duration	Intermittent or constant with attacks	4 to 72 hours	15 to 180 minutes, several per day	Days to weeks
Triggers	Neck movement, valsalva, pressing over c1-3	Multiple, but neck movement not typical	Alcohol, predictable times during the day	Multiple, but neck movement not typical
Associated Symptoms	Usually absent or similar to migraine, but milder	Nausea, vomiting, photophobia, phonophobia, scotomas	Autonomic symptoms ipsilateral to pain	Occasionally decreased appetite, photophobia or phonophobia

The Cervicogenic Headache International Study Group Diagnostic Criteria.

Biondi D M J Am Osteopath Assoc 2005;105:16S-22S

Checklist

MAJOR CRITERIA

■ Point I—Symptoms and Signs of Neck Involvement

(listed in a surmised sequence of importance; obligatory that one or more of phenomena are present)

- Precipitation of head pain, similar to the usually occurring (suffices as the sole criterion for positivity)*:
 - by neck movement and/or sustained awkward head positioning (suffices as the sole criterion for positivity within group, and/or:
 - by external pressure over the upper cervical or occipital region on the symptomatic side

(Provisionally, the combination of the following two points has been set forth as a satisfactory combination within Point 1)

- Restriction of the range of motion (ROM) in the neck*
- Ipsilateral neck, shoulder, or arm pain of a rather vague nonradicular nature or, occasionally, arm pain of a radicular nature*

■ Point II—Confirmatory Evidence by Diagnostic Anesthetic Blockades

(This is an obligatory point in scientific works.)

■ Point III—Unilaterality of the Head Pain, Without Sideshift

(For scientific work, Point III should preferably be adhered to.)

HEAD PAIN CHARACTERISTICS

■ Point IV

(None of the following points is obligatory)

- Moderate to severe, nonthrobbing, and nonlancinating pain, usually starting in the neck
- Episodes of varying duration, or
- Fluctuating, continuous pain

OTHER CHARACTERISTICS OF SOME IMPORTANCE

■ Point V

(None of the following points is obligatory)

- Only marginal effect or lack of effect of indomethacin
- Only marginal effect or lack of effect of ergotamine and sumatriptan succinate
 - (c) female sex
 - (d) not infrequent occurrence of head or indirect neck trauma by history, usually of more than only medium severity

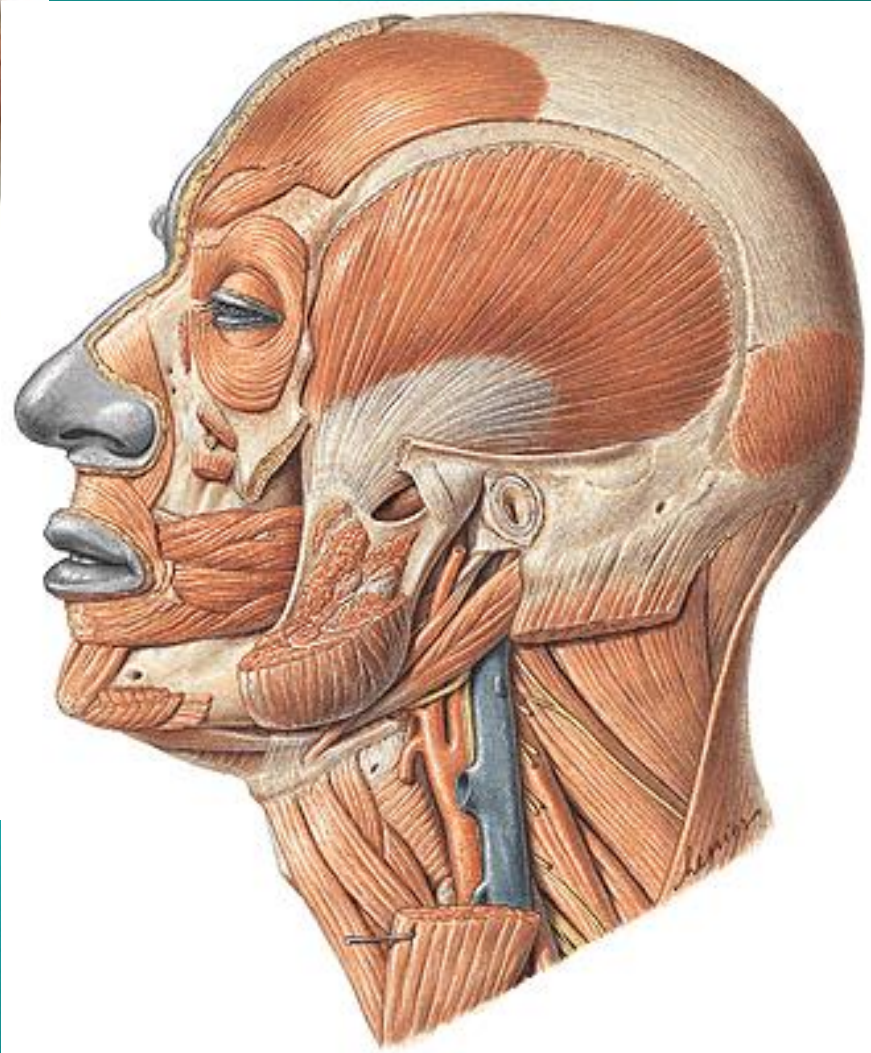
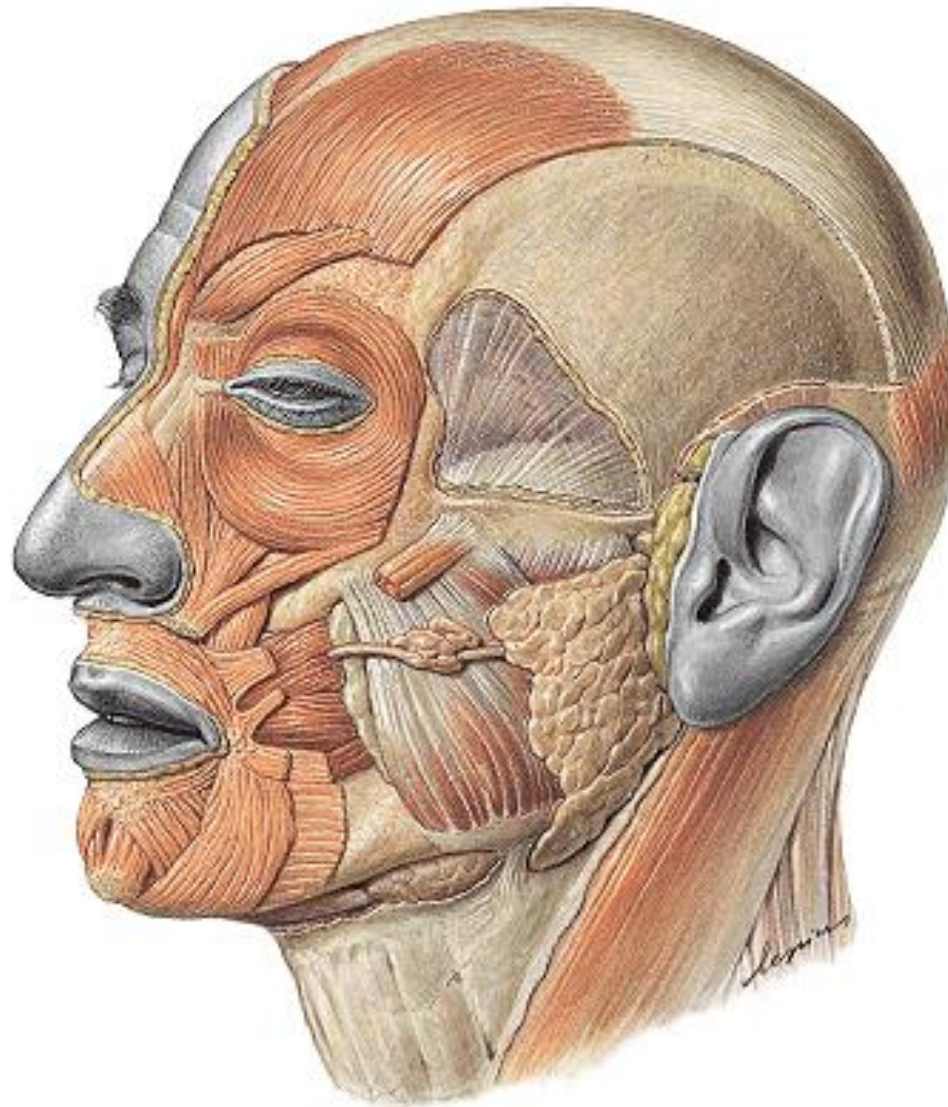
OTHER FEATURES OF LESSER IMPORTANCE

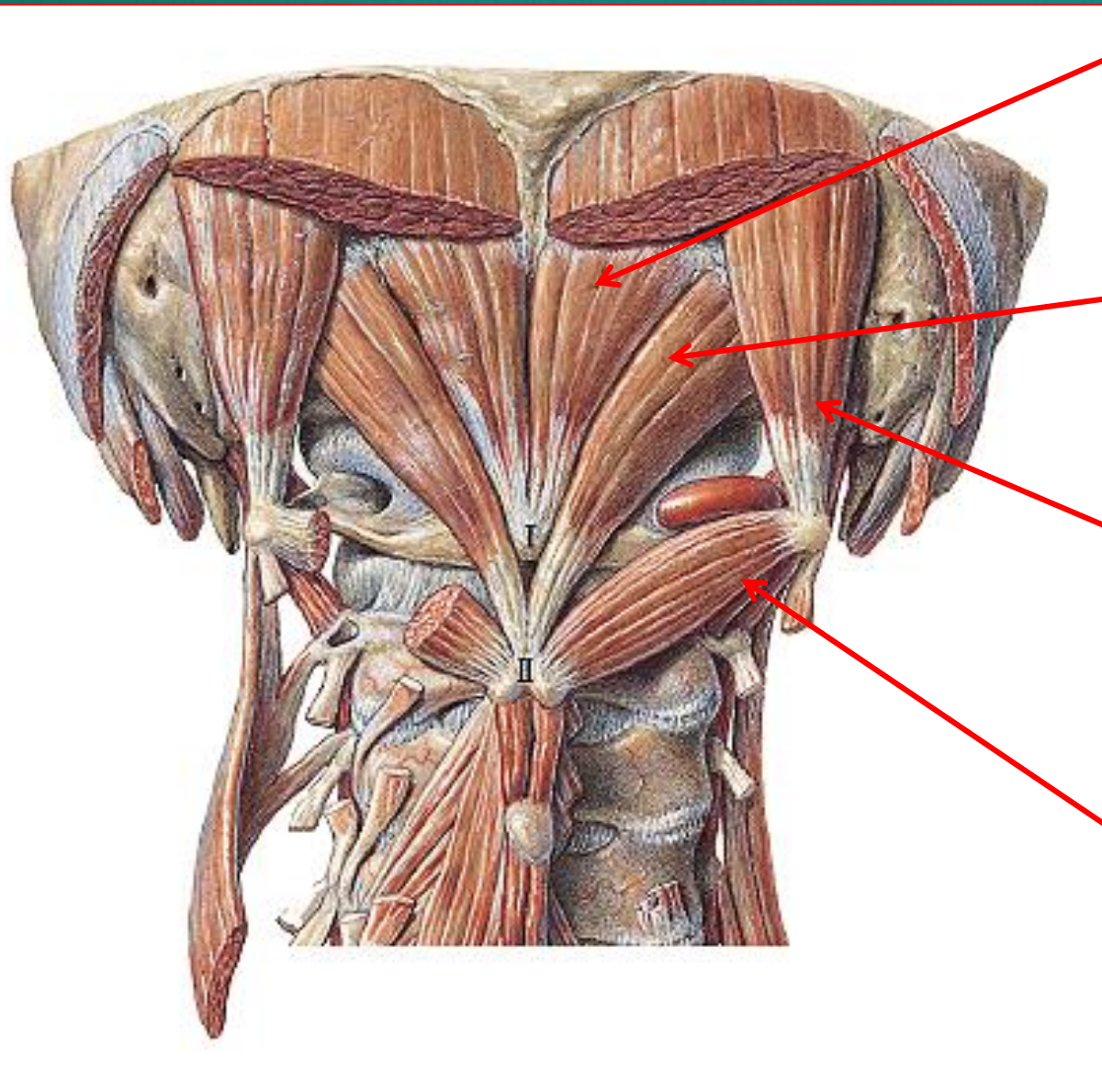
■ Point VI

- Various attack-related phenomena, only occasionally present:
 - nausea
 - phonophobia and photophobia
 - dizziness
 - ipsilateral “blurred vision”
 - difficulties on swallowing
 - ipsilateral edema, mostly in the periorcular area

*The presence of all three points indicated with asterisk fortifies the diagnosis (but still Point II is an additional obligatory point for scientific work).







Rectus capitis posterior minor

Rectus capitis posterior major

Obliquus capitis superior

Obliquus capitis inferior

Structural Contributors to Tension and Cervicogenic Headache



Trapezius

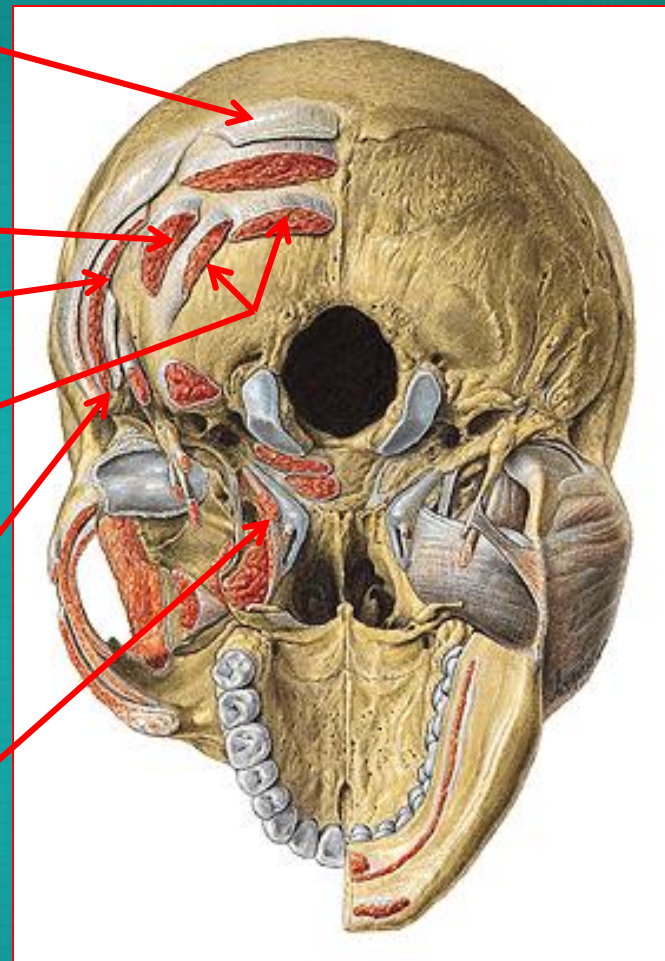
Semispinalis capitis

Splenius capitis

Rectus capitis posterior major and minor

Sternocleidomastoid

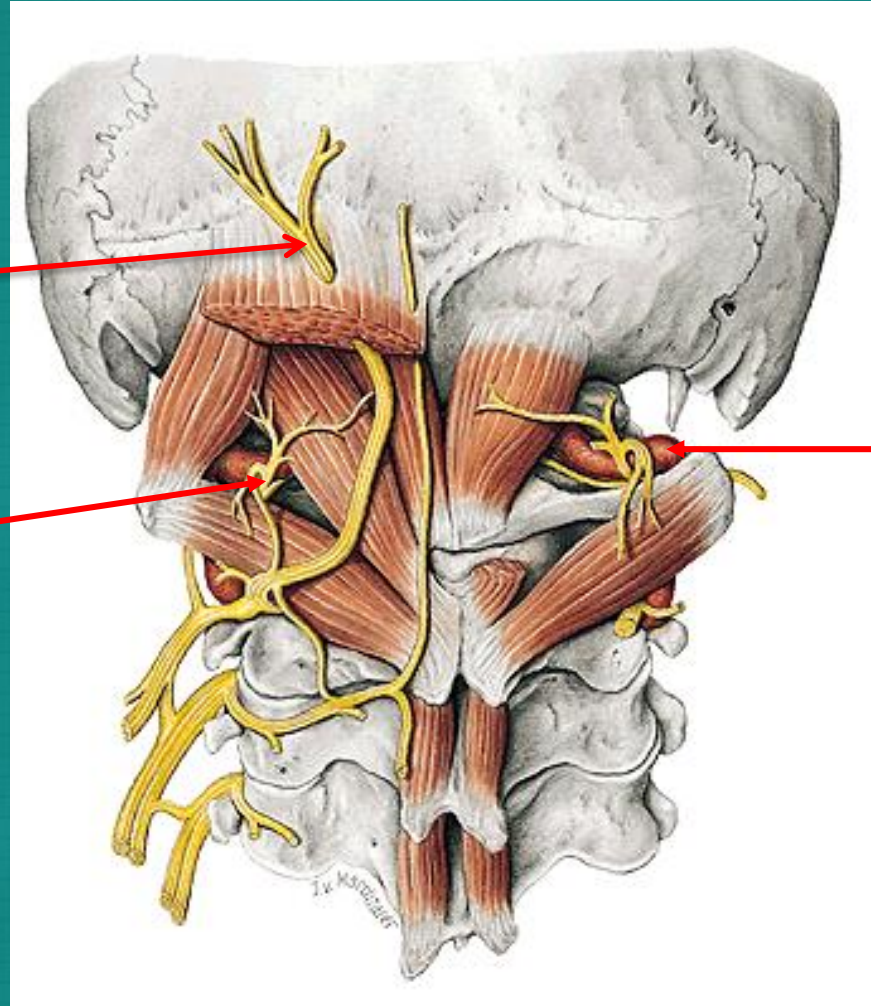
Longus capitis



Suboccipital Triangle

Greater occipital nerve

Suboccipital nerve



Vertebral artery

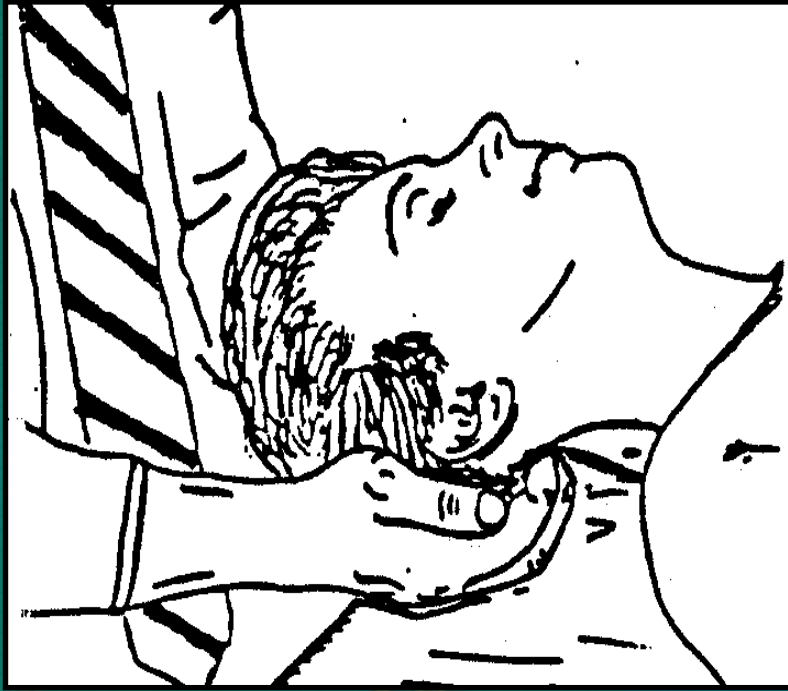


Greater Occipital Nerve

- It is a spinal nerve
- It exits between first and second cervical vertebrae
- It passes THROUGH the trapezius
- It innervates the cutaneous aspect of the back of the head



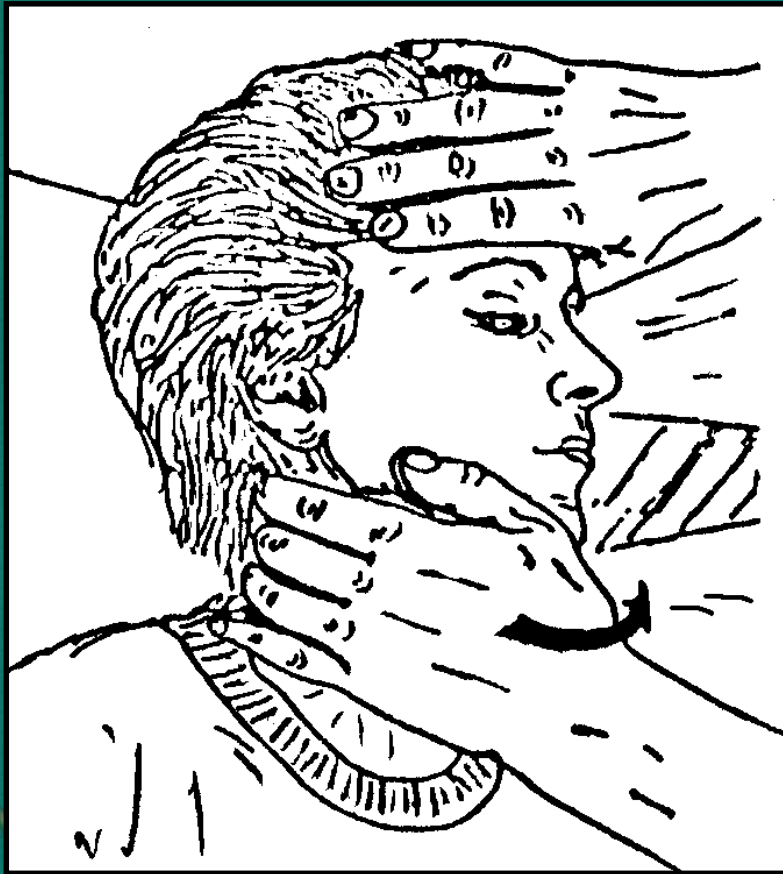
Suboccipital Tension Release



1. Patient is supine.
2. Physician is seated at the head of the table.
3. Place fingers under the suboccipital area.
4. Let the full weight of the patient's head rest your fingertips. This will supply sufficient force to release contracture of the suboccipital area.
5. This may be used to relax musculature on the occiput up to the superior nuchal line.

This excellent technique that can also be used prior to active articulation of the upper cervicals and occipitoatlantal area.

Posterior Cervical Soft Tissue Technique



1. Patient supine.
2. Stand at the patient's side.
3. Place one hand lightly on the forehead.
4. Put the pads of the fingers of the other hand on the posterolateral part of the neck.
5. Apply enough force to stretch the soft tissues of the neck with this hand while sidebending and extending the cervical area. Avoid sliding across the skin. The hand on the forehead offers gentle resistance to these motions but allows enough movement to prevent excessive force to the cervical spine. Treat both sides.

Many physicians use this technique prior to, and as preparation for, active correction or following correction of the articular component of the lesion.

Cervical Stretching Technique



1. Patient supine with the physician standing at the head of the table.
2. Cross your arms and place them under the patient's flexed head.
3. Take the flexed neck and head to the first motion barrier.
4. Resist as the patient extends his neck toward the table.
5. Now vary the positioning by adding rotation and sidebending. Again resist as the patient presses his head toward the table. Do this for both sides.

This can also be done as a passive technique in acutely traumatized, frail or elderly patients

Cervical Facilitated Positional Release

Dx FRS_L

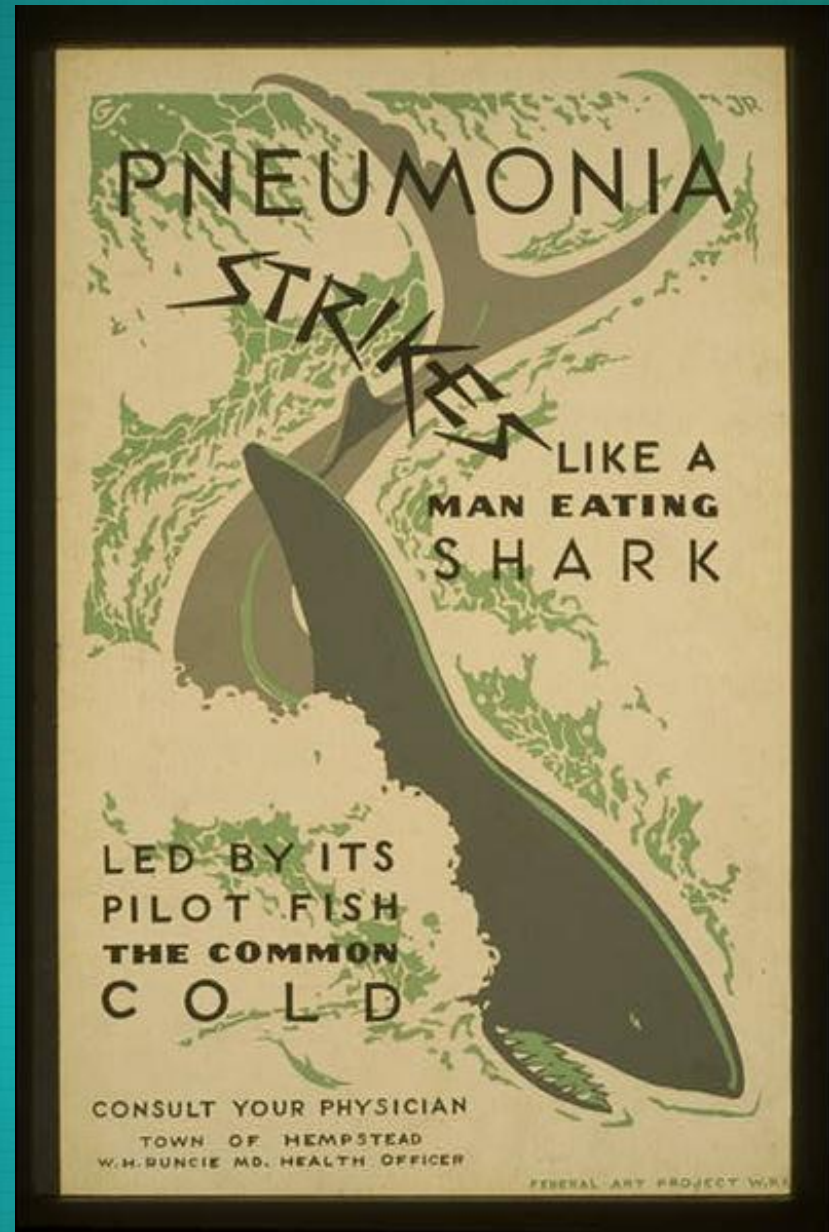


1. Patient supine
2. C-spine placed in neutral in the sagittal plane
3. Then placed in position of ease at the segment (FRS_L)
4. Compress from the head to the dysfunctional segment
5. Wait 3-5 seconds or until resolves and return to neutral

Can be converted into a still technique by reversing the position back through the barrier, using the fingers on the dysfunctional segment as a fulcrum



Chest Wall Pain/ Respiratory Illness

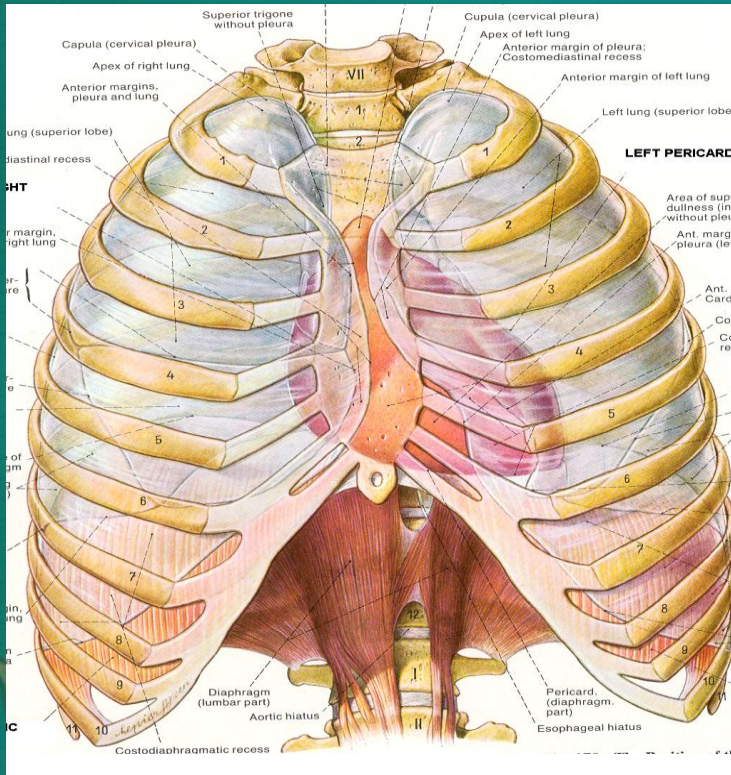


Differential Diagnosis by System

- Cardiac: Angina, MI, PE
- Musculoskeletal: Costochondritis/Tietze's syndrome
- Pulmonary: Pneumonia, asthma
- Gastrointestinal: GERD
- Neurologic: Anxiety, intercostal neuritis
- Rheumatologic: Pericarditis or pleurisy 2°
SLE, RA
- Somatic dysfunction

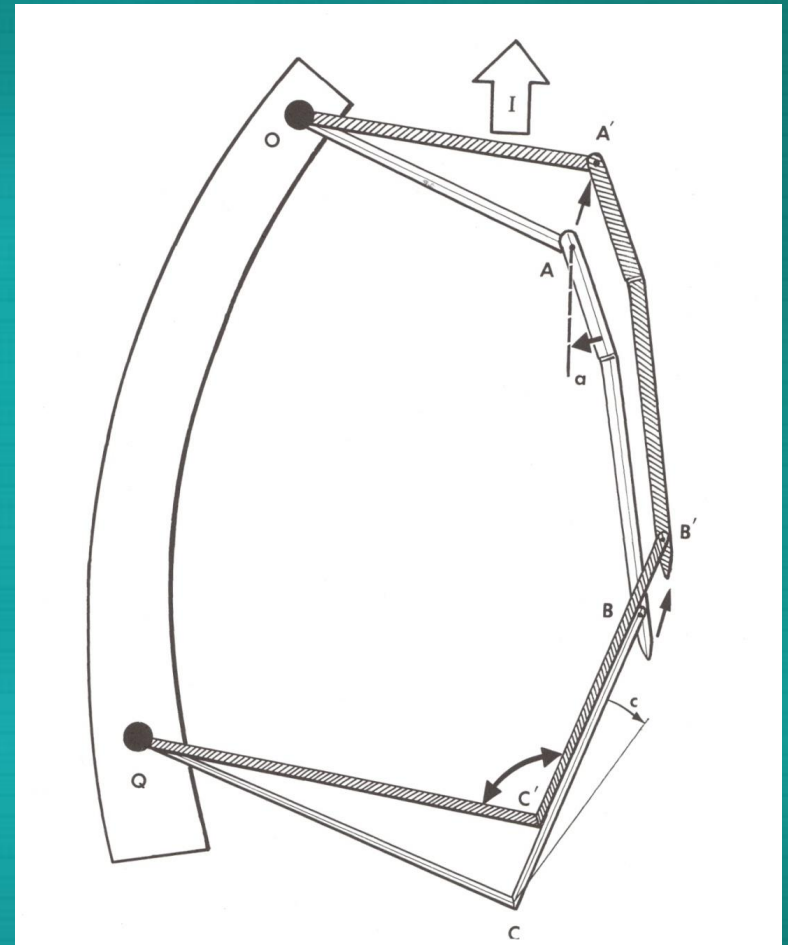
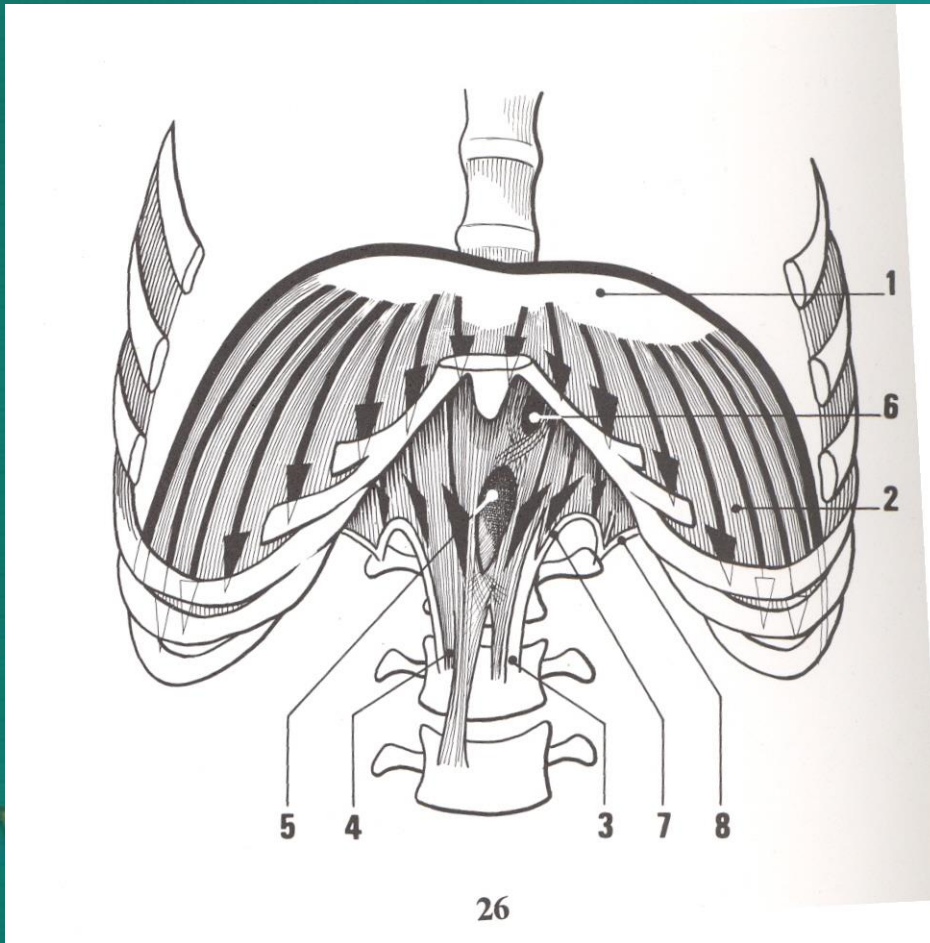


The Thoracic Cage

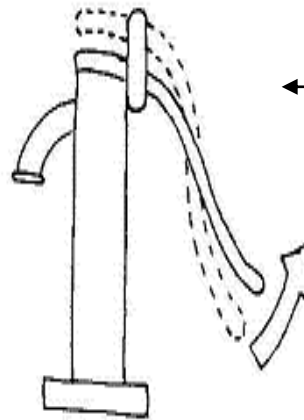
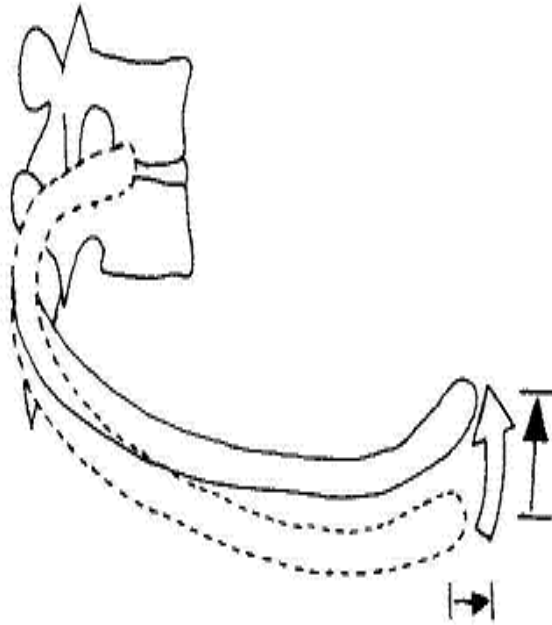


- The primary function of the thoracic cage is protection of the viscera within- a static process related to its *structure*
- Freedom of motion (unrestricted dynamic *function*) of the thoracic cage is essential for effective respiration and all of its physiologic benefits
-
- Understanding the anatomy and motion characteristics is necessary for appropriate manipulative treatment

Motion of Respiration

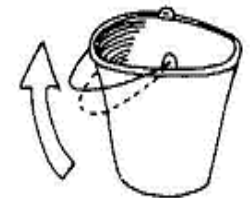
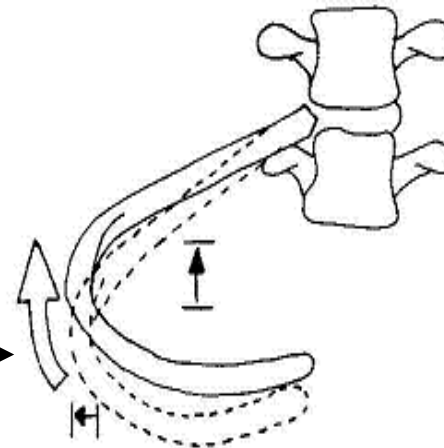


Characteristic Motions of the Ribs

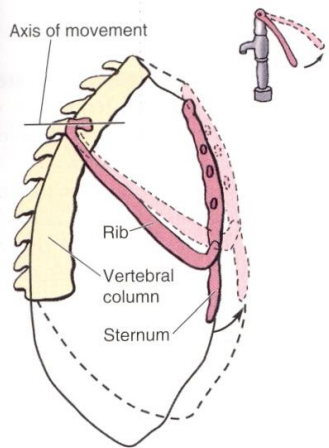


Pump handle motion
In upper ribs, increases
A/P diameter

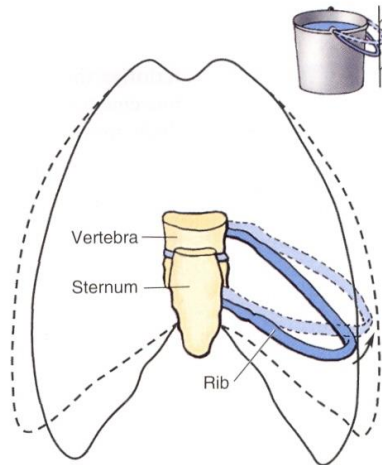
Bucket handle motion
in lower ribs,
increases transverse
diameter



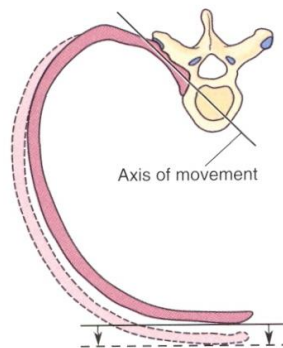
ore, Oriented



Right lateral view

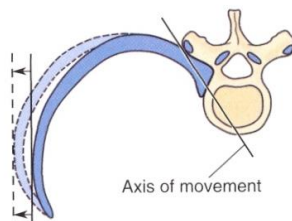


Anterior view



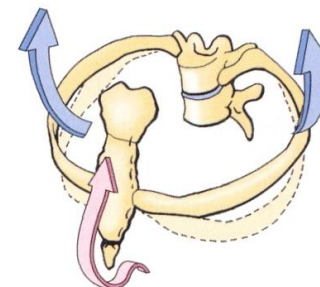
(A) Upper ribs

Superior view



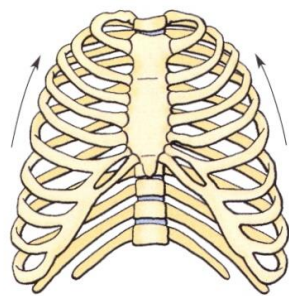
(B) Lower ribs

Superior view



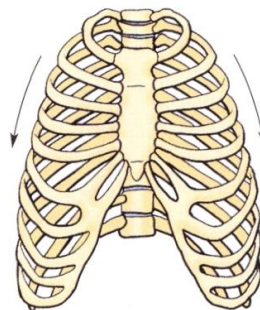
(C) Left anterior oblique view

Combination of rib movements



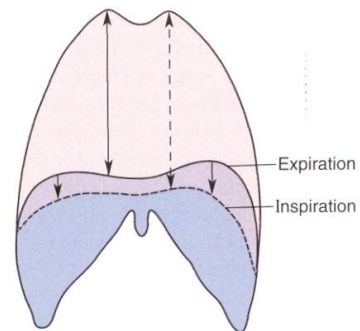
Forced inspiration

(D)



Forced expiration

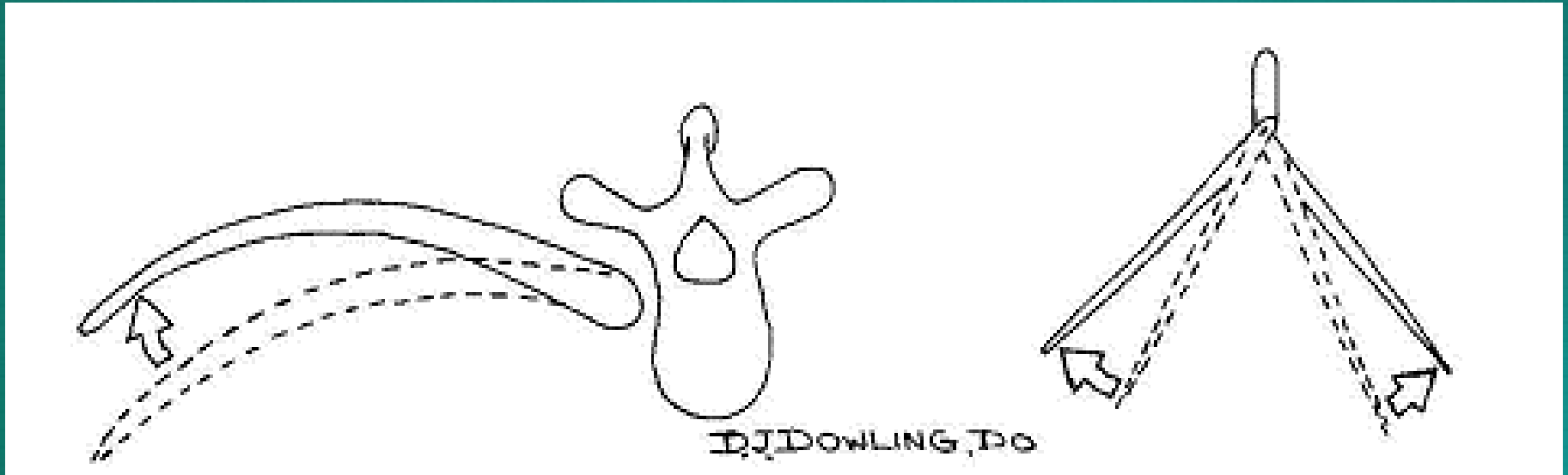
(E)



(F)



Caliper Motion of Ribs 11 and 12

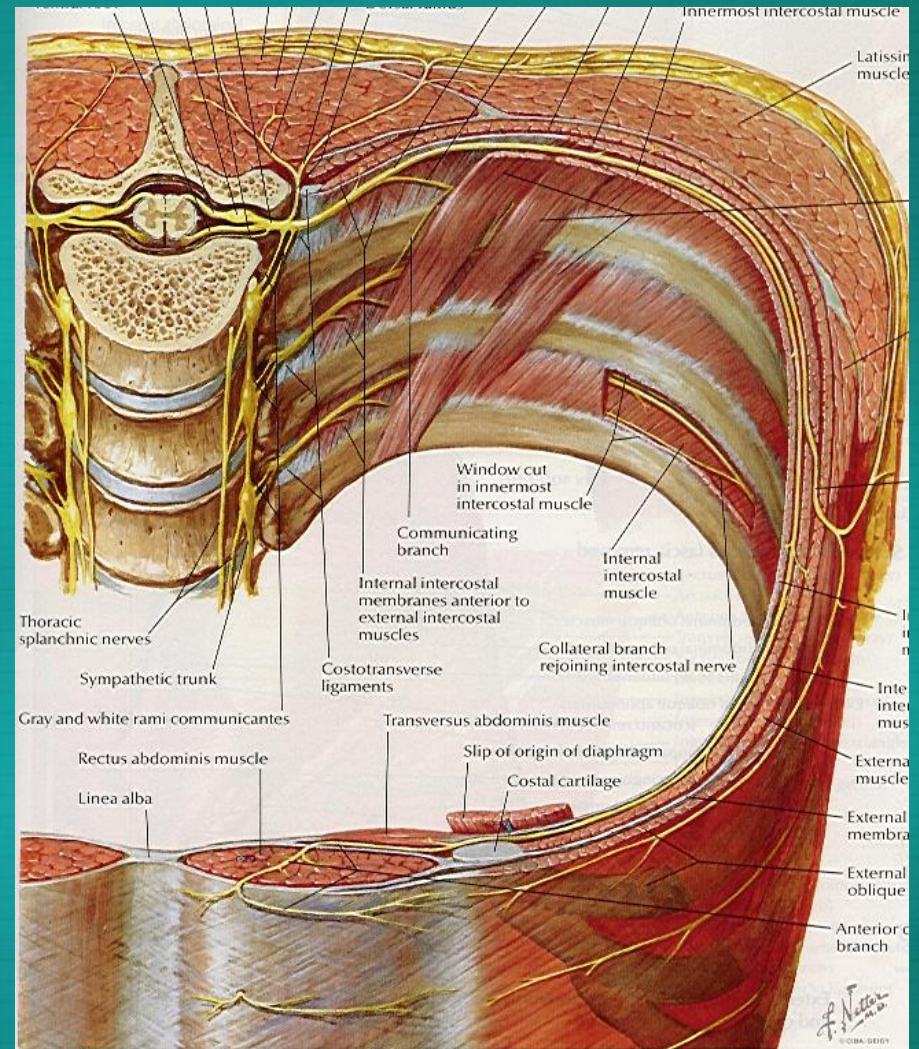
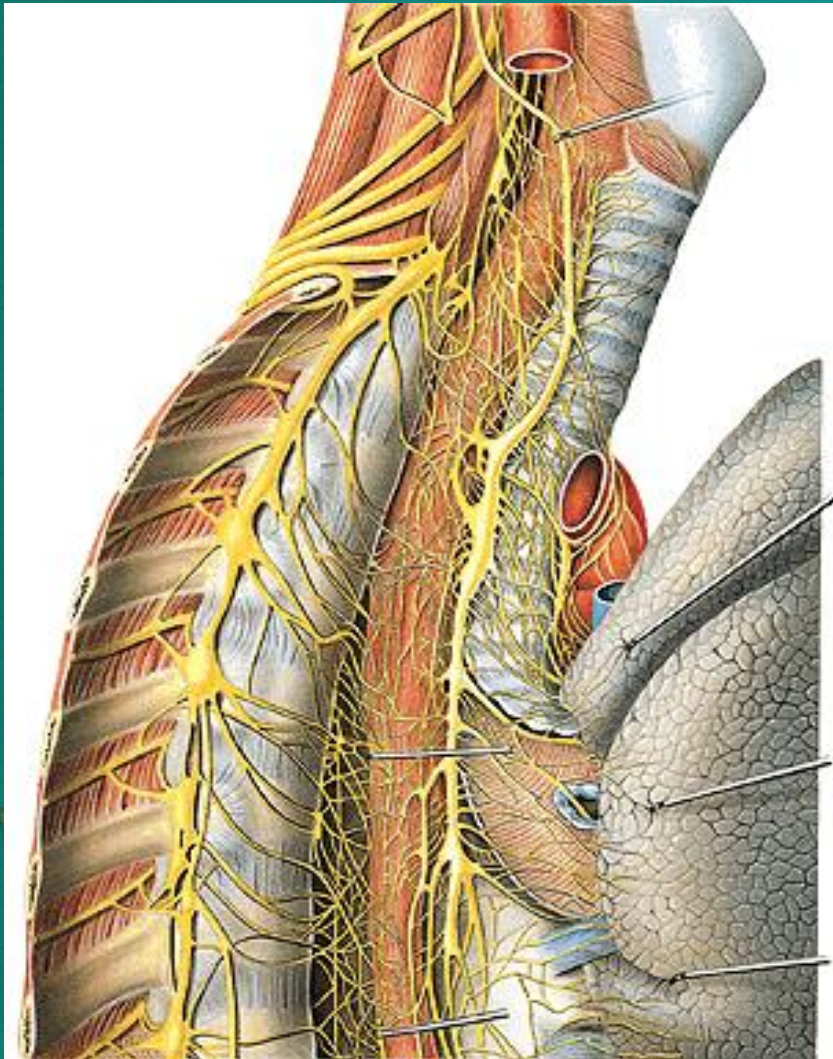


NO ANTERIOR ARTICULATION

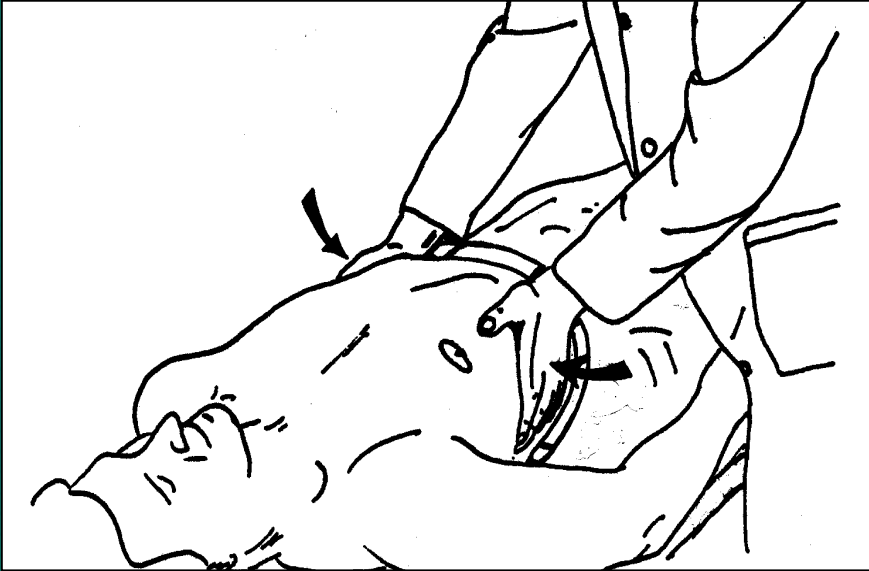
Rib 12 is influenced from above by diaphragm and below by quadratus lumborum, moves posteriorly and inferiorly in inhalation



Sympathetic Chain



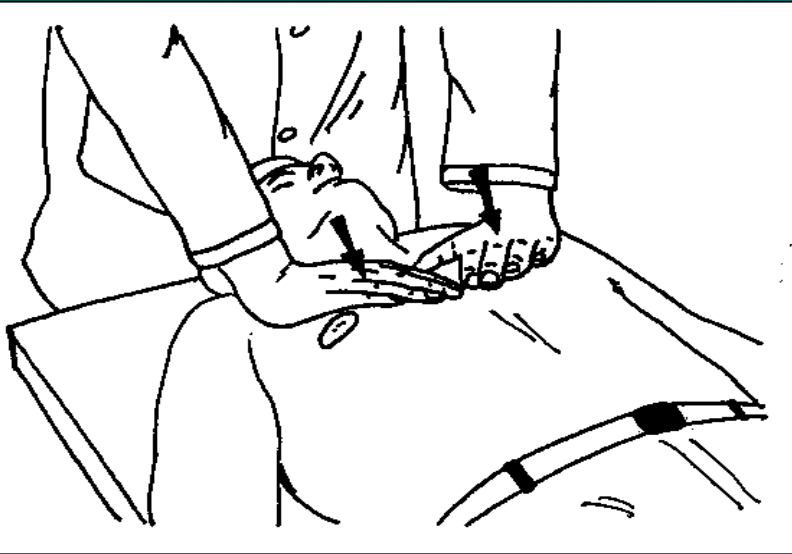
Lower Thoracic Lymphatic Pump: Diaphragm Doming



There are some situations which may preclude the use of vigorous thoracic pump techniques, e.g., advanced osteoporosis, presence of external ventilatory devices, recent chest surgery or trauma, etc.

1. The physician stands at the side of the supine patient, facing the patient.
2. The physician's hands contact the patient's lower lateral rib cage.
3. As the patient exhales, the physician's hands augment the medial motion of the lower ribs.
4. The patient is instructed to inhale. As the patient inhales, the physician resists the lateral movement of the lower rib cage.
5. As the patient reaches the height of inhalation, the physician's hands are suddenly removed from the rib cage, causing an in rush of air.
6. The technique may be repeated 2-3 times.

Upper Thoracic Lymphatic Pump (with respiratory cooperation)



1. The physician stands at the head of the table or bed. The patient is supine.
2. The physician's hands contact the patient's anterior chest wall with the heels of the hands beneath the inferior border of the clavicle.
3. As the patient exhales, the physician follows the inferior movement of the upper rib cage.
4. The patient is instructed to inhale. As the patient inhales, the physician resists the cephalad movement of the upper ribs.
5. As the patient nears the height of inhalation, the physician suddenly removes the hands from the patient's chest, allowing a sudden rush of air.
6. The procedure may be repeated 2-3 times.



Seated forward leaning T-Spine Articulator



These slides courtesy of Kendi Hensel, D.O., Ph.D.

Seated forward leaning T-Spine Articulator



Seated forward
leaning
T-Spine
Articulator



Seated forward leaning T-Spine Articulator

- Physician controlling UE and thorax
 - Choose best position based on body habitus and location of restriction
- Contact on transverse process or rib angles
- Patient is drawn forward to restrictive barrier
- LVMA (low velocity, medium amplitude) springing is applied until release is felt
- Recheck



Low Back Pain



QUICKLY
RELIEVED

BACKACHE

BY CARTER'S

Smart Weed & Belladonna

BACKACHE PLASTERS

WEMPLE & COMPANY NEW YORK.

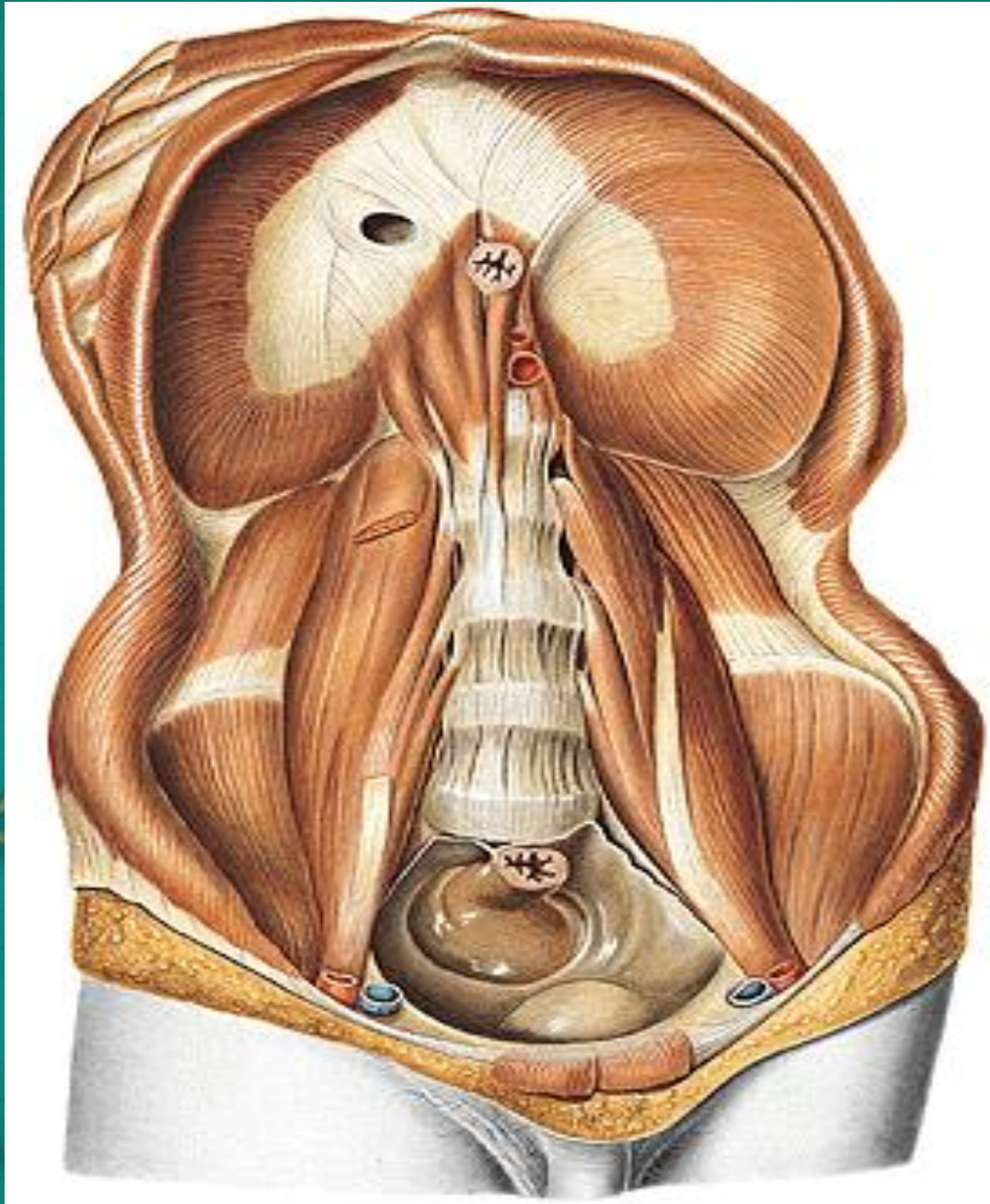
SEE OTHER SIDE

The illustration shows a young boy in a yellow jacket and brown hat kneeling on the ground, using a hammer to assemble a log cabin. A young girl in a red dress and white apron stands beside him, holding a hammer. They are in a garden with a white fence and a house in the background. The text is arranged in a decorative, ornate font with a central eye-like symbol containing a sunburst.

Why is this so important?

- One of the most common reasons patients see their primary care physician
- 60-80% of adults will have a disabling episode of low back pain in their lives
- ~25% of industrial injuries are due to LBP, but it accounts for nearly 90% of workman's compensation costs





Making the Diagnosis

- History and physical exam provide a diagnosis 90% of the time
- Ancillary testing: x-rays, CT, MRI, EMG/NCT, discography, myelograms, labs are not indicated without red flags and a trial of conservative care
- 60-70% of cases of low back pain are diagnosed as idiopathic
- 35-45% of asymptomatic people will have positive imaging studies, including herniations



Red Flags to Consider

- Age < 18 yrs or > 50
- Weight loss
- History of cancer (personal or familial)
- History of severe trauma
- Fever, night sweats
- Progressive motor weakness or numbness
- Bone Pain worse at night.

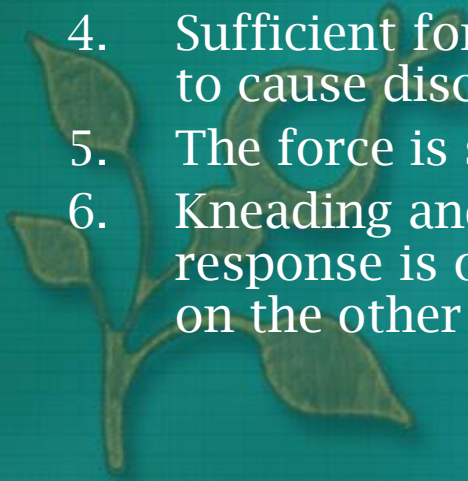


Lumbar Spine Soft Tissue

Source: Outline of Osteopathic Manipulative Procedures

Diagnosis: paraspinal muscle dysfunction

1. Patient is lateral recumbent and the physician stands at the side of the table.
2. Physician hooks the fingers of both hands over the medial aspect of the erector spinae muscles. His/her cephalad forearm is in the patient's axilla and the other forearm is braced against the anterior superior margin of the iliac crest.
3. Physician's fingers are drawn anteriorly and laterally to scoop the muscle laterally creating kneading. At the same time, he/she carries the shoulder and innominate posteriorly and widens the distance between them, creating stretching.
4. Sufficient force is applied to feel the muscles relax but not enough to cause discomfort or to cause the muscles to tighten further.
5. The force is slowly relaxed.
6. Kneading and stretching are repeated rhythmically until maximal response is obtained. This technique can be applied to the muscles on the other side.



Lumbar Spine Soft Tissue



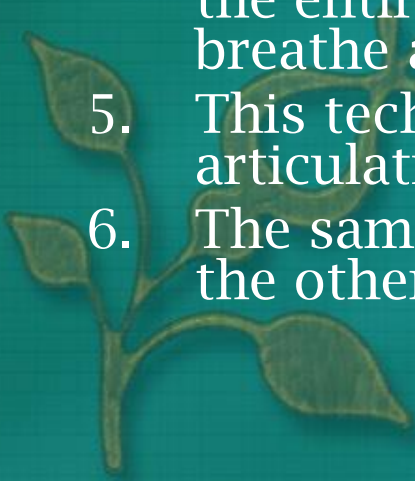
You can rotate the shoulder back further and use muscle energy to get further stretch of the lumbar and lower thoracic paraspinals.

Sacroiliac Articulation Technique

Also Useful for Lumbar Type 2 Dysfunctions

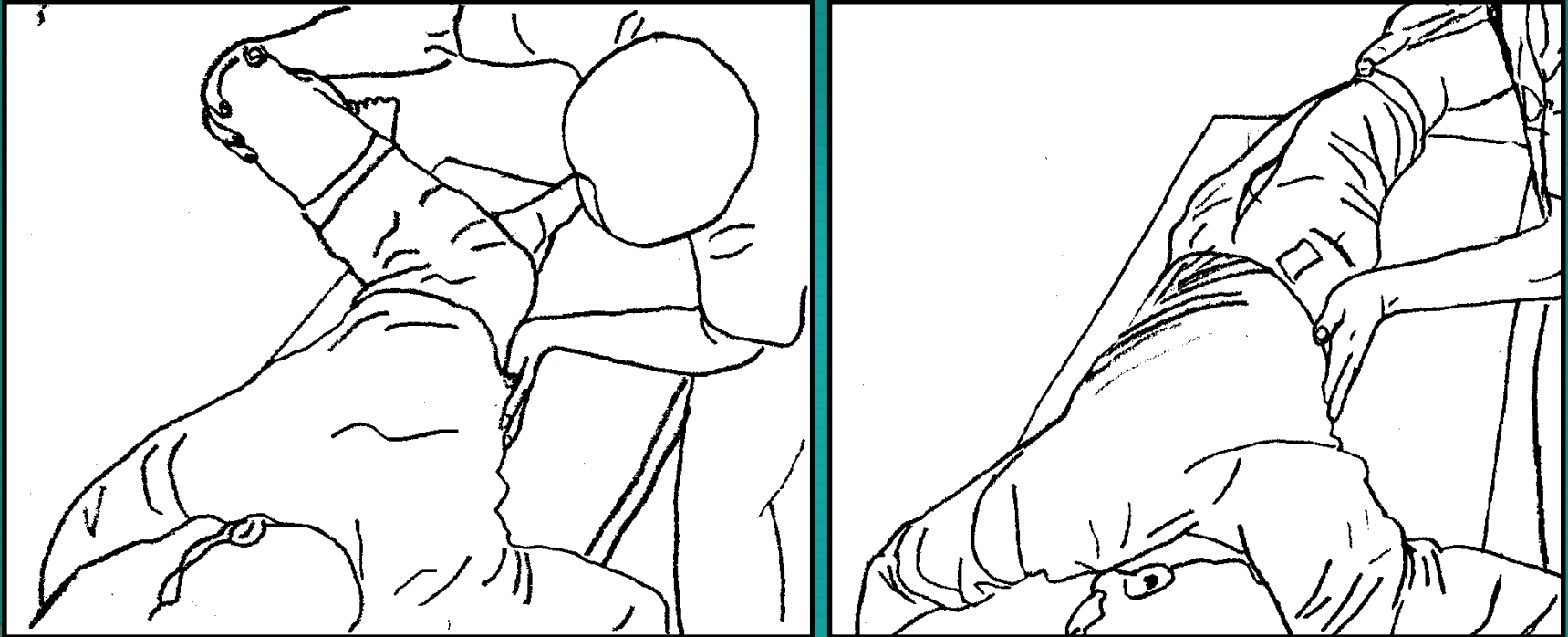
Treating right sided dysfunction

1. Stand behind the patient and place one hand on the sacrum at S2.
2. With the patient's lower leg slightly flexed, grasp the upper leg just below the knee and flex the knee and hip.
3. Flex the hip up to the level of S2 while palpating for motion at S2. Abduct the thigh until you feel a slight resistance.
4. Ask the patient to take in a deep breath and hold it. While maintaining abduction, extend the leg allowing it to fall off the table at the end of extension. Take up slack throughout the entire maneuver. Remember to tell the patient to breathe again.
5. This technique may produce an audible or palpable articulation.
6. The same procedure is repeated with the patient lying on the other side to treat the opposite sacroiliac articulation.



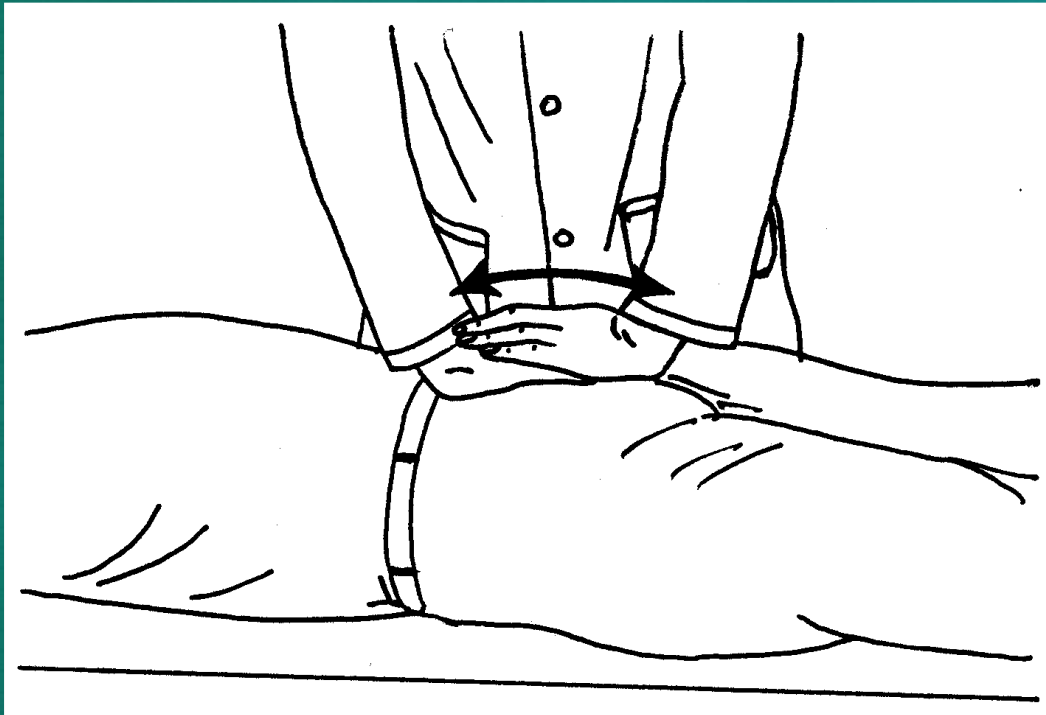
Sacroiliac Articulation Technique

Also Useful for Lumbar Type 2 Dysfunctions



The photos illustrate treatment of a right sacroiliac motion restriction. This technique is used as both a diagnostic test and a treatment for subtle motion restrictions between the sacrum and the ilium. It is a general mobilization technique which also helps to free up the respiratory axis of the sacrum.

Sacral Rocking Technique



Classically, sacral inhibition has been used for treatment of diarrhea and dysmenorrhea by applying 1-2 minutes of steady pressure to the lumbosacral junction.

1. The patient is placed in a prone position and the physician's hands are cupped over the sacrum. The base of the palm should be over the sacral base.
2. The patient is asked to breathe deeply several times as the physician augments sacral respiratory motion
3. The apex of the sacrum is rocked anteriorly on inhalation while the base is rocked posteriorly.
4. With exhalation, the reverse motion is augmented.
5. This may be done several times to reestablish sacral respiratory motion and to affect fascias and related structures.

Shoulder

TRIMNELL'S NERVINE TONIC

THE REMEDY FOR LOST VIGOUR.

FOR WEAK MEN AND NERVOUS WOMEN.

Effects a cure with economy, certainty and rapidity in all forms of
NERVOUS DEBILITY OR POVERTY OF NERVE FORCE.

**Promotes Appetite. Increases the Assimilation of Nutritive Matter
Induces Refreshing Sleep.**

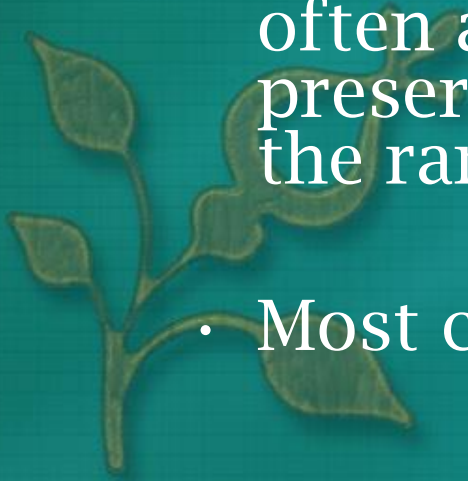
**Improves every Vital Function, Brain, Digestion, Lungs, Heart, and
Sustains the Vital Power under conditions of extraordinary
fatigue and privation.**



Adhesive Capsulitis

“Frozen Shoulder Syndrome”

- A common condition characterized by pain and restriction of shoulder motion that increasingly gets worse over the course of a year.
- S/S: Decreased ROM (active and passive). Abduction, Internal and external ROM is often affected. Extension is typically preserved. Pain is often present at the end of the range of motion.
- Most commonly seen in patients >40



Adhesive Capsulitis

“Frozen Shoulder Syndrome”

- Typically caused by prolonged shoulder immobility
- Tenderness is usually at the anterior portion of the shoulder.
- Main treatment goal is prevention!
 - Early mobilization following shoulder injury is essential.
 - OMT, especially Spencer Techniques, should be directed at improving motion and lysing adhesions.
 - Treatment of the glenohumeral joint and upper thoracic often provide relief.



Spencer Technique

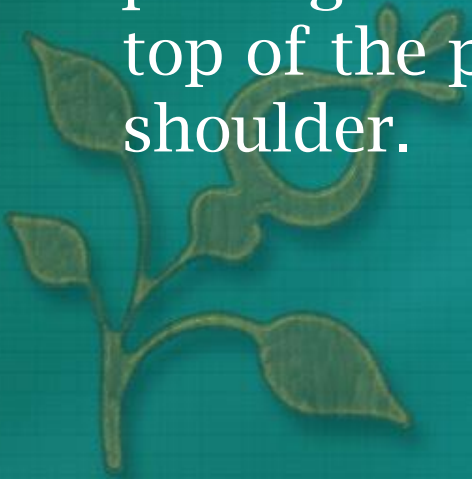
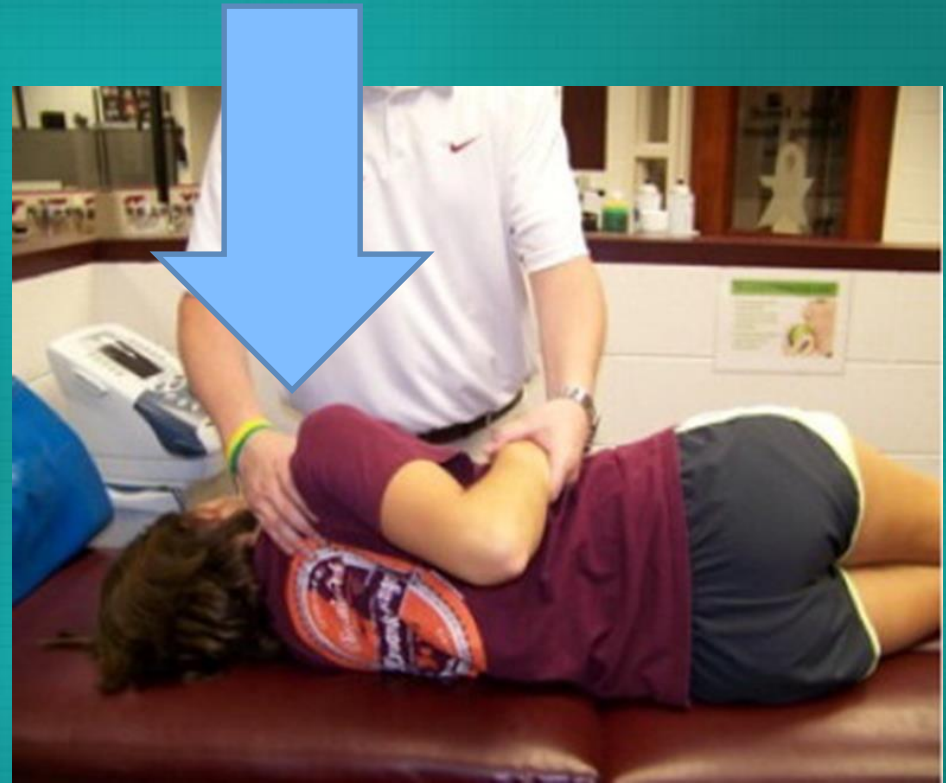


- Patient is positioned in lateral recumbent position lying with the side of the dysfunctional shoulder up.
- Physician stands on the side of the table facing the patient, then carefully and slowly moves the upper extremity through the 7 stages.



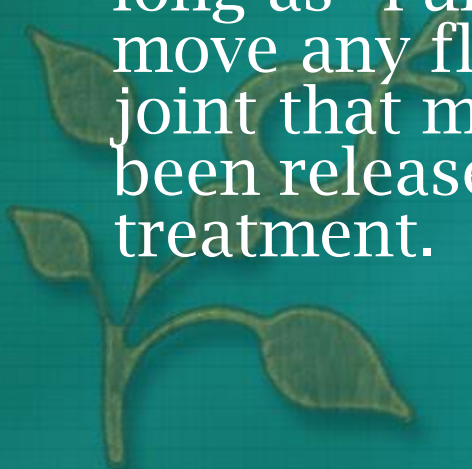
Spencer Technique

- The purpose of this technique is to improve motion in the glenohumeral joint.
- It is important that the physician limits motion at the scapula by placing his hand on the top of the patient's shoulder.



Spencer Technique

- During each stage, the physician may encounter restriction, and may treat that restriction with either muscle energy treatment or articular techniques.
 - Order doesn't matter, as long as "Pump" is last to move any fluid in the joint that may have been released during treatment.
1. Extension
 2. Flexion
 3. Circumduction (with Compression)
 4. Circumduction with Traction (holding at either elbow or wrist)
 5. Abduction
 6. Adduction/external rotation
 7. Internal Rotation
 8. Pump (always the last step)

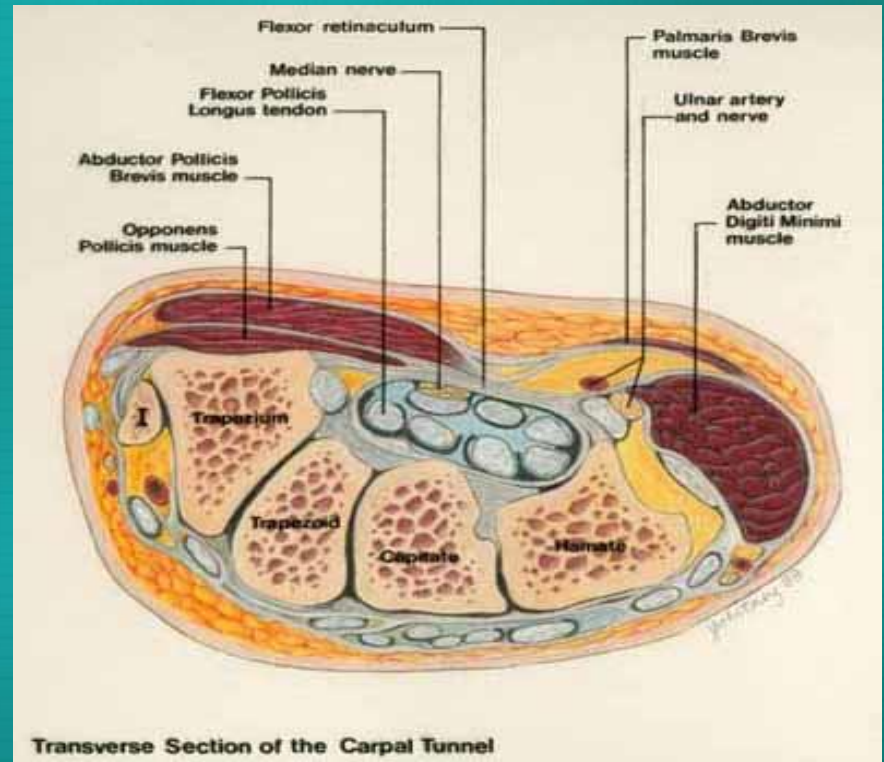


Carpal Tunnel Syndrome



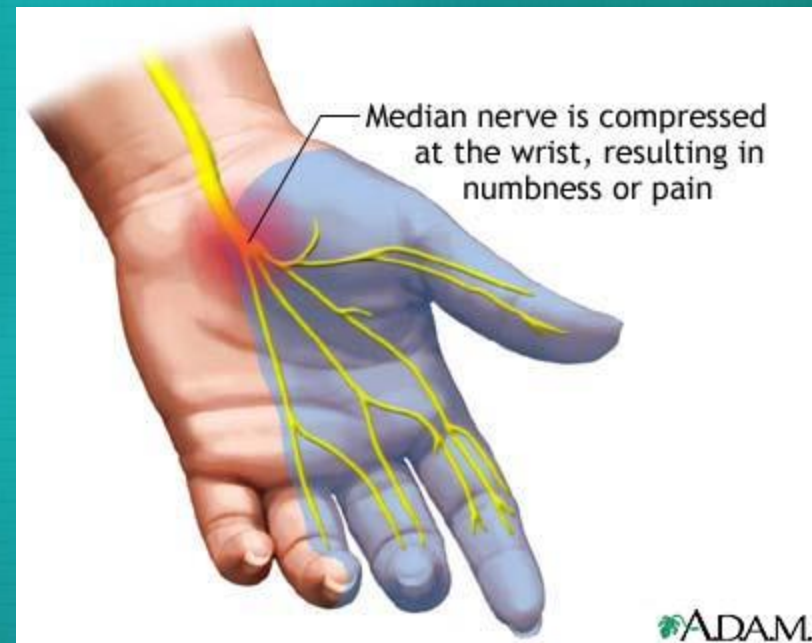
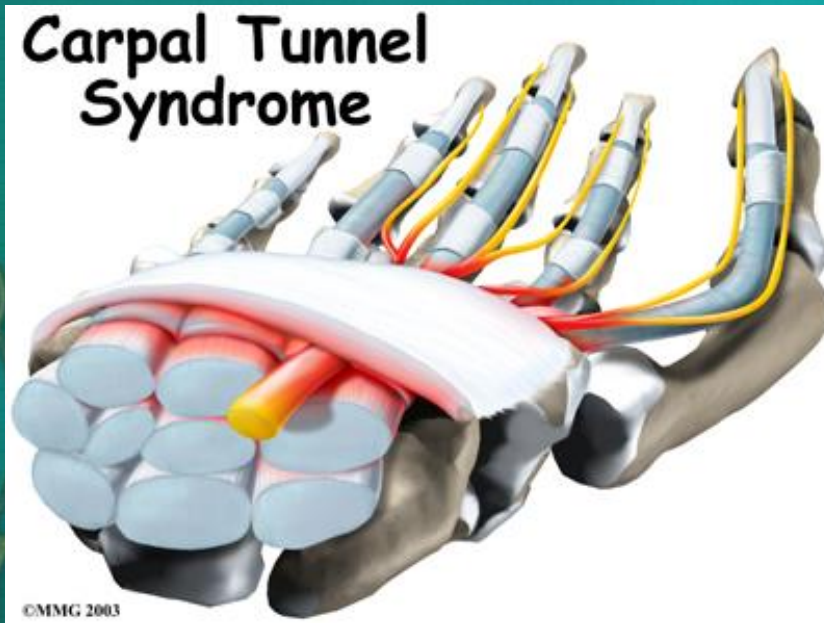
Carpal Tunnel

- Traveling through the carpal tunnel is the median nerve, the flexor digitorum profundus tendon, the tendon of the flexor pollicis longus and the tendon of the flexor digitorum superficialis.

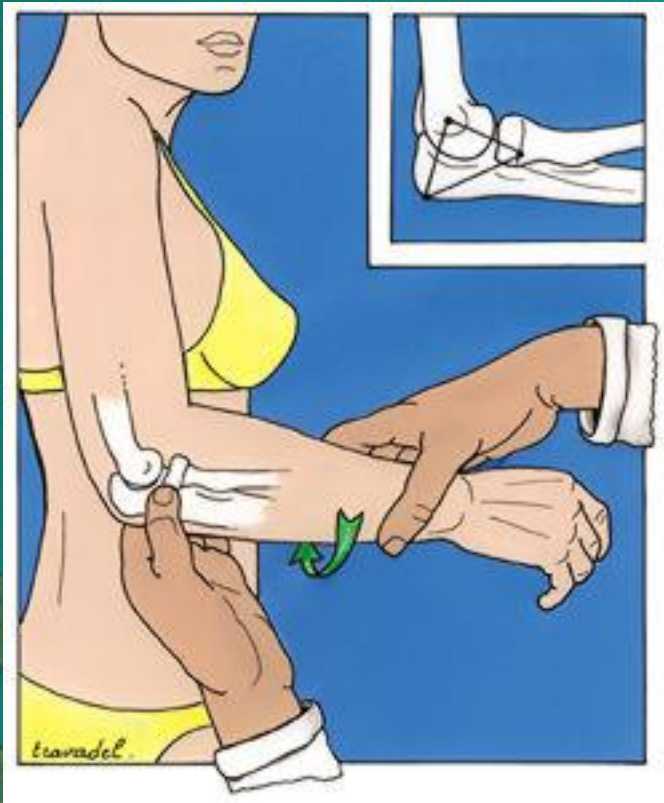


Carpal Tunnel Syndrome

Impingement, compression or irritation to the median nerve will result in paresthesias of the lateral aspect of the palm, middle and index fingers, and thumb. There may be associated weakness of the thumb abductors.



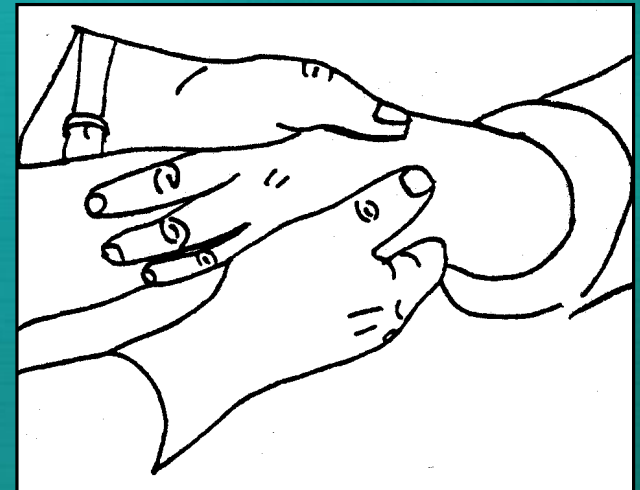
Posterior Radial Head Treatment



1. Flex and bring towards supination
2. Put pressure over radial head from the posterior aspect
3. Have patient try to pronate for 3-5 seconds. Relax. Reposition to the new barrier and repeat.

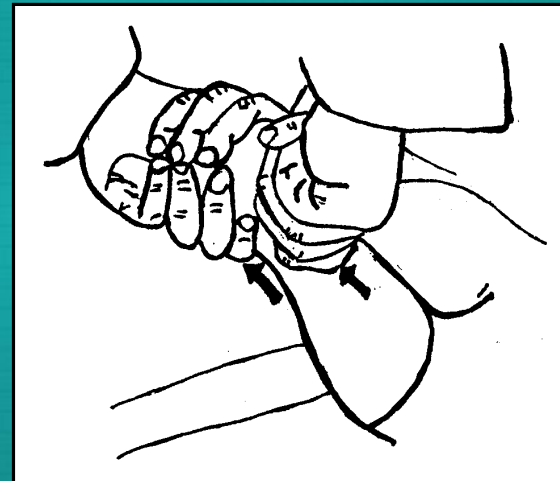
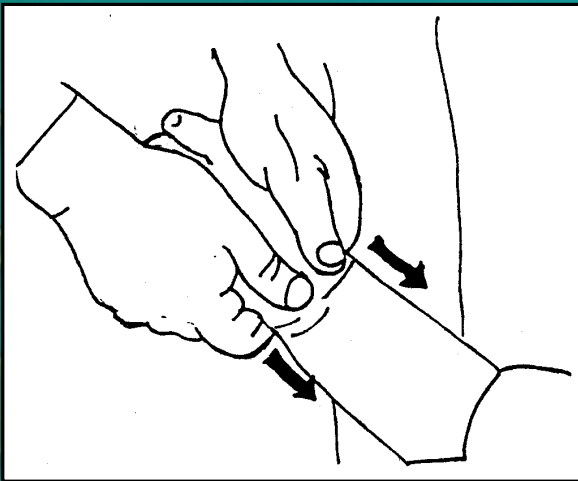
Carpal Separation Technique

The physician grasps the patient's pronated hand using both hands. The physician's fingertips are in contact with the thenar and hypothenar eminences while his thumbs are placed against the distal radius and ulna for the traction separation counterforces. The physician then holds the wrist in passive flexion and may add lateral gliding to one side or the other, facilitating mobilization. The wrist is brought into extension with distraction to articulate the carpals.



Carpal Separation Technique (cont.)

If a specific carpal bone fails to mobilize, the physician may place one thumb on that bone with the other thumb placed on top of the first as reinforcement and take the wrist from passive flexion into extension. This should mobilize carpal bone restriction.



- “Opponens roll” ligament stretch
- Home stretches



Piriformis Syndrome



Dr. Williams' Pink Pills
for Pale People.

The Genuine as
Advertised, bearing
the full Name
Dr. Williams' Pink Pills for Pale People
on each Package.

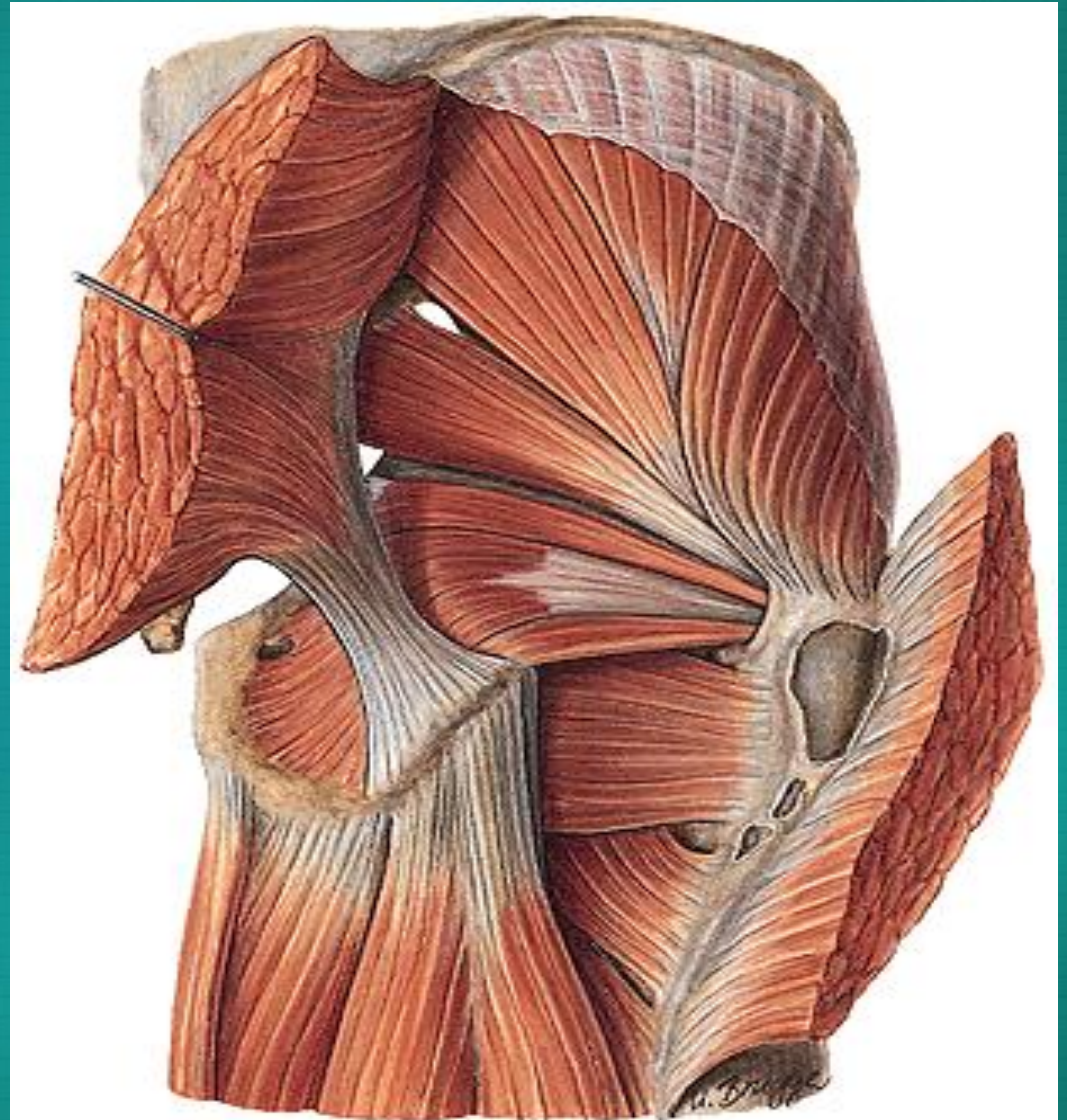
Sold Within.

Accept no Substitute.

A vintage advertisement for Dr. Williams' Pink Pills for Pale People. The ad features a central illustration of two hands: one hand holds a small, cylindrical pill bottle with the product name on it, while the other hand points towards it. The text is arranged around the illustration, with the product name at the top and bottom, and a central paragraph describing the product as the 'Genuine' one. A red box highlights the phrase 'Sold Within.', and the bottom line states 'Accept no Substitute.'

Piriformis

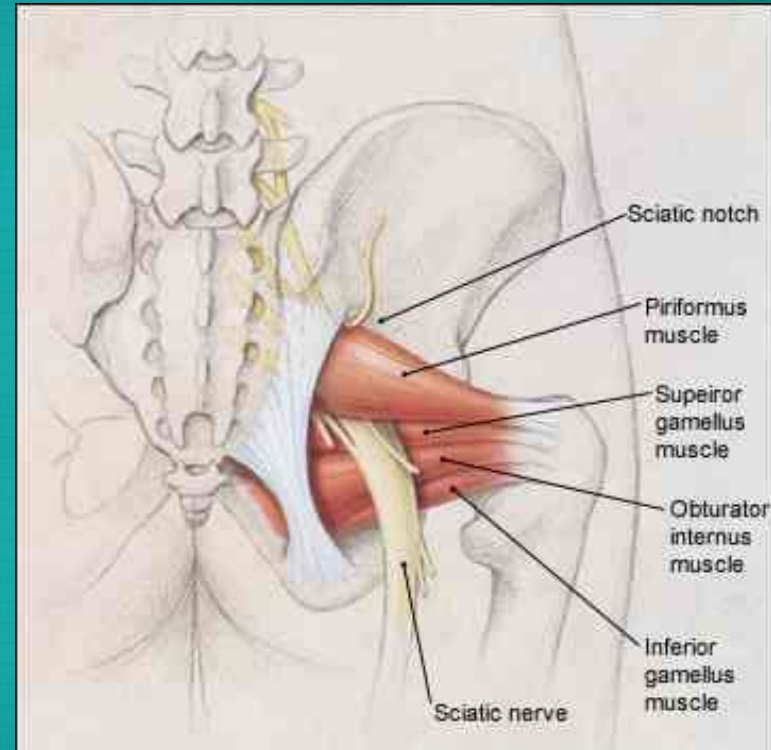
- Anterior surface of sacrum to greater trochanter



Piriformis Syndrome

- Entrapment of the sciatic nerve by an abnormal piriformis muscle, leading to neuropathy
 - Characterized by pain and paresthesias in a sciatic radicular distribution
- Responsible for 6% of LBP and sciatica seen in general practice

Remember the relationship of the piriformis muscle to the sciatic n.



Causes of Piriformis Syndrome:

- Traumatic injury to the piriformis muscle, leading to spasm, edema, and contractures of the muscle. Results in compression and entrapment of the sciatic nerve .
- Reflex spasm of the piriformis muscle
- Abnormal course of the sciatic nerve through the piriformis muscle or its tendon
- Chronic postural concerns, like driving for work, etc



Symptoms/Signs to Make Diagnosis of Piriformis Syndrome

Symptoms

- Pain with sitting, standing, or lying longer than 15 to 20 minutes
- Pain and/or paresthesia radiating from sacrum through gluteal area and down posterior aspect of thigh, usually stopping above knee
- Pain improves with ambulation and worsens with no movement
- Pain when rising from seated or squatting position
- Change of position does not relieve pain completely
- Contralateral sacroiliac pain
- Difficulty walking (eg, antalgic gait, foot drop)
- Numbness in foot
- Weakness in ipsilateral lower extremity
- Headache
- Neck pain
- Abdominal, pelvic, and inguinal pain
- Dyspareunia in women
- Pain with bowel movements

Signs

- Tenderness in region of sacroiliac joint, greater sciatic notch, and piriformis muscle
- Tenderness over piriformis muscle
- Palpable mass in ipsilateral buttock
- Traction of affected limb provides moderate relief of pain
- Asymmetrical weakness in affected limb
- Piriformis sign positive
- Lasègue sign positive
- Freiberg sign positive
- Pace sign (flexion, adduction, and internal rotation test result) positive
- Beatty test result positive
- Limited medial rotation of ipsilateral lower extremity
- Ipsilateral short leg
- Gluteal atrophy (chronic cases only)
- Persistent sacral rotation toward contralateral side with compensatory lumbar rotation

Treatment of Piriformis Muscle Tenderpoint Using Counterstrain



Piriformis counterstrain

PIRIFORMIS COUNTERSTRAIN

Indication: Piriformis tender point associated with back pain, pelvic pain, hip pain, sciatic neuritis, and other problems.

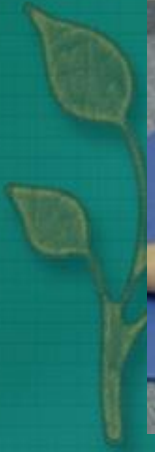
Relative contraindications: Severe hip arthritis, deep venous thrombosis in involved leg.

Technique (prone):

1. Locate the tender point in the mid-buttock halfway between the top of the greater trochanter and the mid-line of the sacrum, labeling it 10/10;
2. Bend the knee on the tender point side, flex the hip 90°, and abduct and externally rotate the hip until tenderness is 2/10 or less;
3. Hold this position for 90 seconds while keeping a finger on the tender point;
4. Slowly return the leg to the table and retest for tenderness.

Piriformis Muscle Energy Technique

- Physician induces internal rotation and ADduction of ipsilateral hip until barrier is met
- Physician provides resisting force, while patient externally rotates and ABducts hip for ~3 seconds
- Physician takes hip further into internal rotation and adduction. Repeat (For patients that are too acute, keep leg straight on table and use internal rotation only)



Piriformis Stretch for Home

- Lower leg parallel to ground
- Sit up straight (extend lumbar spine)
- Flex at hips



PIRIFORMIS STRETCHES

SIT UPRIGHT IN A CHAIR, CROSS ONE LEG OVER THE OTHER, ANKLE ON THE KNEE



Owww...

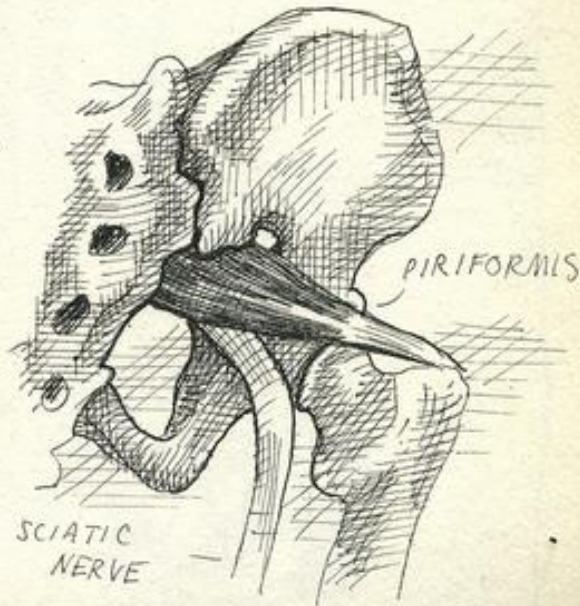


KEEP YOUR BACK STRAIGHT AND LEAN FORWARD, PRESSING DOWN ON YOUR LEG. DON'T OVERDO IT.

LAY DOWN AND TWIST LEG UP AND OVER



MOTHER OF GOD! AUGH!



PIRIFORMIS

SCIATIC NERVE

Handwritten notes at the bottom of the page: "LIPK 4/20/10", "KIC 2/23/10", and "203-20".

Knee pain



External Rotated Tibia



Landmark Diagnosis of Tibial Rotation

1. With the patient supine, place your thumb and index finger of one hand on the lateral margins of the patella;
2. Place the tip of your other index finger on the midline of the tibial tuberosity which should normally be below the middle of the patella;
3. Tibial tuberosity lateral = tibia external rotation;
Tibial tuberosity medial = tibia internal rotation.

TIBIAL TORSION PALPATION



Normal tibial alignment

Should be done seated to remove any influences of the femur/hip

External (lateral) Tibial Rotation

- a. The patient is supine.
- b. The physician stands on the side of involvement and grasps the patient's extended leg below the knee and above the ankle.
- c. The leg is internally rotated to the motion barrier and the patient is instructed to externally rotate the leg while the physician resists this motion.
- d. After a few seconds, the physician "takes up slack" in internal rotation.

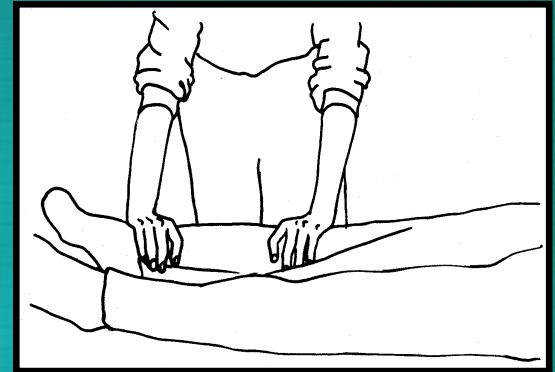


Figure 20: Muscle Energy

External tibial rotation may be caused by hypertonicity of iliotibial tract or biceps femoris.

This technique stretches those areas by internally rotating tibia.

Repeat 3 times and recheck.



Ankle Sprain



Beneficial to
Young and Old

"GESUNDHEIT, GRANDPA"

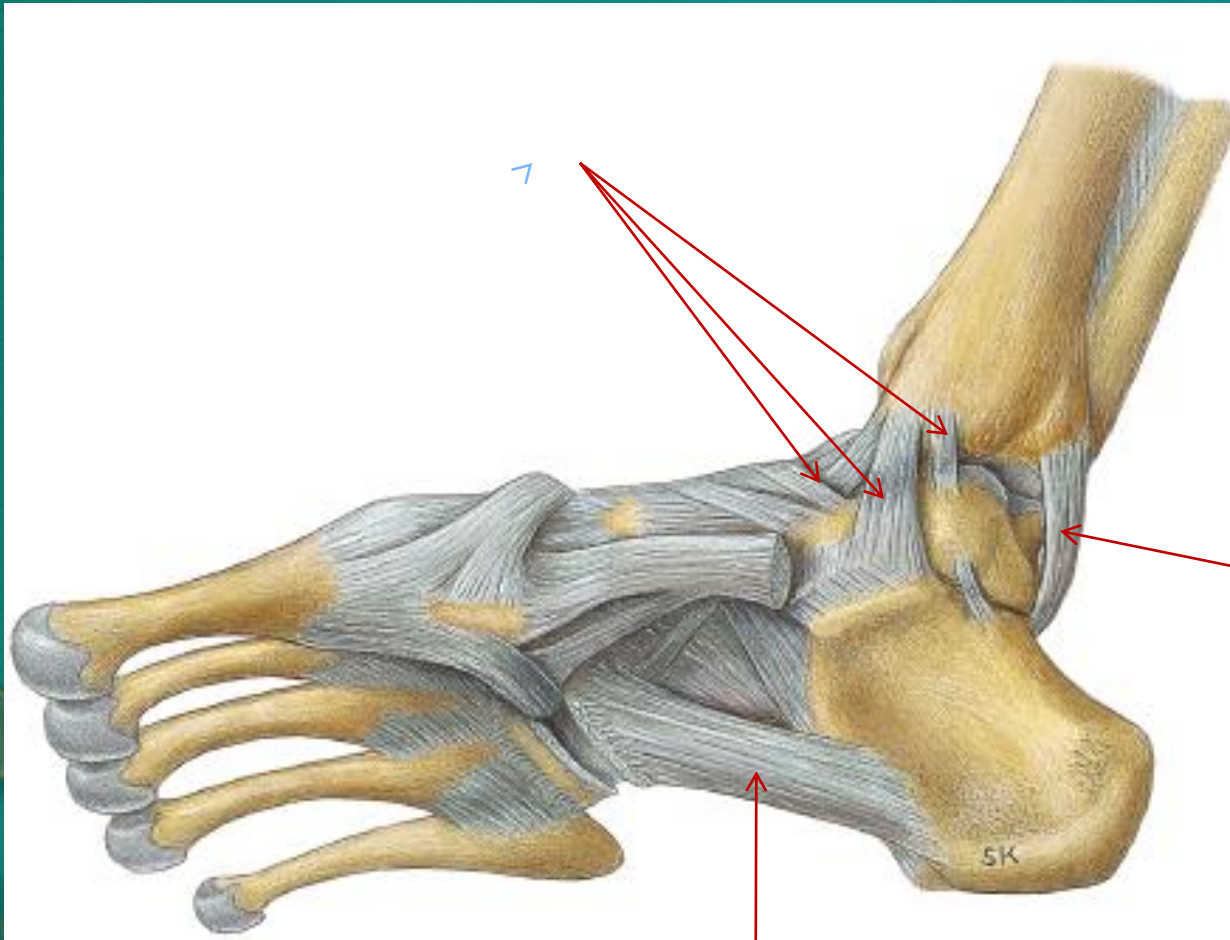
Cultivate
the **RAINIER BEER** habit
It brings the glow of health and gives
a new lease on life No medicine
can equal it as a **TONIC**—

SEATTLE BREWING & MALTING CO. Seattle, Wash.

Source: Rainier Co. Inc.

A vintage black and white advertisement for Rainier Beer. The top half features an illustration of an elderly man with a cane sitting in a chair, and a young girl in a white dress standing next to him, offering him a glass of beer. A bottle of Rainier Beer sits on a table next to the man. The text is arranged in a classic, serif font, with 'RAINIER BEER' in a large, bold, outlined font. The overall tone is nostalgic and emphasizes health and family.

Clinically Important Ligaments

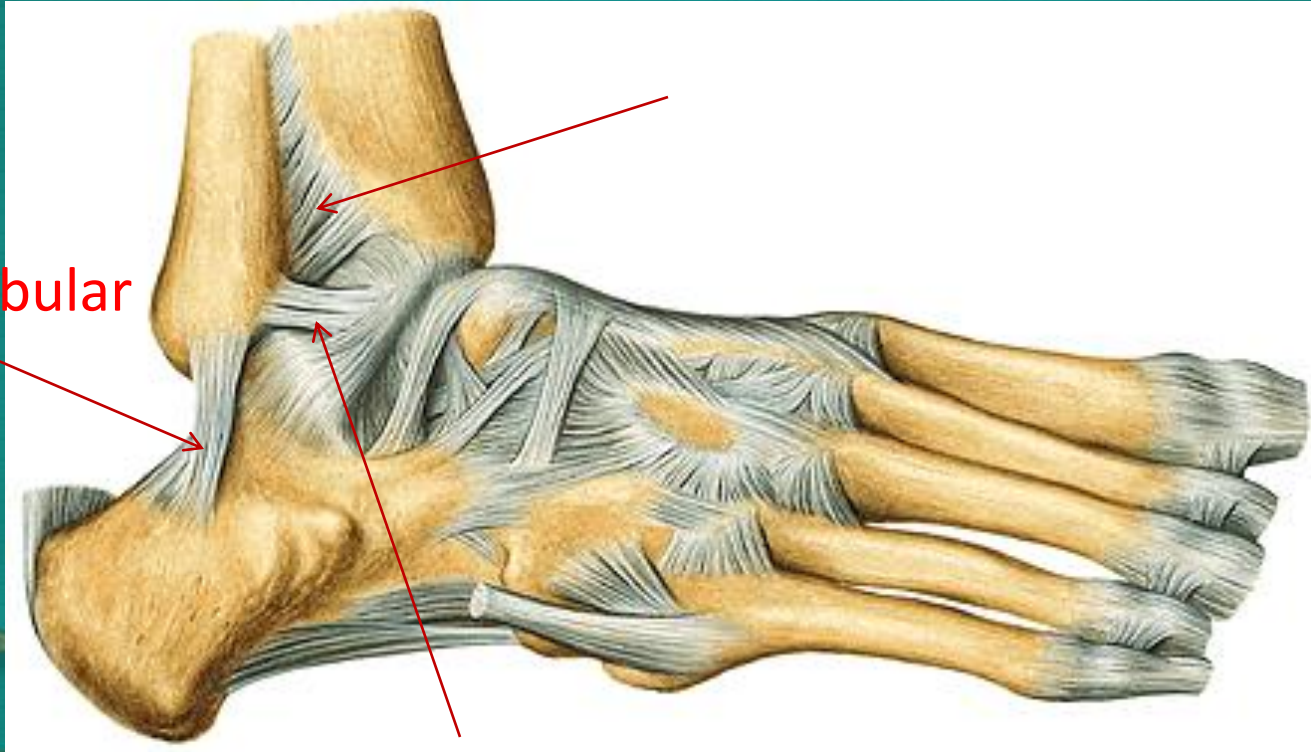


Posterior
tibiofibular
ligament

Long plantar ligament

Clinically Important Ligaments

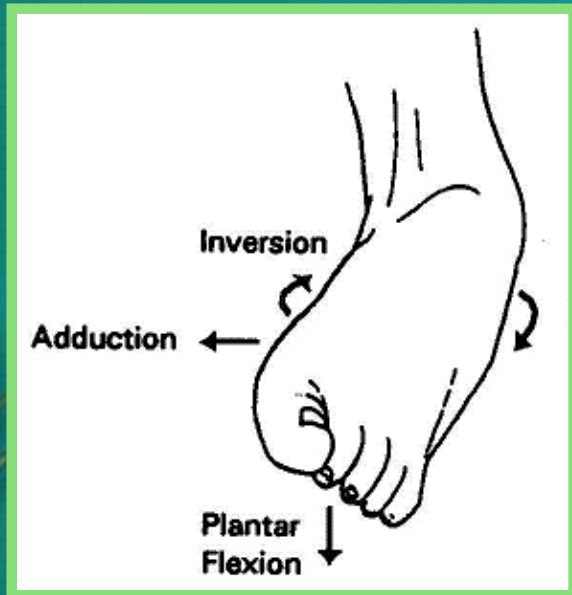
Calcaneofibular
ligament



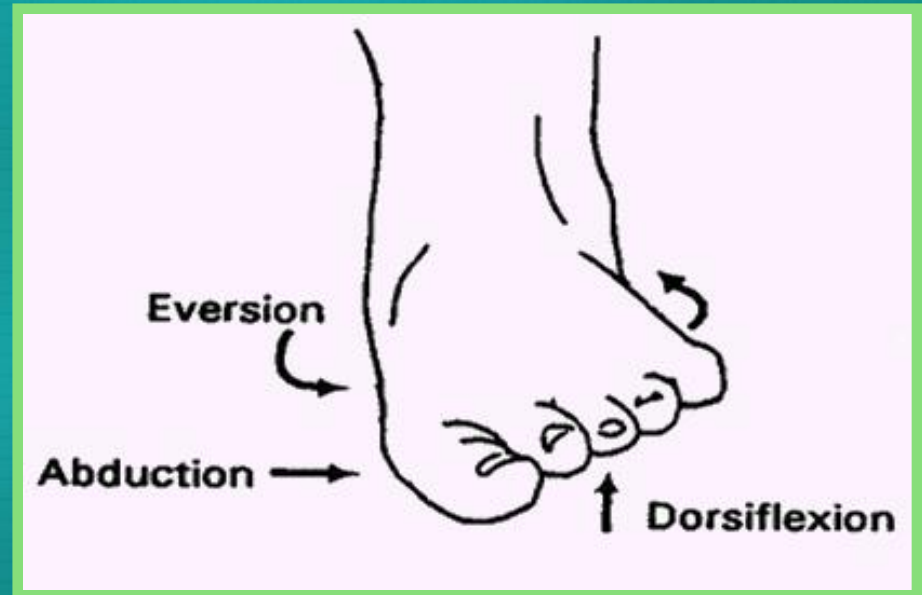
Anterior talofibular ligament- most commonly injured ligament in ankle sprains

Motions of the Ankle

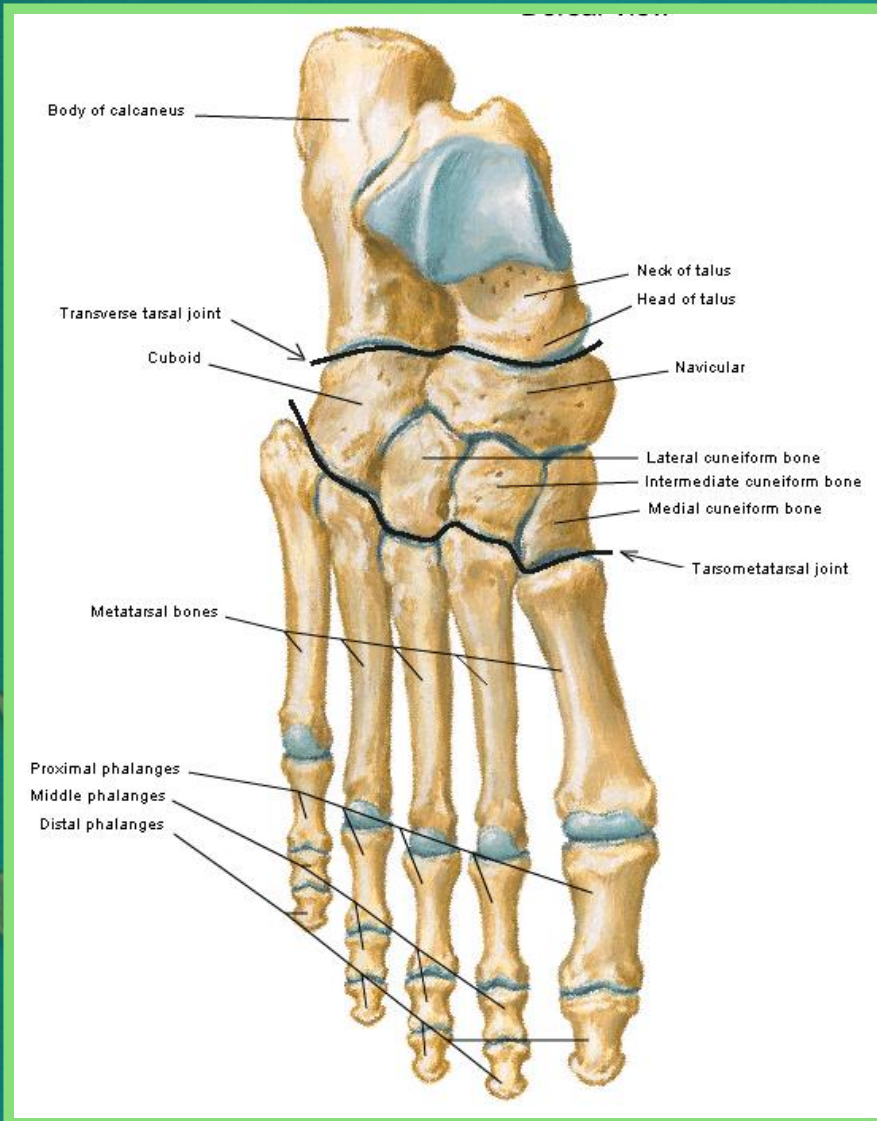
- Supination
 - Adduction
 - Inversion
 - Plantar flexion



- Pronation
 - Abduction
 - Eversion
 - Dorsiflexion



Ankle Sprain



- More ankle sprains occur in plantar flexion due to the less stable narrow dimension of the posterior talus

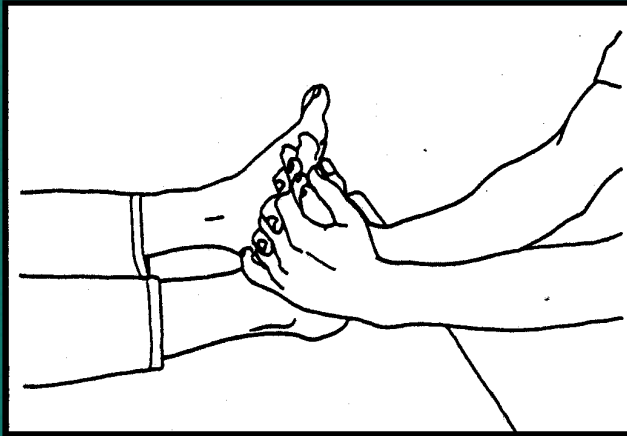
Anterior Drawer Test for Sprained Ankle



To assess the integrity of the anterior talofibular ligament, have the patient sit with the knee flexed at 90° , and stabilize the distal leg by placing one hand just above the ankle.

Put the other hand around the heel end with the foot in about 20° of plantar flexion, move the foot forward. An increase in anterior motion, and a soft end point to the movement is a positive sign for sprain.

Traction Tug for resetting Talus



The traction tug frees the talus from its articulation with the calcaneus and the tibia and fibula. Once these articulations are gapped, the talus can regain its neutral position.

- The patient is placed in the supine position with the physician's hands clasped together over the dorsum of the foot and the thumbs on the plantar aspect.
- Traction with dorsi flexion and eversion is applied to the ankle and a short tug is applied to reset the talus in the mortise of the ankle