SPECIALIST TESTS

Shoulder

Active Test= Could be muscular or joint problem.

Passive Test= Therapist does it, no muscles firing, movement at joint = joint problem

Resisted= Muscles working but no movement, can't be movement at joint as therapist is blocking it = muscular

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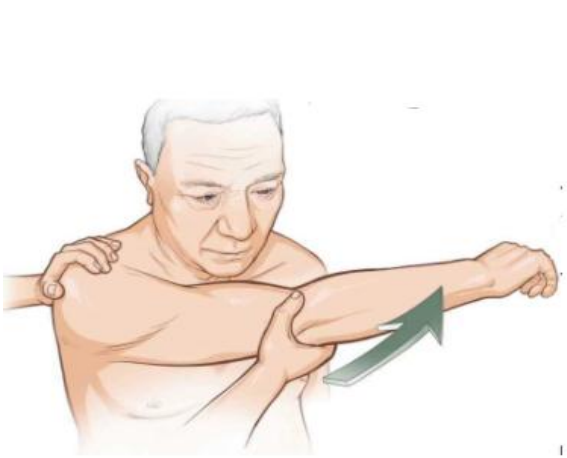
Acromioclavicular Sheer Test

Therapist interlocks fingers cupping the anterior and posterior aspect of shoulder with one hand on clavicle and one hand on spine of scapula.
Squeeze hands together.
If pain, clicking or abnormal movement occur = a positive test indicates AC joint pathology

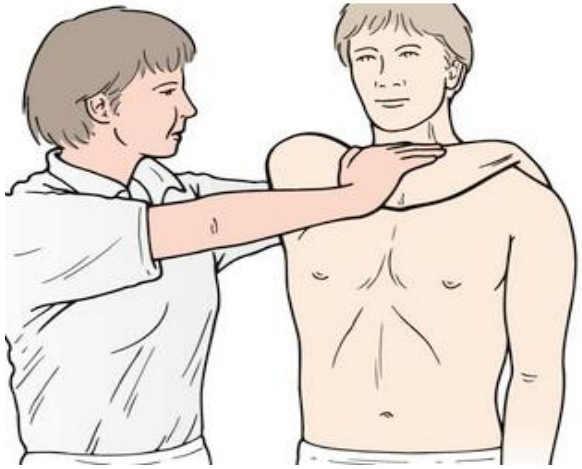


Acromioclavicular joint (AC is at the end of clavicle). You can palpate it

Acromioclavicular Compression Test

Therapist pushes elbow across, this stresses AC joint and if pain is felt - problem with AC joint, possible AC separation.

Cause of injury: falling on point of the shoulder.



Sternoclavicular Compression (Scarf) Test

Therapist pushes elbow further across, this stresses SC joint and if pain is felt - problem with SC joint, possible sprain.

Cause of injury: direct blow to the sternum.

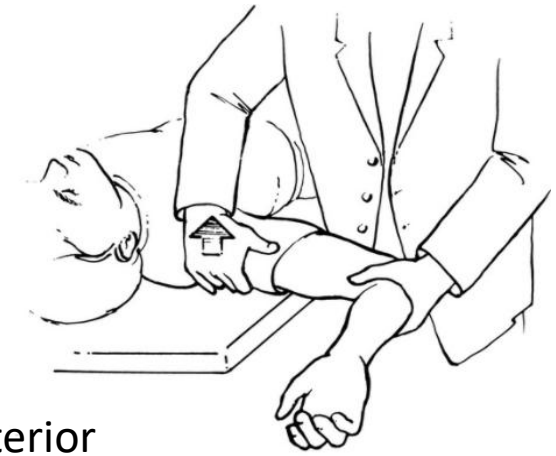
Glide (Draw)Test

Therapist fixes the shoulder then pushes down.

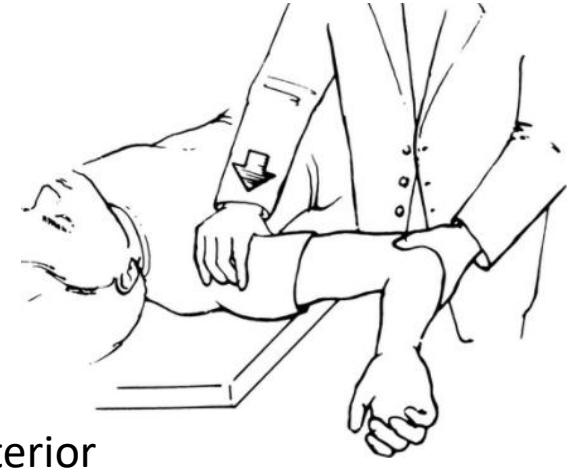
Does head of humerus give any movement or unnatural movement?

Movement could indicate loose ligaments from an impact injury.

Supine position = Anterior glide Supine position = Anterior glide



Anterior



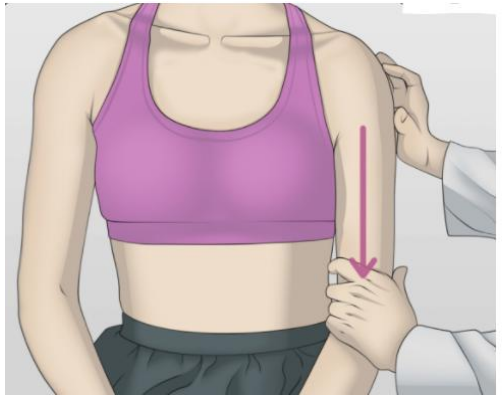
Posterior

Sulcus Test -for inferior shoulder Glenohumeral instability.

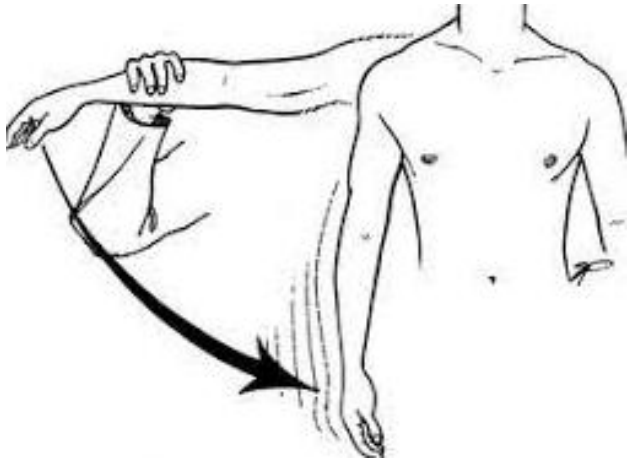
Therapist grasps forearm and pulls distally to the floor.

If the test is positive there will be subluxation movement at joint and the client will feel grinding.

Test can also be done in supine position.



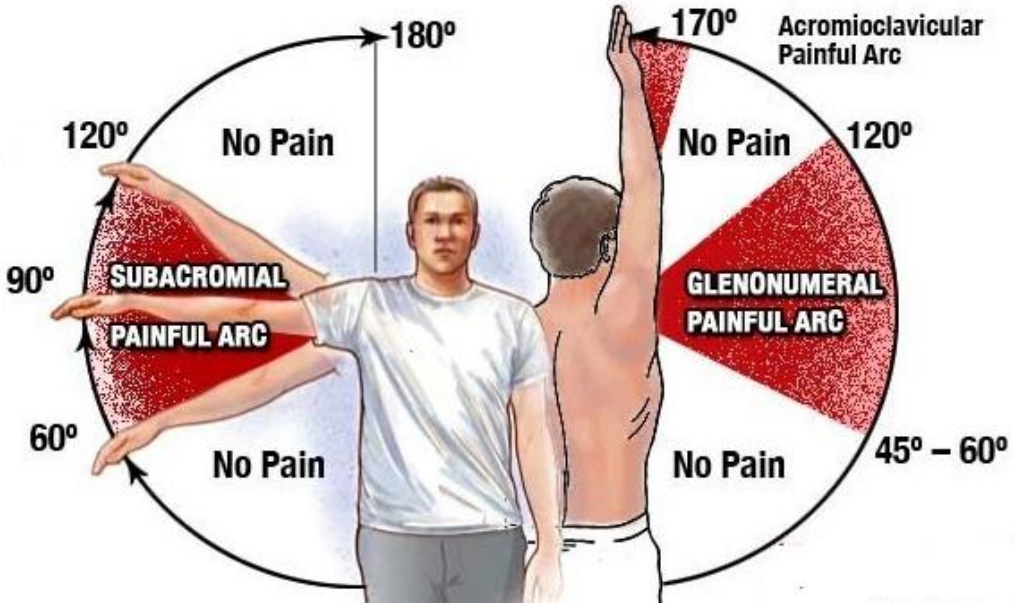
Abduct Client's arm to 90 degrees



<u>Drop ArmTest</u> - tests for tear in rotator cuff particular in **Supraspinatus**
Client slowly drops arm down to side.
Positive test is when client can't slowly drop arm to the side or feels pain when doing so.
Supraspinatus helps deltoid to abduct.

Hawkins Kennedy Test (test for subacromial impingement-Supraspinatus tendon)
Therapist elevates arm to 90 ° Therapist applies forced internal rotation of humerus.
Test is positive if patient's symptoms are reproduced.
Result is compression of supraspinatus tendon.

Painful Arc Test
for Supraspinatus Impingement



The client is sitting or standing

From the neutral arms position, the client fully abducts arm.

The test is positive for **supraspinatus impingement** if the client reports pain between 60 and 120 degrees of abduction. Pain should reduce after 120 degrees of abduction.

If the pain occurs at the end of abduction = indication of **(AC)acromioclavicular joint** dysfunction

Empty Can Test (Jobe Supraspinatus Test)

for integrity of the supraspinatus tendon and rotator cuff impingement

The client is seated or standing

The client's arm(s) elevated to 90 degrees in scapular plane, elbow(s) extended, full internal rotation, and pronation of the forearm(s) -a thumbs-down position as pouring liquid out of a can

The client resists downward pressure applied by the examiner at the client's elbow or wrist

The test positive if the client experiences pain or weakness with resistance.

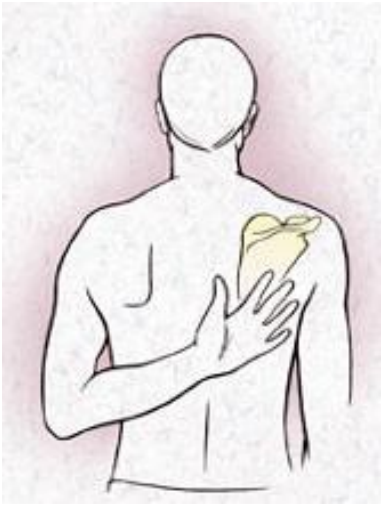
Apley's Scratch Test

to evaluate shoulder joint ROM and instability

External rotation and abduction
The client asked to reach behind the head and touch the superior medial angle of the opposite scapular

Test positive =pain occurs in rotator cuff or unable touching opposite shoulder =rotator cuff pathology

Internal rotation and adduction
The client asked to reach behind the back and touch the inferior angel of the opposite scapular



Speed's Test for pathology of the biceps tendon

The client is sitting or standing.

The client's arm is extended in supination at 90° of abduction and 30° of horizontal flexion.

The client continues elevating the arm against a resisted isometric force applied by the examiner.

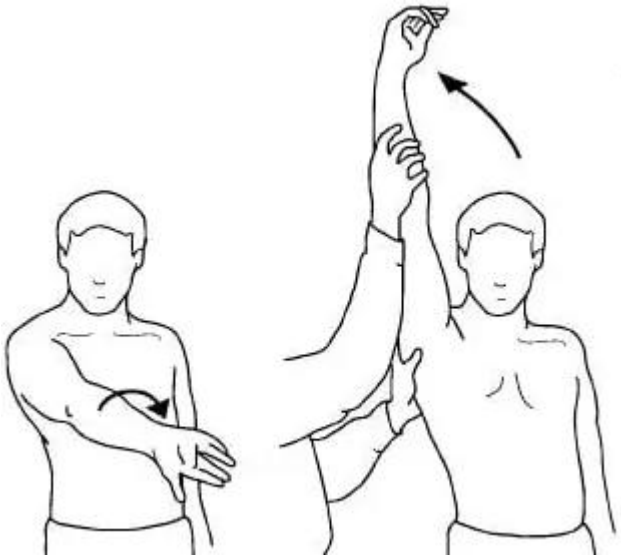
Simultaneously, the examiner palpates the bicipital groove region with the other hand.

Positive test:

The difference in the strength of elevation of the shoulder with pain in the bicipital groove region =pathology in the long head of the biceps

Profound weakness on resisted supination=a second or third degree sprain of the biceps tendon should be suspected.

Neer Sign (or Neer Impingement Test) for rotator cuff impingement syndrome



The client is sitting or standing

The examiner medially rotates the affected arm and raises it in forced forward elevation with one hand, while stabilizing the scapula with the other hand.

Positive test: severe pain with motion.

Gerber's Lift-Off Sign for isolated rupture of the subscapularis tendon

The client is sitting or standing

The examiner is behind the client

The client performing internal rotation (IR), by lifting the hand off the back while the examiner places pressure on the hand.

Positive test: the client is unable actively to lift the hand of the back against the examiner's resistance or compensates by extending the elbow and shoulder =a tendon rupture or muscle insufficiency

Impingement Relief Test (Shoulder Abduction Test)

for suspicion of C4 or C5 nerve root irritation(It can also be used for thoracic outlet syndrome)

The client is sitting or supine on the bench
The client actively (or passively) elevates the arm through abduction, so that the hand or forearm rests on top of the head.
Positive test: the symptoms of nerve root irritation improve or resolve(as abduction of the arm decreases the tension of the nerve roots)= a nerve root compression or a herniated disk should be suspected.

Knee - Patellofemoral joint

Collateral Ligaments

Valgus and Varus Stress test

Valgus test Lateral
Lateral side= LCL

Varus test Medial
Medial side = MCL

Patient supine, Therapist flexes client's knee at 90", secures femur then extends lower leg. Abduct and adduct ankle, to produce movement laterally and medially, there should be minimal movement.

Valgus: if the ankle moves laterally, then the MCL is damaged.

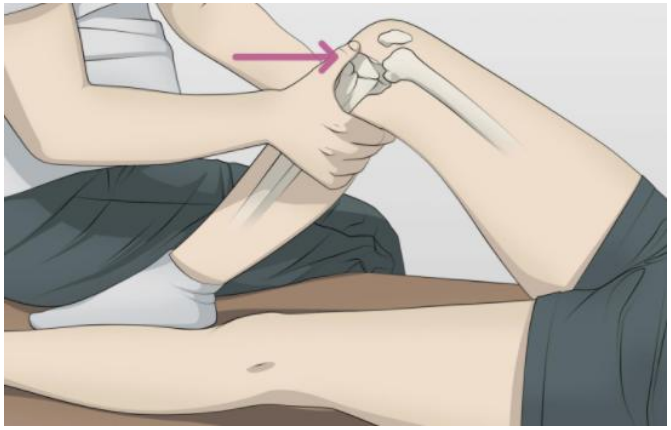
Varus: if the ankle moves medially, then the LCL is damaged.

If a collateral ligament is totally torn, then there will be a lot of movement without pain. If the collateral ligament is just damaged, then the movement will not be significant so the main indicator is pain.

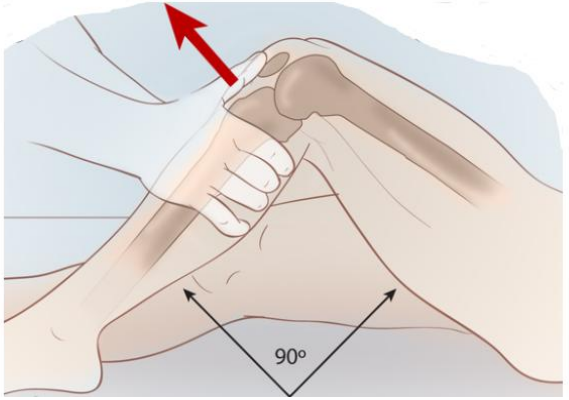
MCL is more frequently damaged

Draw Test - Cruciate Ligaments

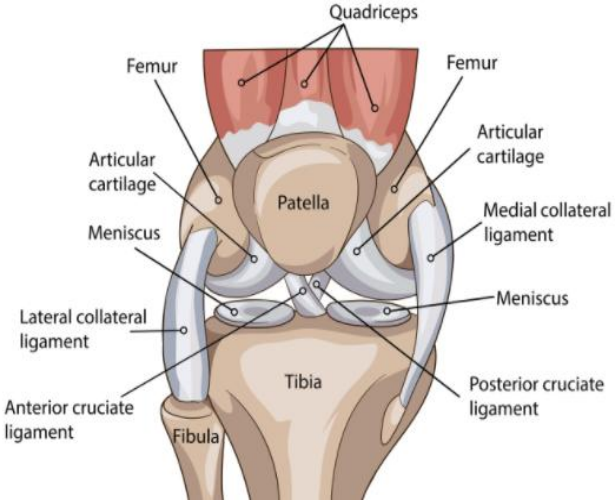
Anterior - Pull Forward= ACL = movement then the ACL is weak or torn.
Posterior - Push Back= PCL = movement then the PCL is weak or torn.



Push back for PCL



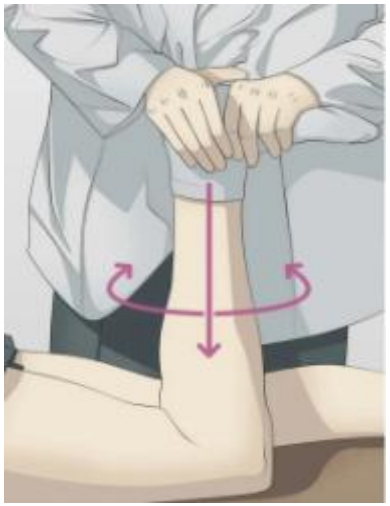
Pull forward for ACL



The **ACL** is more crucial than the **PCL** – it is often torn during fast deceleration or hyperextension of the knee eg football.

Since the **PCL** is not crucial, it is often removed if injured.

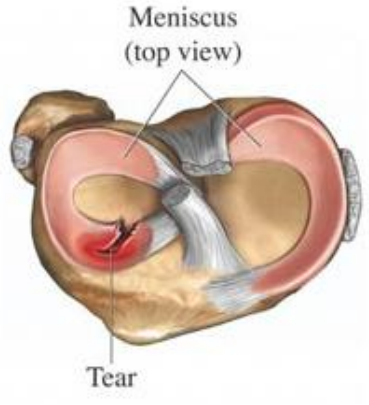
Meniscus test – **Apley's Grind Test** for medial and lateral tears



Therapist externally rotates and pushes down to test medial meniscus and internally rotates for lateral meniscus whilst pushing down.
Pain when pushing down could indicate problems meniscus.

Meniscus - are concave and act as shock absorbers

If the medial or lateral collateral ligament is torn (MCL or LCL) then it is likely that the meniscus will have torn on the same side as the ligament tear.
On the opposite side the meniscus will have been compressed.
Meniscus tears are often repaired surgically by trimming the meniscus.
Following this procedure the meniscus will be thinner than previously, so will provide less shock absorption.



Noble Compression tests for **Ilotibial Band Friction Syndrome**

Patient is supine with hip and knee flexed to 90 degrees.

Therapist applies pressure with the thumb (or fingers) to lateral epicondyle.

While maintaining pressure, the client's knee is **passively** extended.

A positive test occurs when the client experiences severe pain over the lateral epicondyle at approx 30 ° of knee flexion.

The client reports the pain is similar to the pain created during similar activities.

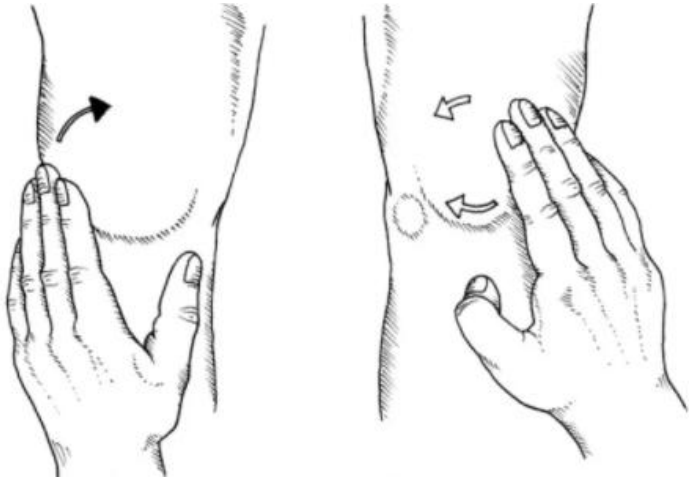
Lateral pull test (patella maltracking)

Patella out of alignment

Patella in normal alignment

Mal-tracking can be evaluated with the client in a sitting position with the legs hanging off the table.
The client is asked to actively extend their knees.
The tester observed the tracking with and without light palpation of the superior pole of the patella

Patella sweep test for minimal joint effusion



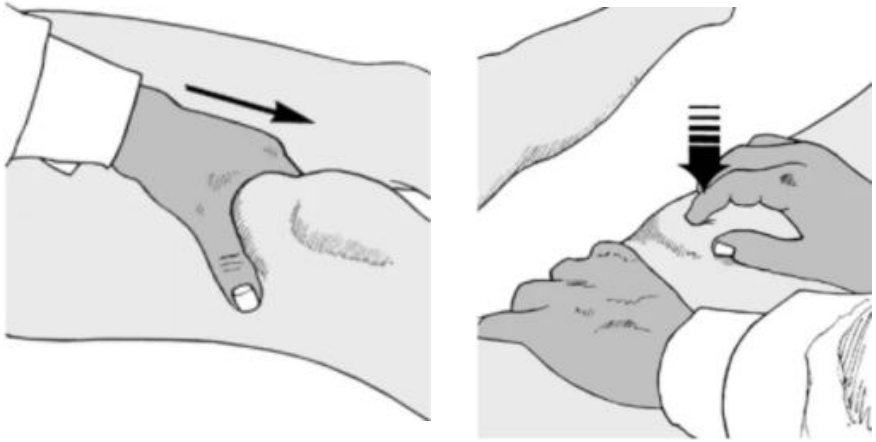
The client is supine with the knee in full extension.

The examiner sweeps his hand upwards and towards the suprapatellar bursa 2 -3 times in an attempt to move the effusion from the inside of the joint capsule to the suprapatellar pouch.

Then strokes downwards on the lateral aspect of the knee just superior to the supra-patellar bursa towards the lateral joint line.

If the test tests positive you'll detect a small wave or bulge on the medial aspect of the knee, just inferior to the patella within a few seconds.

Tapping the patella for large effusions



The tester push firmly down on the suprapatellar pouch with the palm of one hand while one queezing the lateral side of the knee with the thumb and fingers. With the other hand, encircle the inferior aspect of the knee, pressing toward the patellar.

Quickly tap the patella against the femur to see if it bounces, which it will do if there is **fluid** trapped beneath it.

Sometimes a clicking sound is heard. Watch for fluid returning to the suprapatella pouch as the hand is removed.

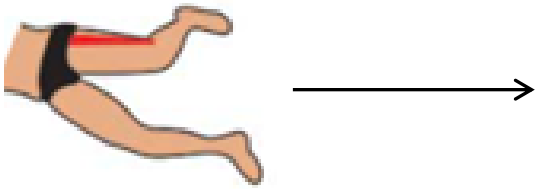
Ober's test to evaluate the tightness in the IT band and TFL

The client is in a side-lying position with the affected side up with lower leg flexed for stability.

The therapist stands behind the client, with one hand stabilising the upper iliac crest to prevent movement in any direction.

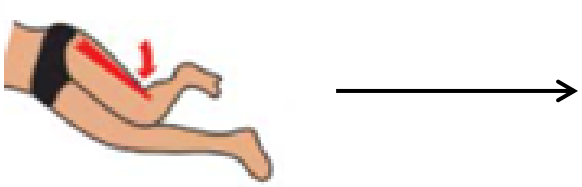
With the other hand, the therapist grasps the distal end of the client's affected leg, which is flexed to a right angle (90°) at the knee.

The therapist passively abducts and extends the patient's hip with the knee flexed to 90°.



Positive test

If the TFL and ITB are tight, the leg would remain in an abducted position without falling on the table and the client would experience lateral knee pain

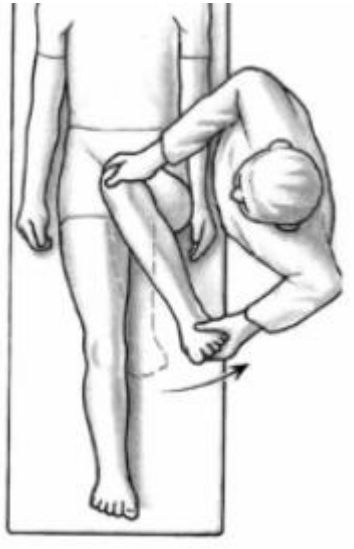


Negative test

If the TFL and ITB are normal, the leg will slowly drop down towards the table without any discomfort for the client

Coxal Joint - Hip

Quadrant Test or Scour test - (tests for a labrum tear)



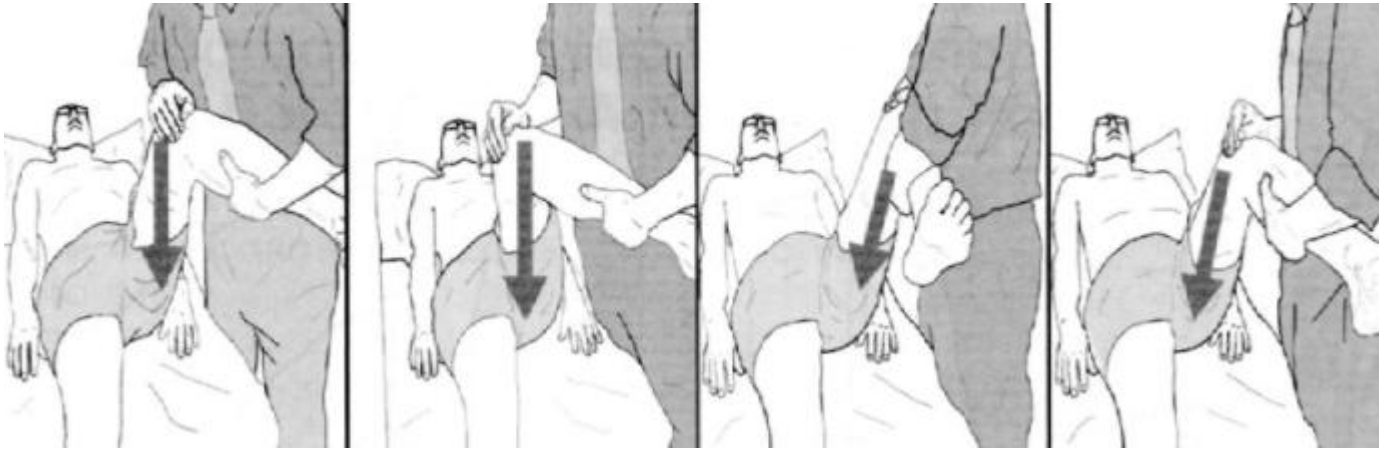
Therapist takes client's leg to 90 degrees and moves the leg around in a square, to test the flexion/extension and lateral/medial rotation of the hip.

A compression force is applied through the knee along the longitudinal axis of the femur at the end range of flexion and adduction.

This test stresses the lateral and posterior joint capsule.

Test is **positive** if resistance, apprehension, or pain felt anywhere during the test

It tests for Osteoarthritis, Osteochondritis dissecans and acetabulum labrum defects.

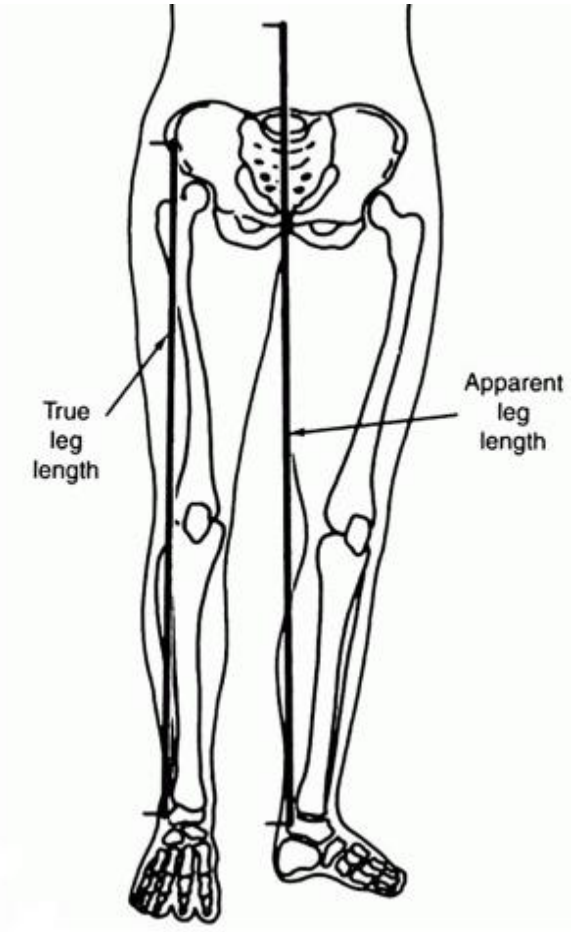


Leg length (true and apparent)

The client is supine with both lower limbs are in identical positions and the pelvis is square.

True length -measured from the anterior superior iliac spine (ASIS) to the tip of medial malleolus.

Apparent length- measured from the umbilicus to the tip of medial malleolus .



The legs length measurement is used to find leg length discrepancy if any.

If there is a shortening of the limb, the body compensates by tilting the pelvis down, equines position of the foot , flexing the opposite knee and /or hip.

Both legs are measured separately and the difference of the measurements is compared.

true shortening **=**apparent shortening = there is no compensation

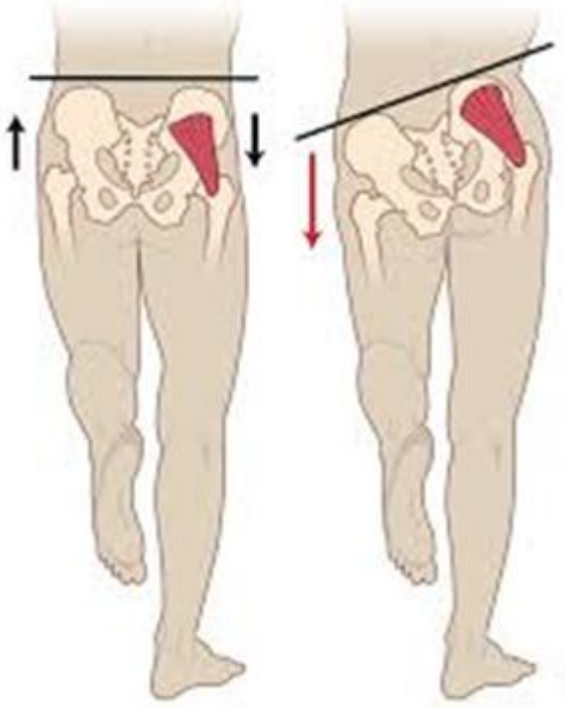
true shortening **>** than the apparent one= that part of the shortening has been compensated for

true shortening **<** than the apparent one= a fixed adduction deformity in addition to shortening without any compensation

Acceptable leg length discrepancy = up to 10mm-15mm

Trendelenburg test

for Gleuteus Medius/Minimus Muscles



Negative test Positive test

To test to see if the patient has any glute medius/minimus problems:
If the (Right Hip) pelvis drops, indicated by a lowering of the gluteal crease, then the opposite side (Left Hip)gluteus medius/minimus muscles are weak =**positive test**

Slump Test - neural physical examination that is used for detecting disc bulging / herniation of the lumbar spine or irritation of the dura of the spinal cord

1.The client sits upright with the legs hanging loosely over the edge: hips are in a neutral position
hands are behind the back

2.The client "slumps" the back into thoracic and lumbar flexion The examiner supports the head to keep it in a neutral position. With one arm , the examiner then applies pressure across the shoulders to maintain increased flexion in the thoracic and lumbar spine.

3. At the same time, the client actively flexes the cervical spine and head as far as possible. Using the same hand, the examiner then applies pressure to maintain flexion in all three parts of the spine

4.The client extends the leg and foot

5.and asked to flex the foot (or the examiner holds the client's foot in maximum dorsiflexion)In this position the client is asked to actively straighten the knee as much as possible.

The test can cause pain(impingement or irritation of the dura and/ or nerve roots) and radiating it down into the areas supplied by the sciatic nerve.

6.If the client is unable to extend the knee because of pain, the examiner reduces the pressure on the cervical spine and asks the patient to slowly raise the head.

Positive test -if the patient is then able to extend the knee further without pain or with less pain **=** neural structures are affected

The test is then repeated with the other leg to compare the results

The straight leg raise test (the Lasegue test)

a fundamental manoeuvre during the physical examination of a patient with lower back pain. It aims to assess for **lumbosacral nerve root irritation**. This test can be positive in a variety of conditions,as though lumbar disc herniation is the most common

The client is supine without pillow under the head
the trunk and hips in neutral, (no internal or external rotation or excessive adduction or abduction)

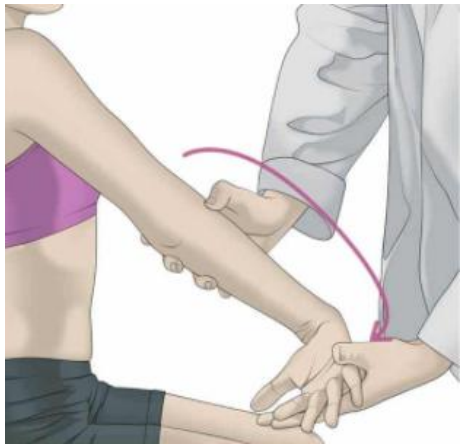
Each leg is raised individually - uninvolved side first
(The tested leg is placed in slight internal rotation and adduction of the hip and extension of the knee to avoid undue stress on the dura (**membranes of the spinal cord).**

The examiner lifts the client's leg by the posterior ankle with the knee fully extended and continues it by flexing at the hip until the patient complains of pain or tightness in the back or back of the leg.

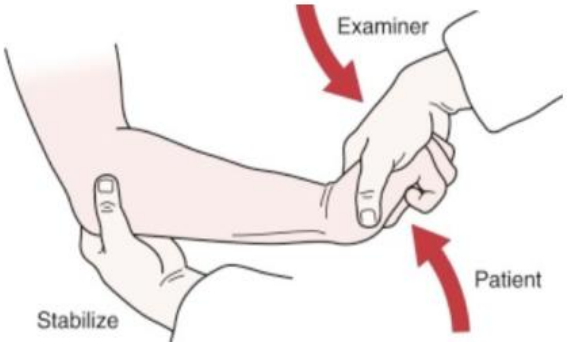
<u>Positive test:</u> gluteal or leg pain :

- Neurologic pain in the leg and low back between 30-70 degrees of hip flexion = nerve root compression(**the sciatic nerve)** or lumbar disc herniation at the L4-S1
- Pain < than 30 degrees of hip flexion = serious acute problems in the spine, lower back or buttocks
- Pain > than 70 degrees of hip flexion = tightness of the hamstrings, gluteus maximus or pathology of the hip/sacroiliac joints.

Elbow
Lateral Epicondylitis or Tennis Elbow



Mill's Test:
The client is standing or seated.
The arm is relaxed at side and the elbow extended.
The examiner passively stretches the wrist in flexion and pronation.



Cozen test or resisted wrist extension test.
The examiner stabilises the elbow with one hand while the other hand lies at on the dorsum of the client's fist.
The client dorsiflexes the wrist against the resistance of the examiner's hand.
Or the examiner can press on the client's firmly extended wrist, into flexion against the client's resistance.

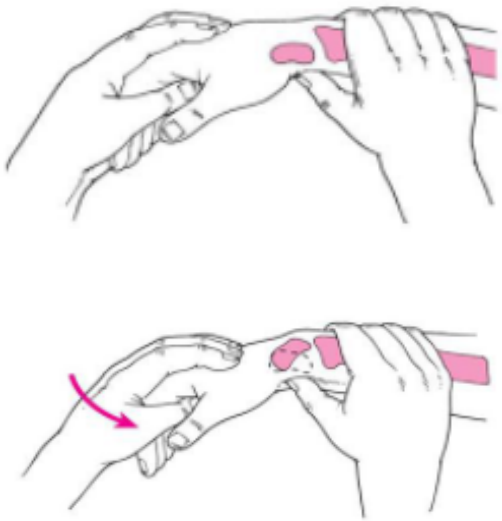
Maudsley Test or tennis elbow test.

The client is seated facing the examiner with support under the forearm

Using one hand, the examiner resists extension of the 3rd digit of the hand, stressing the extensor digitorum muscle and tendon, while palpating the client's lateral epicondyle with the other hand.

Positive test: Pain at the lateral epicondyle or proximal musculotendinous junction of wrist extensors

Wrist and Hand



Scaphoid load test - provocative maneuver for rupture of scapholunate ligament.

The examiner is placing the thumb over palmar aspect of the distal pole of the scaphoid.
Maintaining constant pressure there, the examiner moves the wrist from extended position with ulnar deviation to flexion, radial deviation, and back again

Positive test - dorsal wrist pain or a clunk

Mallet finger test

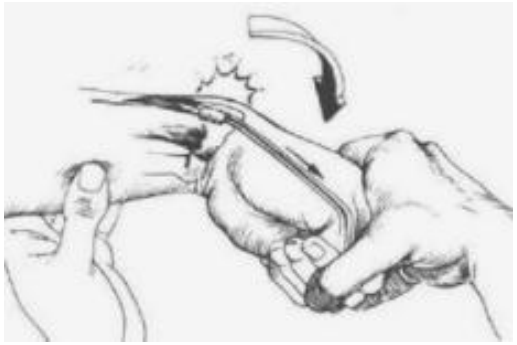
The examiner holds the affected finger .
The client tries to straighten the distal interphalangel joint (DIP) actively.

Positive test – DIP joint cannot be straightened voluntarily. It can be straightened easily passively.

Finkelstein's test for de Quervain's tenosynovitis

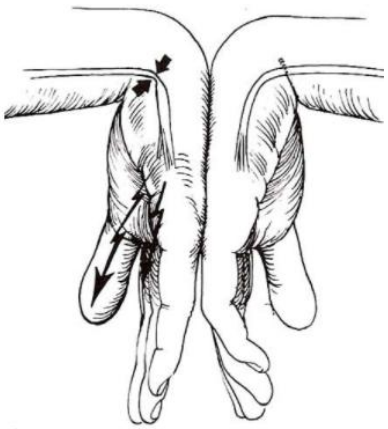
The client's thumb flexed with the other fingers flexed around it.

Active test : The client deviates the hand to the ulnar side

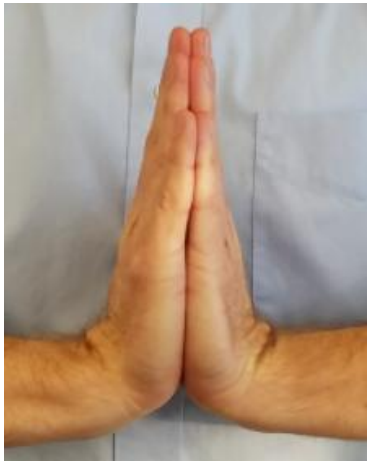


Passive test :The examiner grasps the client's hand, stabilising the forearm with one hand, and
then deviates the wrist to the ulnar side with the other hand.

Positive test: pain on the lateral aspect of the wrist



Phalen's test for the carpal tunnel syndrome. The client keeps the wrists in complete unforced flexion for at least 30-45 seconds experience worsening of symptoms in the



Reverse Phalen's test

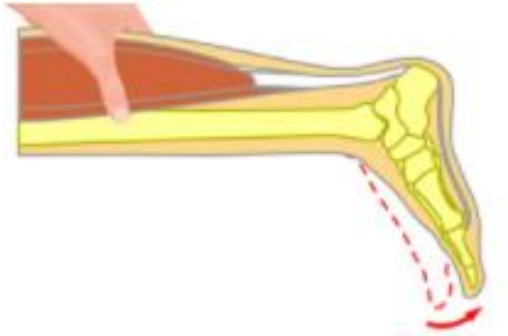
The client keeps both the wrists and fingers in complete extension for 60 seconds.

Tis test is less reliable than Phalen's test

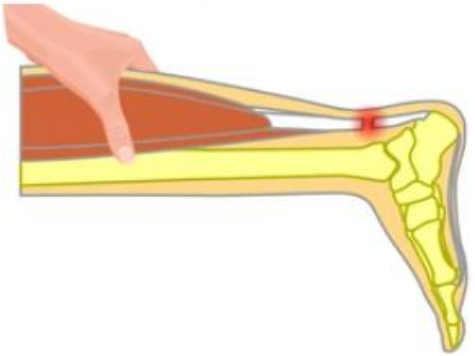
Positive test: the reproduction or/and worsening of symptoms along the median nerve distribution

ANKLE and FOOT

Thompson squeeze test for a complete Achilles tendon rupture.



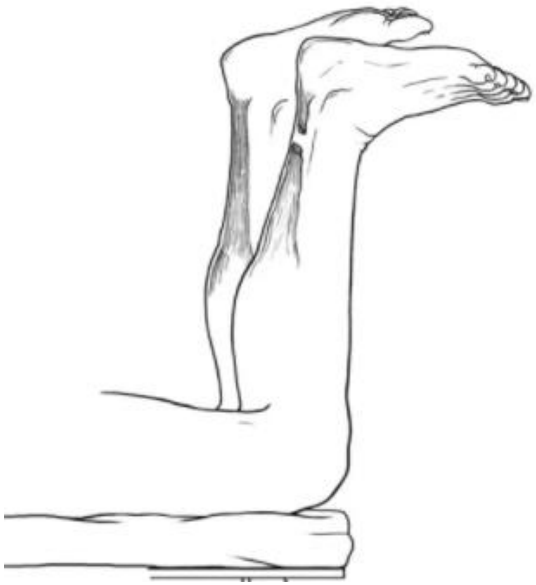
Passive squeezing of the calf muscles produces plantar flexion of the foot when the Achilles tendon is intact.



Squeezing calf produces no motion of the foot in injured **= Positive test =** suggests a torn Achilles tendon

Matles Test for Achilles tendon rupture

The client is prone with the foot over the end of the table. The examiner stands at the end of the table. The client actively flexes the knee to 90 degrees while the position of the foot is observed throughout the motion.
Positive test = the foot falls into neutral or slight dorsiflexion
Normal = the foot remains in plantar flexion).



Calf length test

Testing one leg at a time

1.Standing facing a wall at about 10cm

2. One foot is about a foot behind the leg being tested

3. Keeping the heel on ground, bend the front knee until it touches the wall.

4. If it is not possible, move the tested foot closer to the wall and to try again.

5.If the front knee is touching the wall easily , move the foot further away from wall and try again.

6.Repeating steps 4 (or 5) until the knee can touch wall

7. Measure the distance between the wall and the big toe for the each leg and compare.

Smaller than 10cm = **restricted, shortened calf muscle**