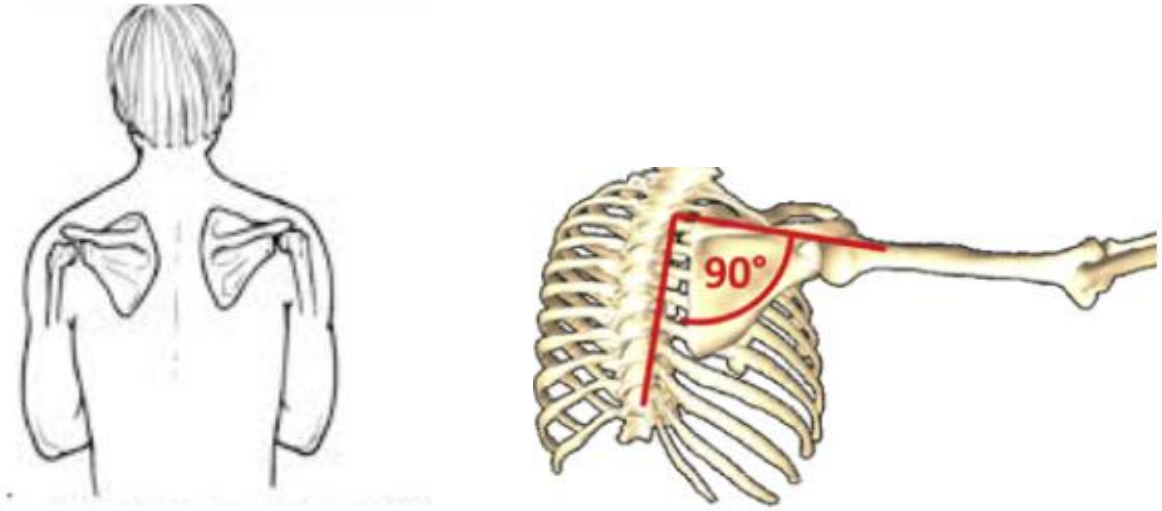
1) Upper Trapezius

Assessment of the relative shortness of the right side upper trapezius.

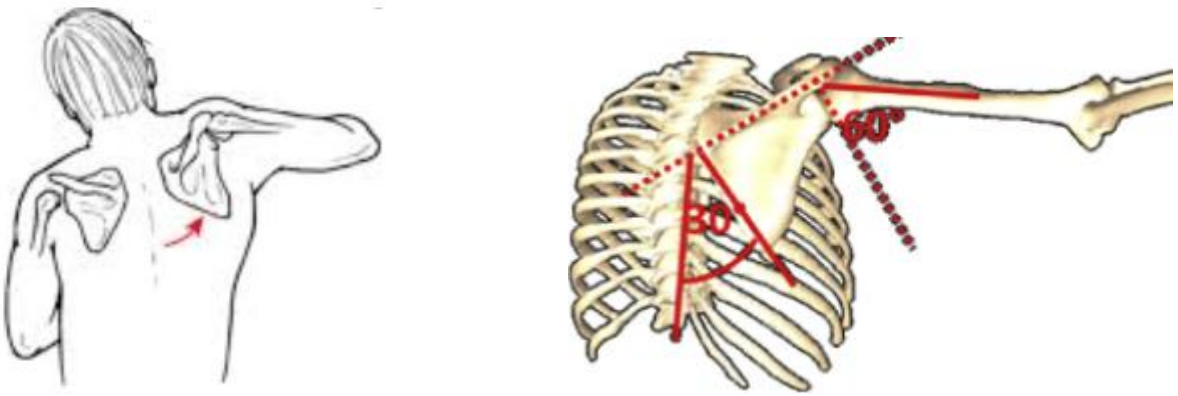
One side is compared with the other to decide the side most in need of treatment.

Scapulo-humeral rhythm test.

Normal - elevation of shoulder after 60° of arm abduction.



Abnormal - if elevation of the shoulder or winging of the scapulae occurs within the first 60° of shoulder abduction.



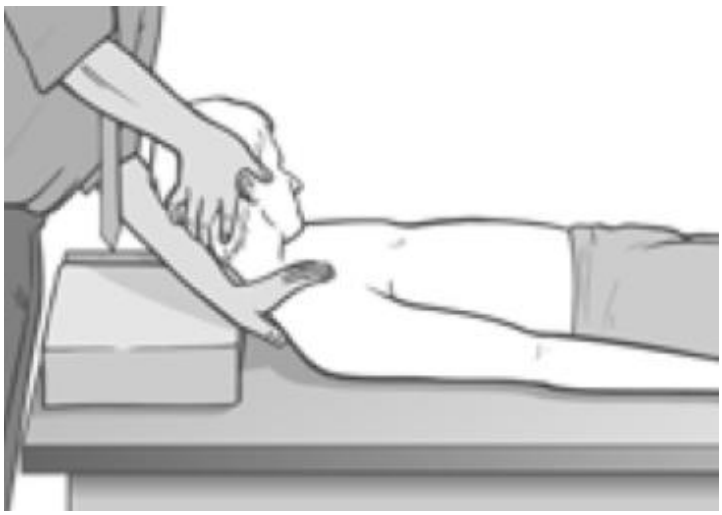
MET treatment of right side upper trapezius.

The client is supine, the head is in the upright position, with no rotation (anterior fibres). The client is asked to bring their ear to the shoulder and shoulder to the ear against resistance, this is held for the appropriate time, on relaxation the shoulder is then gently eased away from the stabilised head.

2) Levator Scapula

Test and MET treatment for the levator scapula.

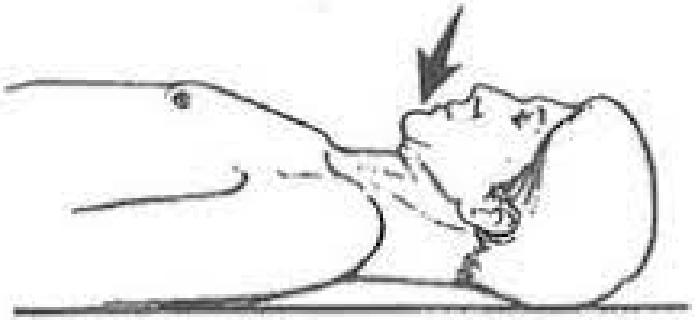
The client is supine, the therapist supports the head as it is guided into side bending followed by flexion, if a resistance is felt prior to the chin touching the chest, this would indicate relative shortness.



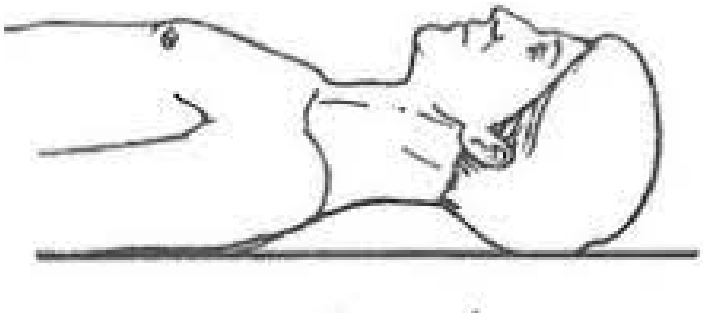
3) Sternocleidomastoid muscles (SCM)

Neck flexion test

Normal - ability to hold chin tucked while flexing the trunk.



Abnormal - if the chin pokes forward while attempting trunk flexation.



4) Scalenes

There is no easy test for shortness of the scalenes muscles apart from observation, palpation and assessment of trigger point activity/tautness and a function.

The scalenes are accessory muscles for inspiration. A visual observation of relative shortness would be to observe the respiration cycle with the client in a supine position.If the upper chest was seen to move prior to the diaphragm on inspiration, this would indicate possible dysfunction.

To passively test the scalenes, the client is in a supine position with a support under the shoulder blades, the supported head is then gently taken into extension, side bending right, then rotation to the left (to test the left side) or extension, side bending left and rotation right (to test the right :side). A feeling of resistance prior to full rotation (80 degrees) would indicate hypertonicity.

MET treatment of the anterior fibres of scalene muscles.

The client is supine. The therapist's hand placement is on the sternum, with no rotation of the neck.
The **sternocledomastoid** muscles would also be influenced during the treatment of scalene muscles.

MET treatment of the middle fibres of scalene muscles

Tthe neck is supported at half rotation and the hand placement is on the second rib just below the centre of the clavicle.

5/6) Pectoralis major/ Latissimus dorsi muscles

Arm elevation test

Assessment of shortness in pectoralis major and latissimus dorsi muscles.
Therapist supports the client's arms in a fully flexed position, then lowers the arms towards the couch, if the arm on the tested side is unable to rest along its full length, shortness of pectoralis major is indicated.
If the elbow deviates laterally then there is shortness in latissimus dorsi muscles.

MET treatment of pectoralis major muscles.

MET treatment of latissimus dorsi muscles

7/8) Subscapularis / Infraspinatus

Rotation test

The client is in a supine position, the arm is taken to 90 degrees of abduction and elbow flexion.

Assessment and treatment of shortness in **subscapularis** is ascertained by allowing the arm to fully externally rotate and observing to see if there is parallel alignment with the couch.

Assessment of infraspinatus. The client's arm is allowed to medially rotate while observing to see if parallel alignment occurs.

MET treatment of infraspinatus, the arm is taken to lateral rotation to treat subscapularis.

9) Hamstrings

Hip flexion test

Assessment and treatment for shortness in the hamstrings.
The therapist palpates for resistance / bind using their right hand while maintaining the knee in extension. Less than 80 degrees would indicate relative shortness.

10) Hip adductors

Hip abduction test

Assessment and MET treatment of short adductors / medial hamstrings.

The therapist abducts the client's leg until a bind is felt, if range is less than 45 degrees then shortness is indicated.
To differentiate between short adductors and medial hamstrings, the knee is flexed to 90 degrees, if range increases then this would indicate shortness in the medial hamstrings.

11/12) Gastrocnemius / Soleus

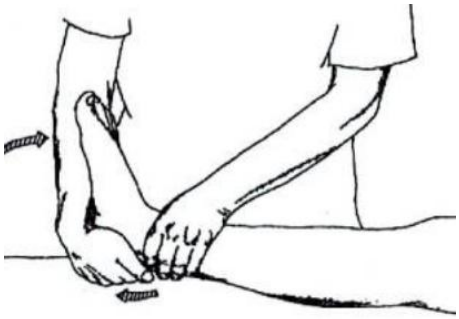
Assessment of gastrocnemius and soleus muscles.

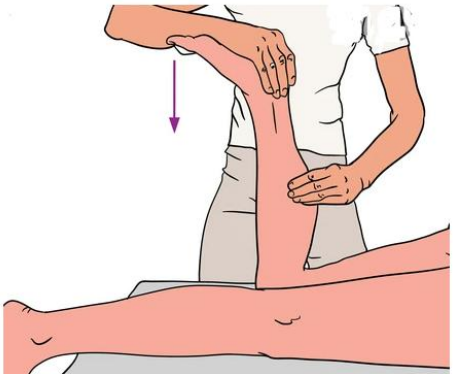
The sole of the foot should achieve a vertical position without resistance.

With the knee in slight flexion, the same assessment is carried out which indicates shortness in soleus.

MET treatment for gastrocnemius and soleus.

From the same position as for treatment of gastrocnemius muscles but the knee should be placed in slight flexion.





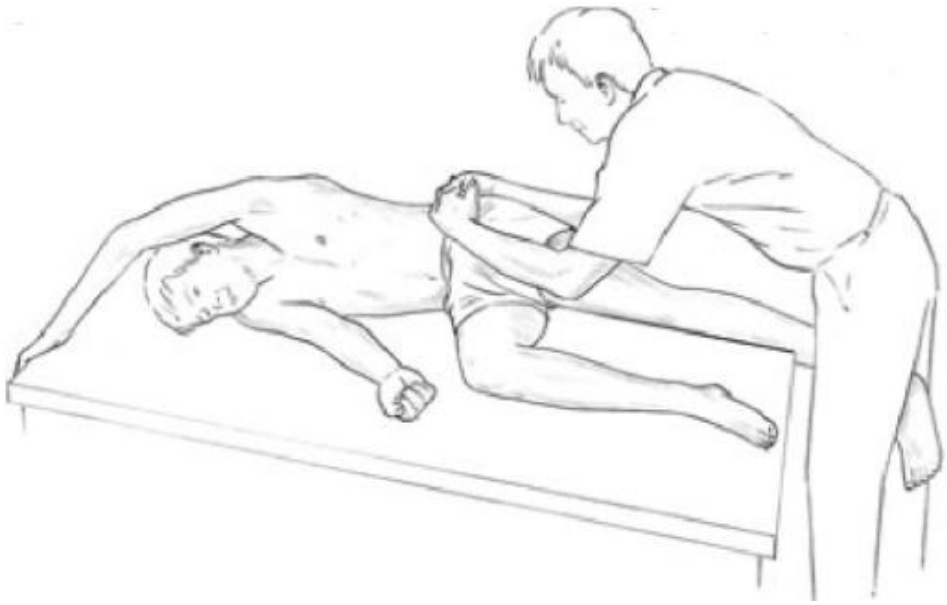
13) Ouadratus lumborum muscles (QL)

Hip abduction test

Palpation assessment for quadratus lumborum overactivity.

The muscle is palpated simultaneously with gluteus medius and tensor fascia lata (TFL), during the abduction of the hip. The correct firing sequence should be: gluteus, followed by TFL and finally QL at around 25 degrees of pelvis elevation. If QL is felt to fire first, this would indicate shortness.

MET treatment of quadratus lumborum.



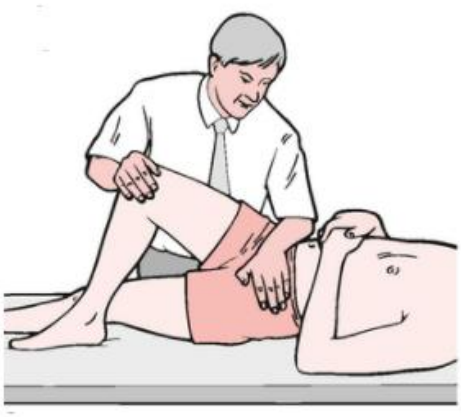
14) Piriformis

Assessment of the shortness of piriformis.

The client is in a prone position, both knees are flexed to 90 degrees and the hips allowed to internally rotate, the side which has less range of motion would indicate shortness.

MET treatment of piriformis muscle with patient supine.

The pelvis is stabilised as the knee (hip) is adducted by the client to normalise a shortened piriformis.



15) Tensor Fascia Lata (TFL)

Ober's test

Assessment for shortness of TFL. The client adopts a side lying position, the shoulder, hip and knee are in alignment. When the therapist's hand supporting the knee is removed the client's thigh should fall to the table. If the thigh remains or drops slightly the TFL is short.

MET treatment of TFL.

The therapist can either support the pelvis or support the opposite knee to the side being treated.

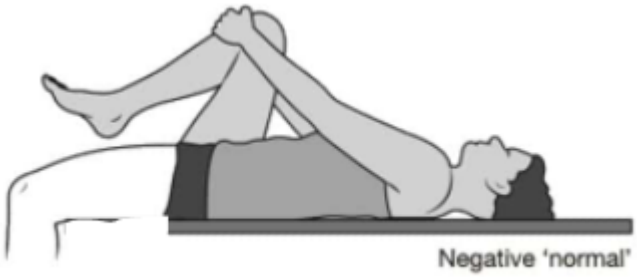
16/17) Psoas/ Rectus Femoris

Thomas test

Assessment for shortness of psoas and rectus femoris.

In the test position, if the thigh is not parallel with the table then psoas is short, and if the knee is less than 80 degrees then rectus femoris is probably short.

Positive



Negative 'normal'

MET treatment of psoas.

After the client isometrically contracts into hip flexion the stretch of psoas is achieved by gravity and effort applied into hip extension by the therapist.

MET treatment of rectus femoris.

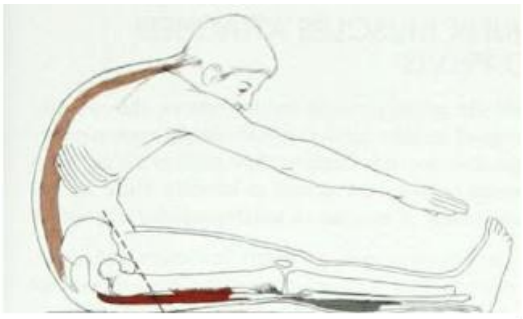
The therapist stabilises the client's sacrum to prevent the pelvis from rotating and stressing the lumbar spine.

18) Erector spinae

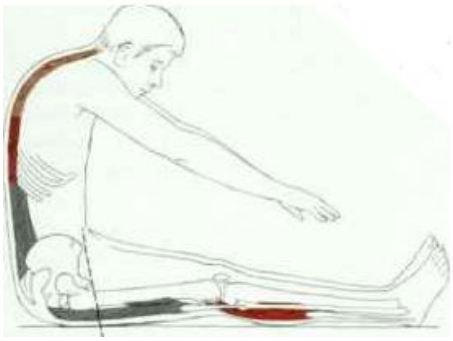
Tests for shortness of erector spinae and posterior thigh muscles

1.Normal length of erector spinae and posterior thigh muscles.

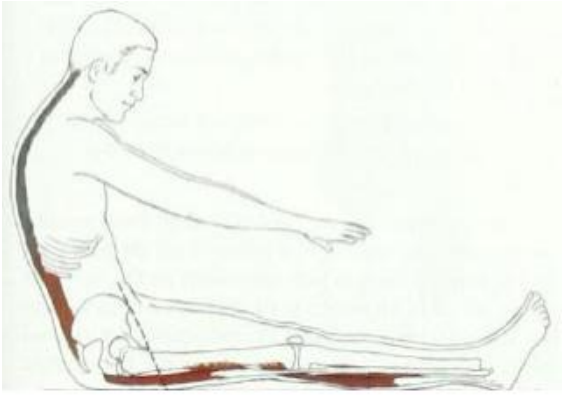
2. Exessive length of back muscles , short hamstrings which cause the pelvis to tilt posteriorly, and normal length of the gastrocnimius –soleus



3. Excessive length of the upper back muscles, slight shortness of the muscles in the mid back and in gastroc-soleus. Hamstrings and low back are normal in length.



4. Normal length of the upper back muscles and short lower back, hamstring and gastroc-soleus muscles.



5. Normal length of the upper back muscles, very tight lower back muscles with lordosis maintained even in flexion.

6. Excessive flexibility of the back overcompensates for shortness of the hamstrings.