

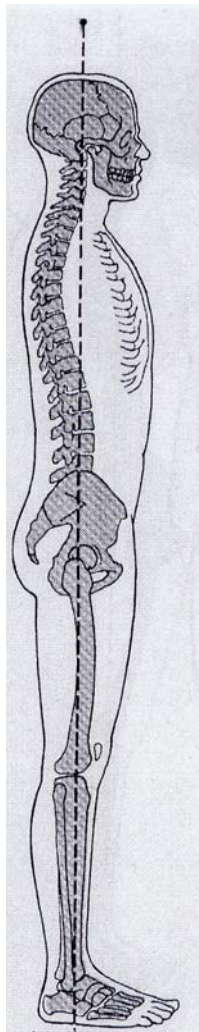
Standing with hyperextended knees, why it is not a good look!

Patient's who stand with hyperextended knees present for a myriad of reasons.

Some are:

- Chronic painful feel
- Chronic calf tightness and or pain
- Chronic low back pain
- Chronic tired back
- Mid thoracic pain (where the exaggerated kyphosis is maximal)
- Chronic neck pain and stiffness
- Recurrent ongoing suboccipital headaches
- Back pain on reaching overhead (Anyone know why? I will give 30 Pounds off the Workshop price if the first one to tell on musmed@ihug.com.au)
- Just for starters.....

Normal Posture



The plum bob passes through:

Through the ear (C0/C1 junction)

Through the shoulder

Anterior part of L4

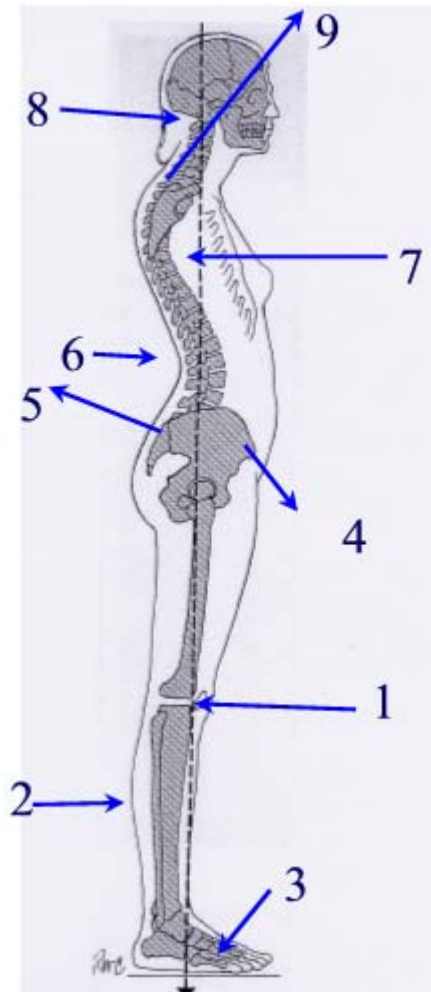
Through the hip joint

Just behind the patella

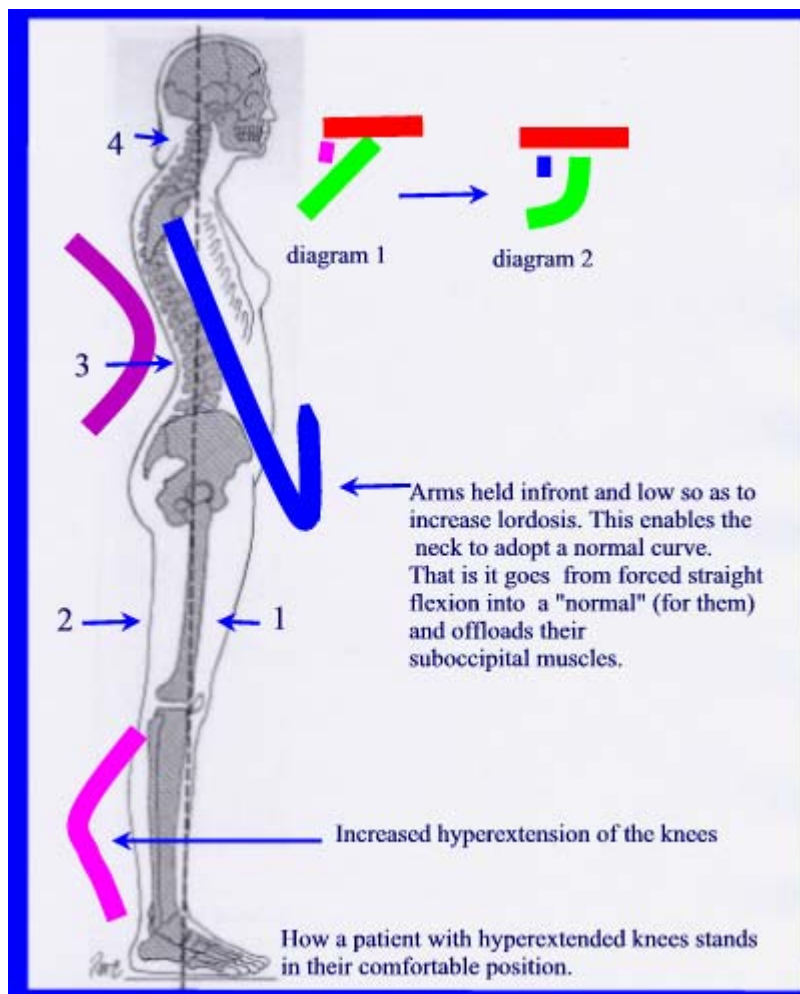
Just anterior to the lateral malleolus

Standing with hyperextended knees.

Body Positions:



1. Hyperextended knees
2. Posterior position of lower limb with tight gastroc/soleus complex
3. Increased loading to forefoot. The patient will be plantar flexed on testing
4. ASIS will be lower than square
5. PSIS will be higher than square. This means there is an anterior rotation of the pelvis
6. Compression the lower lumbar facets producing increased lumbar curve
7. Hyperkyphosis usually T8 or T7. Tender to palpation
8. Cervical spine forced into flexion, facets crunched
9. Due to cervical flexion, the head has to lift so as to see ahead and thus major activity of the suboccipital muscles



Owing to the fact that the plum bob will pass behind their heads in most cases they have to find a comfortable body position. This is made by them holding their hands low in front of themselves at the crutch level.

This enables them to:

1. Lean back further in the lumbar region (3)
2. Promote the closing of the lumbar facet joints – Negative
3. Increase their pelvic anterior rotation and thus their belly sticks out more
4. Producing tighter quads (2)
5. Longer and weaker hamstrings (1)
6. Changes their neck posture (4)

Diagram 1.

This is the position of their neck when not in the comfortable posture.

Green: straight flexed cervical spine

Red: base of skull

Pink: very short suboccipital muscles pulling the head up so that one can see ahead

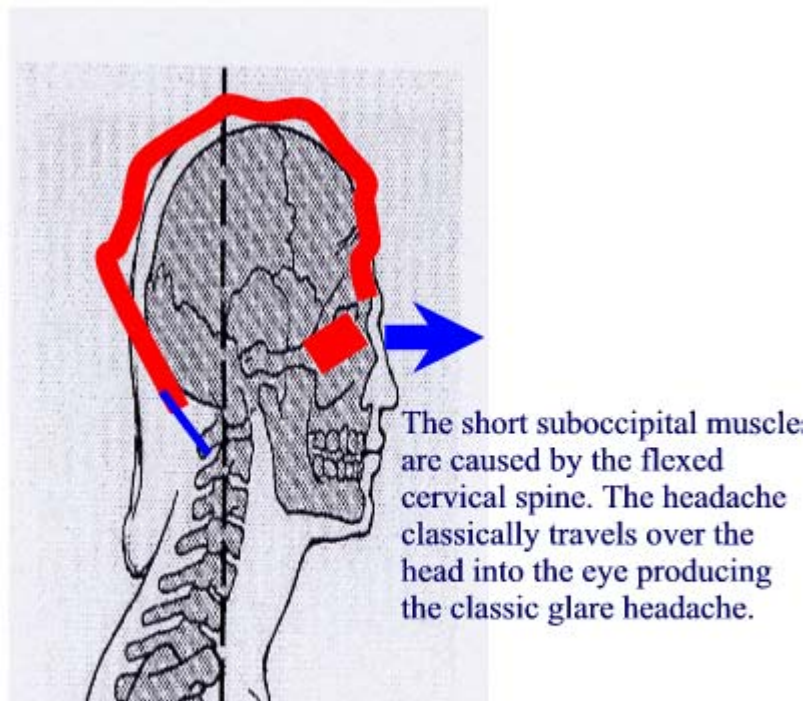
Diagram 2.

This is the position of their neck when they have adapted the comfortable position.

When the neck has obtained a cervical curve the suboccipital muscles are placed under far less tension and thus headaches are reduced.

Usually the plum bob will now pass within 1 inch of the ear canal.

Suboccipital headache.



Headache Pattern- Suboccipital muscles

Red: Headache pattern

Blue line: Short suboccipital muscles

Blue Arrow: explosion and or glare headache.

If you have any queries regarding this please contact me on:

musmed@ihug.com.au

Have a great summer break!

Paul Conneely.

www.musmed.com.au

Dr. Paul Conneely. The patient with hyperextended knees. 21-6-2005