

Welcome to today's webinar

**Postural Correction:
A beginner's guide**

Jane Johnson MCSP

About today's webinar

Today's webinar is scheduled to last for about an hour and will be recorded and made available for download and playback.

You will automatically receive an e-mail containing a link to the recording when it is available.

All microphones and phone lines are muted so we ask that you submit questions by typing them into the question box, located in the lower right-hand corner of your screen and click "send."

We'll collect any questions sent throughout the presentation for Jane and she will answer as many as possible during a Q&A segment at the end of the webinar.

About today's presenter

Jane Johnson is a chartered physiotherapist with a passion for helping both therapists and health & fitness professionals to understand common assessment and treatment methods.

Jane is currently employed as a PhD researcher in the north of England where she is jointly funded by The Royal College of Chiropractors and Teesside University. Her research concerns how to measure and record posture as part of clinical practice, whether posture changes as a result of therapeutic intervention, and whether there is a relationship between posture and pain.

Learning Outcomes

By the end of this webinar it is hoped you will be able to:

- give two examples of why the correction of posture might be considered controversial.
- give examples of postural malalignment in different parts of the body.
- give examples of the consequences of postural malalignment.
- give examples of clients for whom postural correction might be beneficial.
- List 5 steps you might take in your approach to postural correction.
- Using a specific posture from one part of the body, provide examples of the sorts of things a client with this posture might do to correct it, as well as the sorts of things you might do as a therapist.

Controversies and questions:

Postural correction could be considered controversial because therapists do not agree on the answers to these questions:

- **Can** posture be changed?
- **Should** posture be changed?
- **What** methods might be used to help change posture?
- **What** is 'normal' posture?



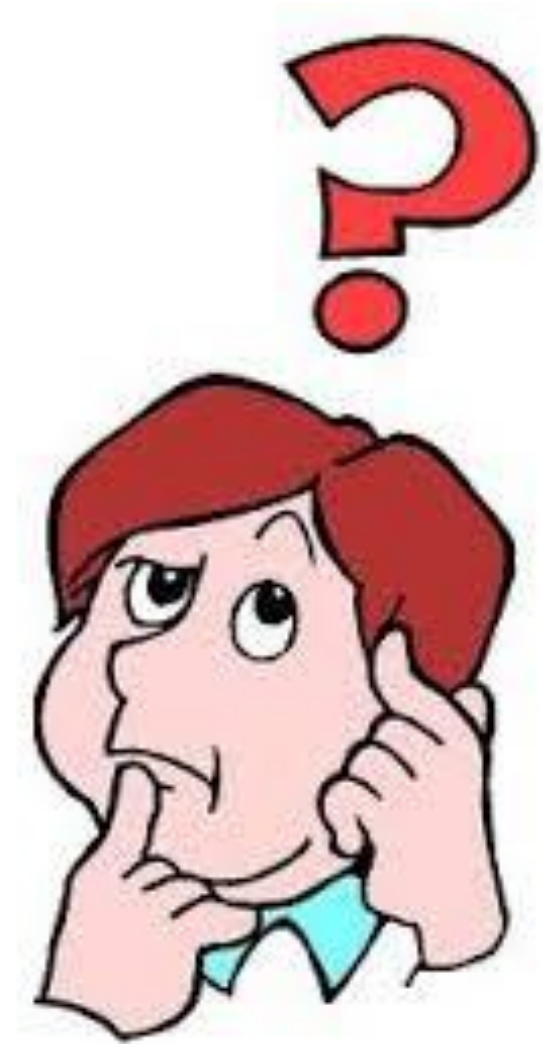
Let us quickly look at some possible answers...

...and in doing so, we will see that 'posture' means different things to different people....



So when you hear the answers that are coming up, ask yourself...

What does 'posture' mean to me?



Can posture be changed?

- **No**, we inherit an overall posture and that's just how we are...like eye colour, skin tone, and general physique. I have my mother's knees: *Her* knees were like this, now *my* knees are like this.
- **No**, any change is short-lived and we quickly revert back to habitual postures.
- **No**, there are too many variables.





- Yes, my posture changes every time I stand up or sit down, for example.
- Yes, but only with surgery.
- Yes, but only some aspects of posture can be changed.
- Yes, but it takes years of dedicated effort.
- Yes, and it can be done instantly with manual therapy.
- Yes, but only when you are young or able-bodied.

Should posture be changed?

- **No**, we are born to be different and should celebrate our diversity.
- **No**, “if it ain’t broke don’t fix it.”
- **No**, changing one aspect of our body adversely affects other aspects.
- **No**, there is no evidence that posture causes or contributes to symptoms, nor that symptoms change when posture changes.



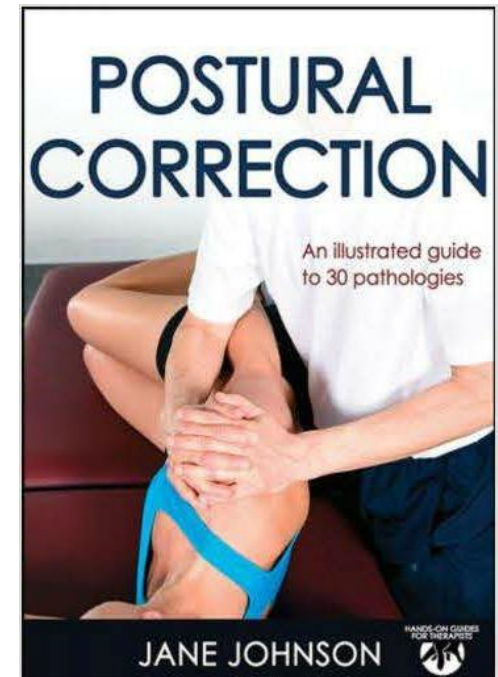


- Yes, we should all strive for good deportment like in Victorian times, it is good for health and wellbeing.
- Yes, if a person feels unhappy with how they look.
- Yes, if there is reason to believe that a particular posture causes or contributes to pain (symptoms) and that by changing posture symptoms will be resolved or reduced

Are you starting to realize that people often use the term 'posture' differently? **Patients and clinicians in particular.**

Sometimes we are referring to overall, **global postures**, often described as 'good' or 'bad' or 'poor'.

Clinically, we are often referring to **the specific positions of certain body parts** (the kinds of described in the book, Postural Correction).



What methods might be used to help change posture?

- Surgery
- Medication (where pain exists)
- Walking aids
- Orthotics
- Braces
- Casts
- Taping
- Mood state (affecting global posture).
- Exercise – global exercises such as swimming.
- Therapeutic exercise – specific to a muscle group.
- Therapeutic stretching – active, passive stretching...
- Bodywork – massage, myofascial release, relaxation.

It is likely that more than one approach is needed



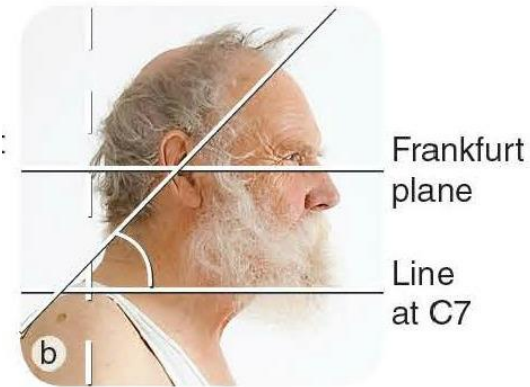
What is 'normal' posture?

(what are 'normal' values?)

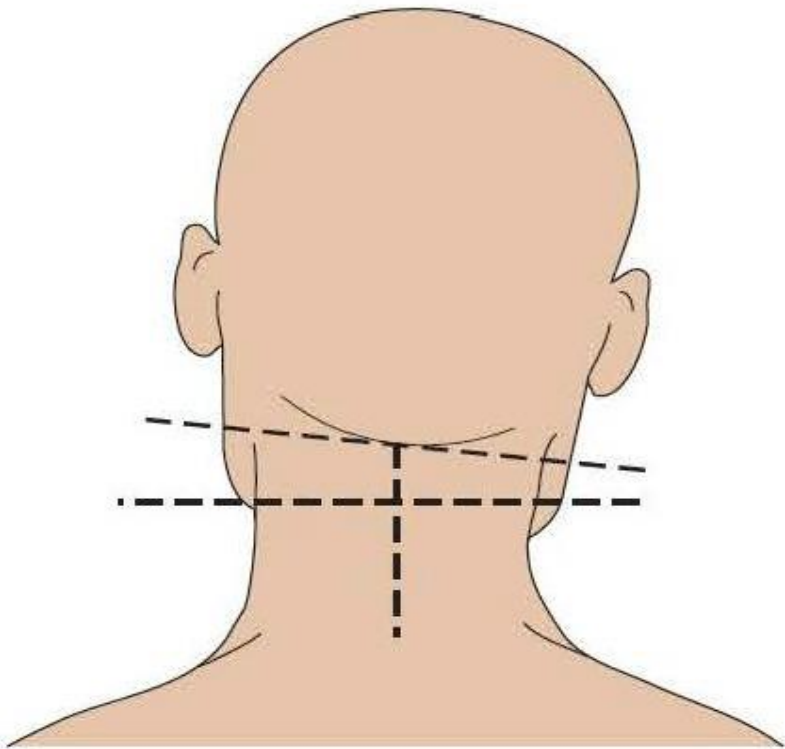


We do not know.

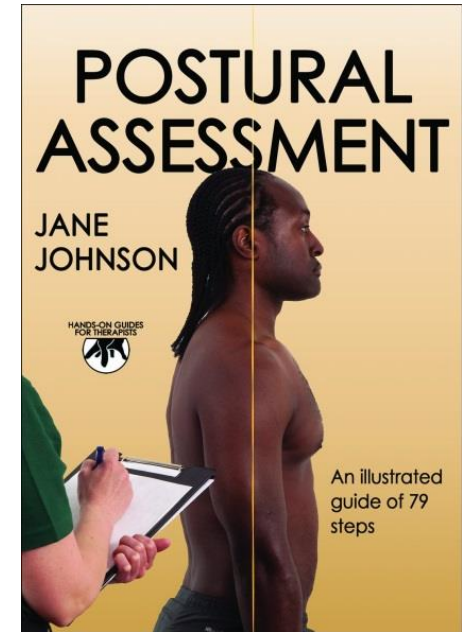
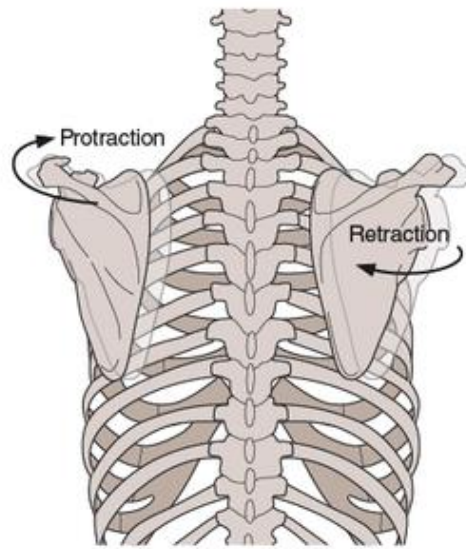
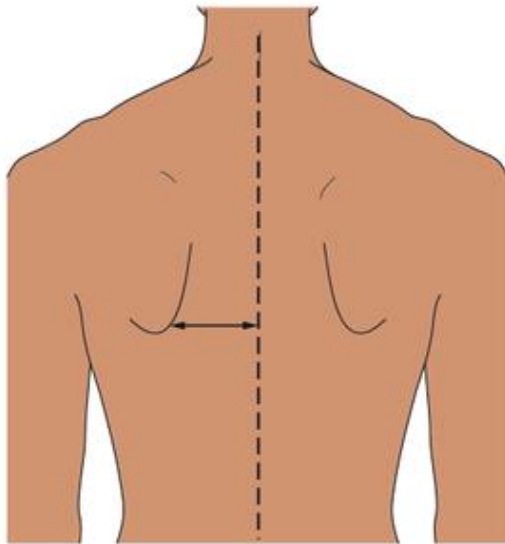
If you measure people using x-rays or photographs or with tape measures or flexirules or inclinometers or sophisticated electronic devices, you get different measures and these are not comparable.



Therefore in clinical practice it may be more appropriate to think in terms of 'malalignment' or 'extremes' of joint position.

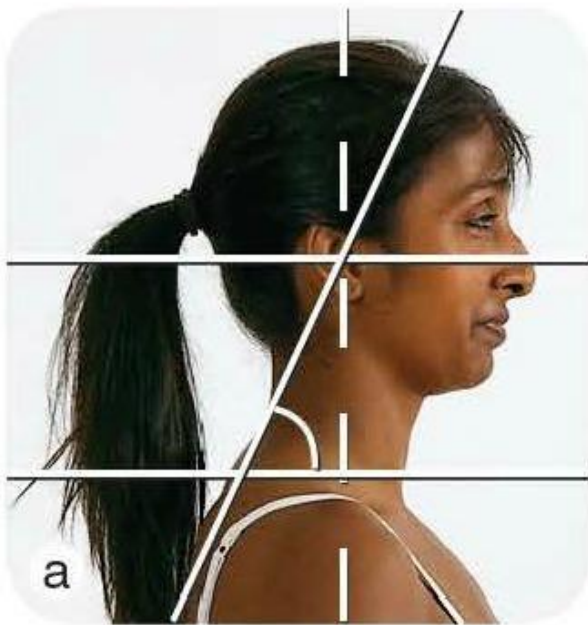


Practicing therapists tend to use subjective visual postural assessment



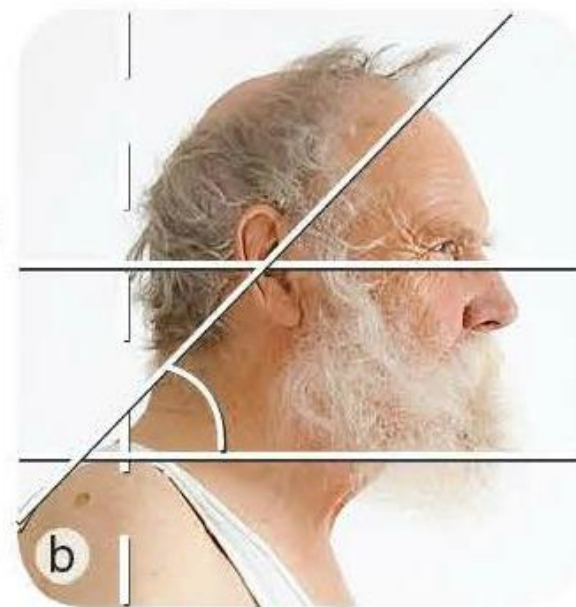
Examples of postural malalignment

Forward head posture



Frankfurt
plane

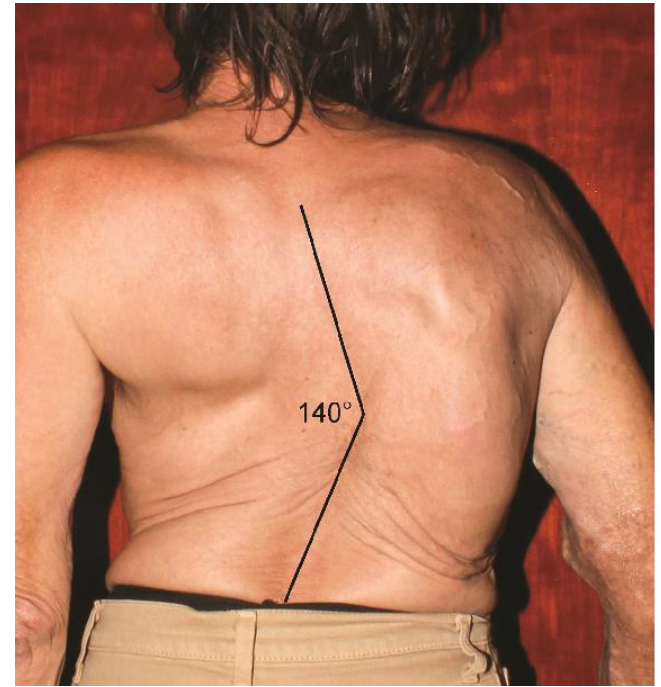
Line
at C7



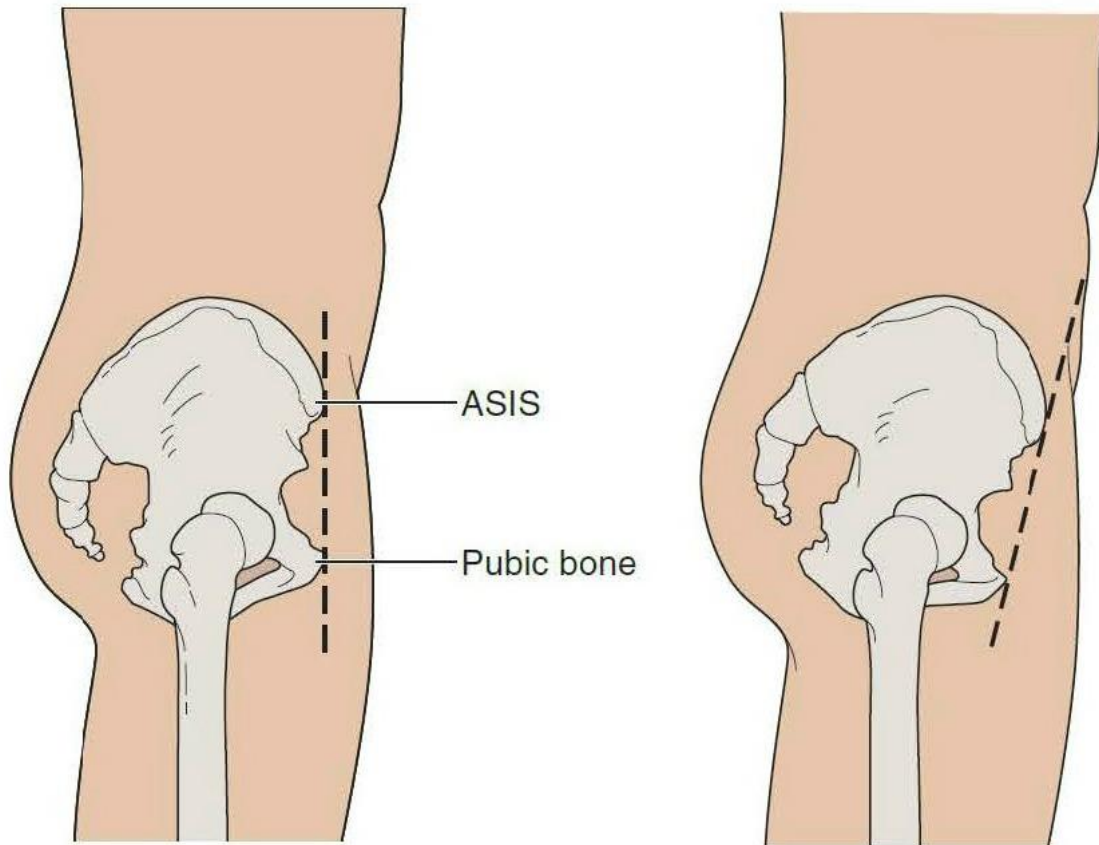
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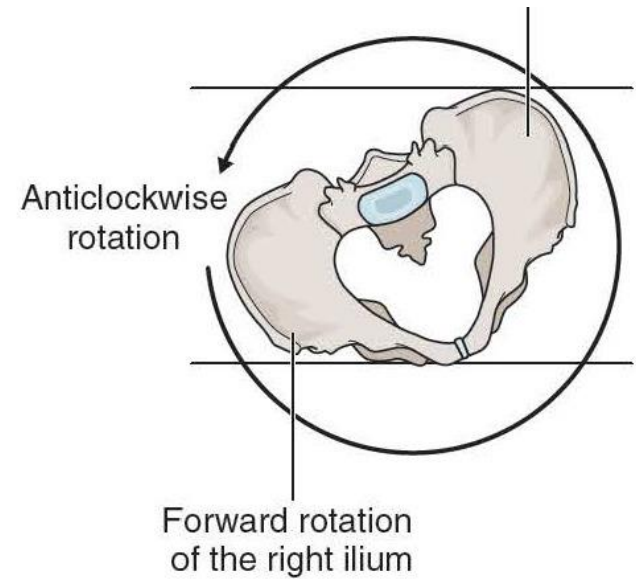
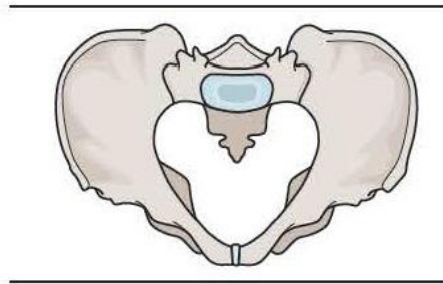
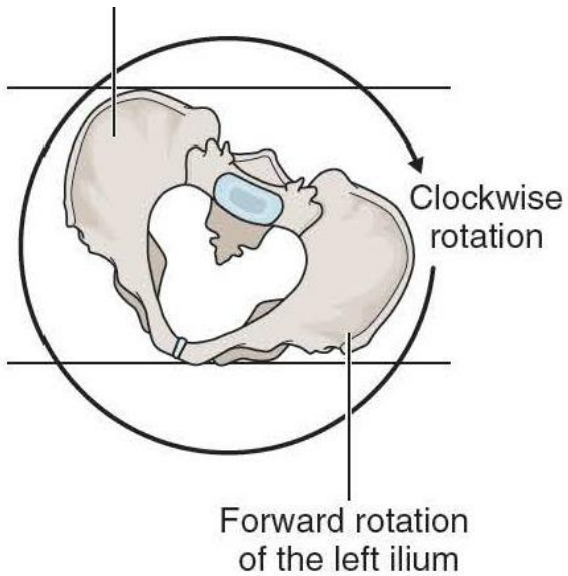
Spine shape - posterior



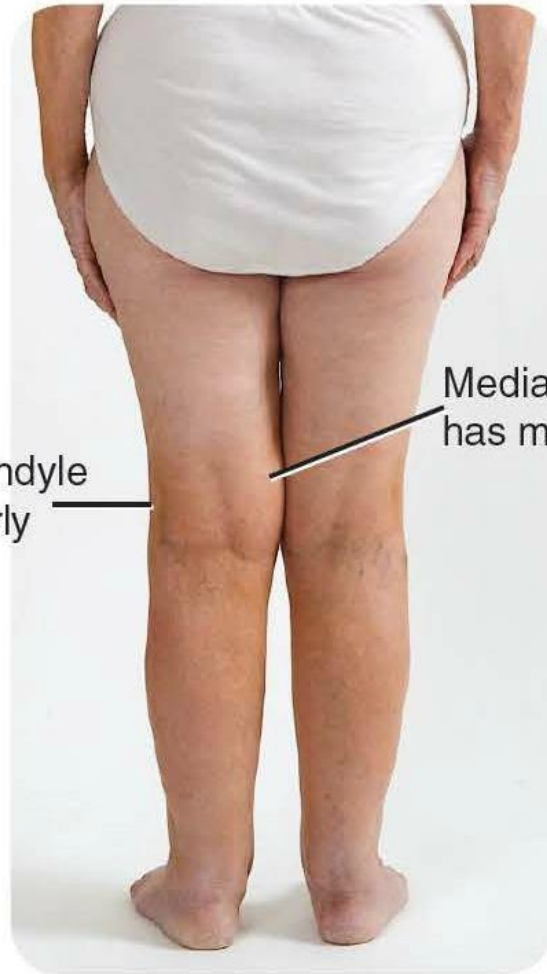
Pelvic tilt - anterior



Pelvic rotation

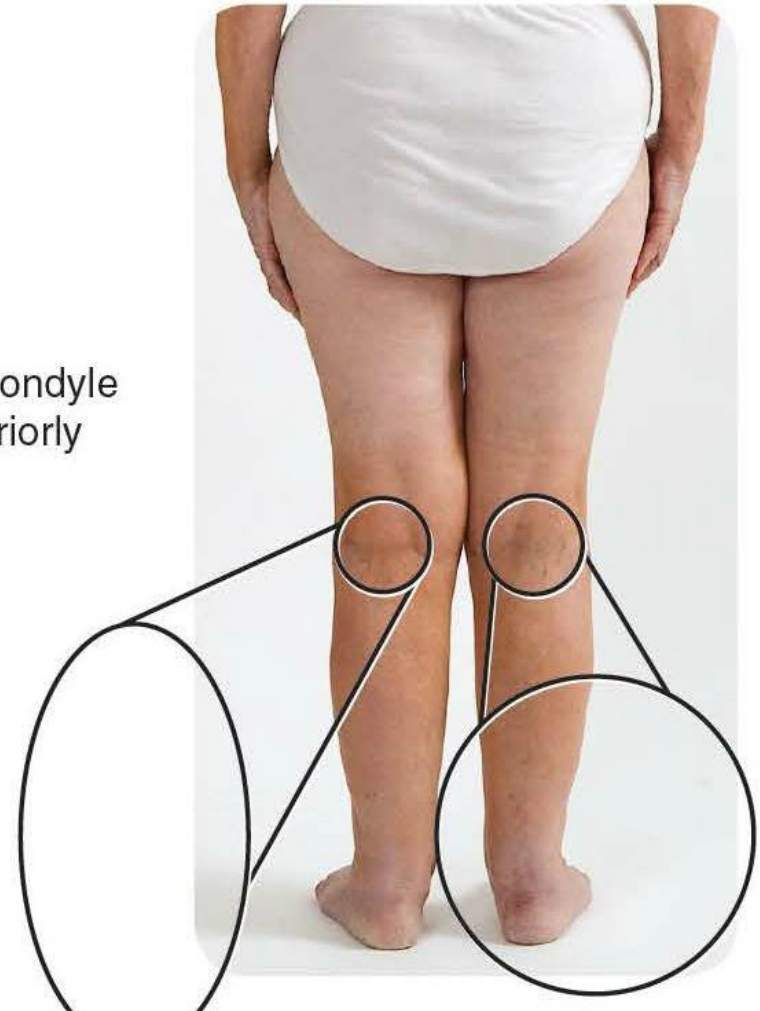


Internal rotation of the hip

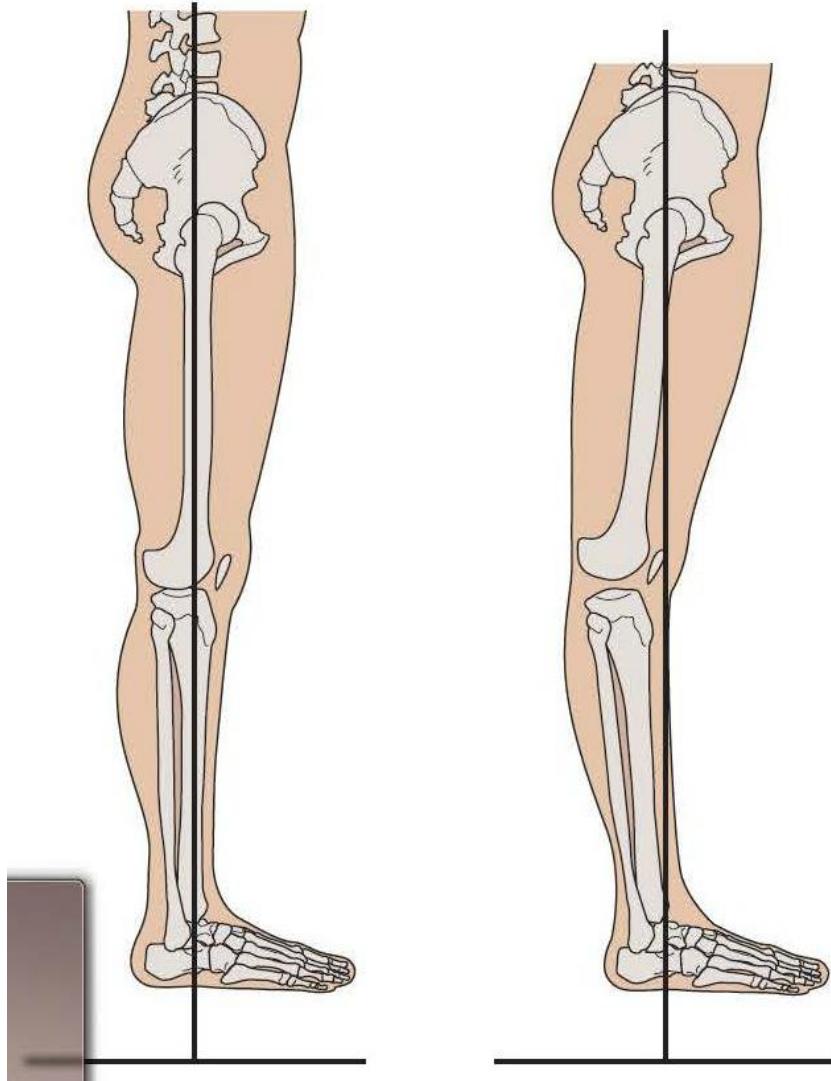


Lateral femoral condyle
has moved anteriorly

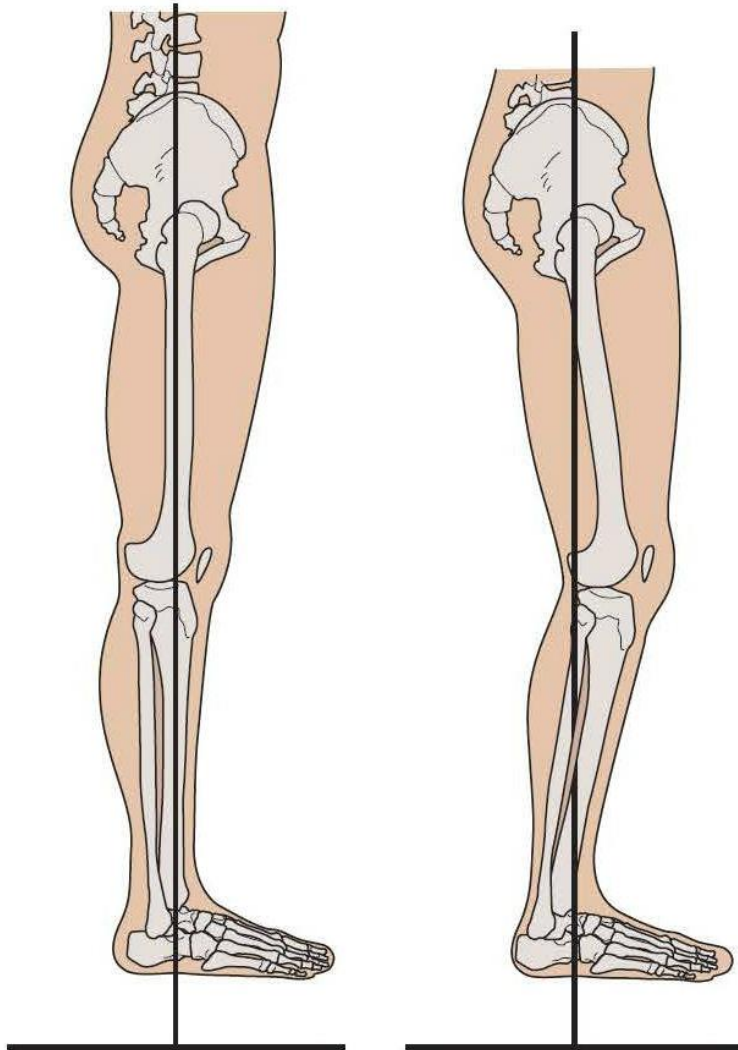
Medial femoral condyle
has moved posteriorly



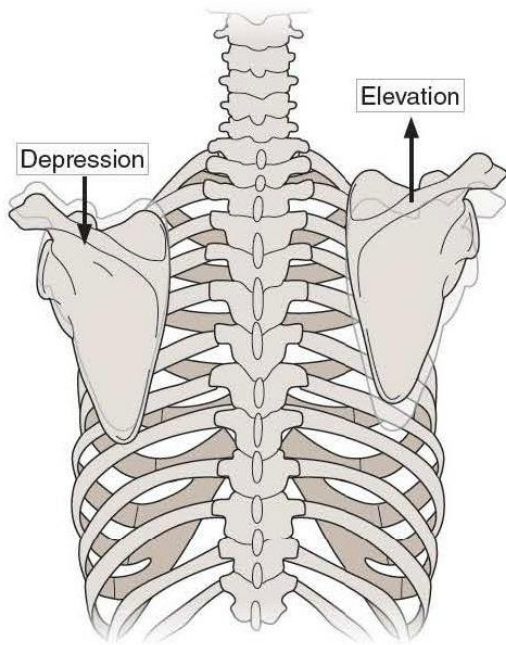
Genu recurvatum



Genu flexum



Elevated shoulder



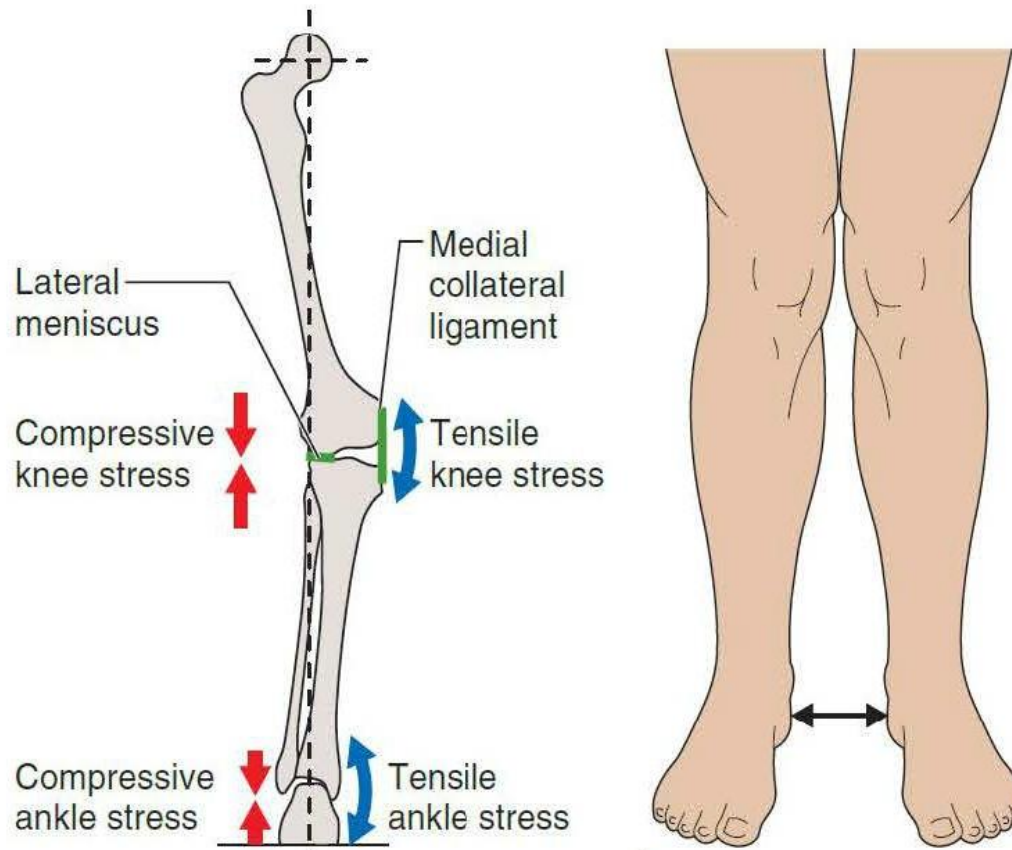
Therefore.....it may be more meaningful to avoid attempts at comparing your client to a 'norm' and to simply aim to change posture in order to reduce symptoms.

You will need to measure posture before and after intervention.

However, it is possible that an anatomical change that is small enough to affect symptoms is too small to be detected with postural assessment methods, and certainly with visual observation alone.

Consequences of malalignment

Take the example of the genu valgum posture.



Consequences – bones

- Compressive and tensile forces may change.
- In the long term, this could affect how bones repair themselves.
- In the lower limb, this could affect weight bearing and perhaps even balance.
- Could less-optimal weight-bearing predispose a subject to stress fractures?

Consequences – Joints

- Could malalignment of synovial joints affect hydration of the joint?
- How would malalignment affect joint capsules – could the capsule become weaker on one side?
- Could malalignment lead to degeneration of joint cartilage sooner than if the joint was aligned better?
- Function is altered. Stresses pass through different parts of a weight-bearing joint, for example than they do when a joint is aligned.
- Could adjacent structures be affected? Blood vessels, nerves and fascia?
- Some clinicians believe that a symptom of joint malalignment is pain.

Consequences – ligaments

- If a ligament is held in a lengthened position it may ‘creep’, becoming longer. The longer ligament then provides less stability over the joint.
- In a weight-bearing joint, this could affect balance...
- In severe cases, a joint may be at risk of hyperextension and in some circumstances that could predispose a subject to injury –with a forceful movements such as elbow extension in tennis, for example.
- A less stable joint is likely to affect joints above and below it as these are forced to compensate.



Consequences – muscles

- There may be adaptive shortening or lengthening of a muscle.
- A shorter muscle holds a joint together more tightly; a lengthened muscle holds a joint together more loosely.
- Both shortened and lengthened muscles could weaken, reducing their function.
- Reduced muscle function might impair balance
- One of the most popular arguments for changing posture is that less than optimal postures contribute – or even cause – muscle pain.

Consequences – other soft tissues

- Blood vessels, lymph vessels, nerves and fascia could all be adversely affected and their function impaired.

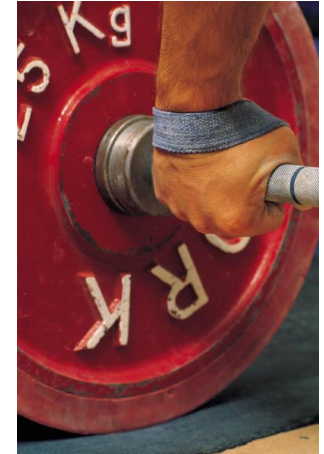
Who might benefit from postural correction?

A random selection of examples:

- A manual worker – if there is evidence of asymmetry. Could this predispose a subject to musculoskeletal pain?
- By contrast, a person who has a sedentary job or hobby.
- Clients with genu varum or genu valgum — there is often knee pain.
- Subjects developing kyphotic postures – could this impair breathing, for example?
- Young people with evidence of scoliosis.



- Persons engaged in sporting activity where malalignment could affect function and therefore performance.
- A subjects for whom deportment is important – such as dressage.
- a subject who has sustained injury to a lower limb joint and is reluctant to bear weight through that joint.
- A subject who suffers from low mood state and wishes to improve their mood. Controversial?



5 steps to postural correction

Step 1 Identify factors contributing to the posture and eliminate or reduce them.

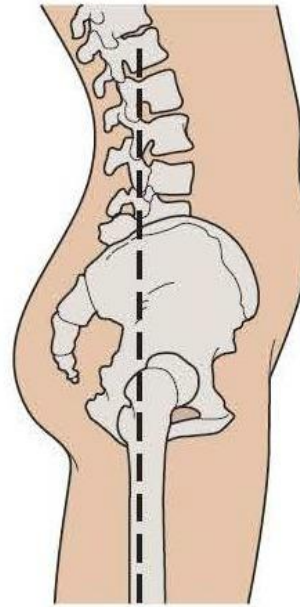
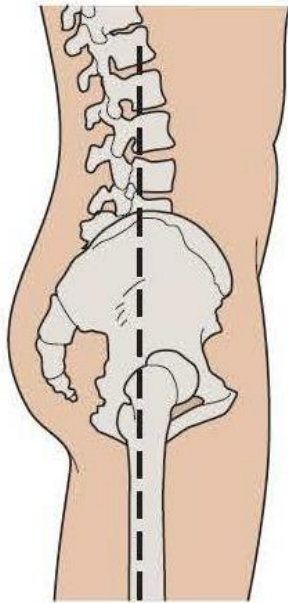
Step 2 Increase range of motion in hypomobile joints.

Step 3 Decrease range of motion in hypermobile joints.

Step 4 Maintain normal joint position.

Step 5 Re-educate movement patterns.

Example of a posture and rationale for correction: **Increased lumbar lordosis**



Rationale for correcting an increased lumbar lordosis

- Increased compression of soft tissue of the lumbar spine.
- Increased compression of the posterior aspect of the intervertebral disc. Could this affect fluid exchange?
- Compression of the posterior longitudinal ligament of the lumbar spine with lengthening of the anterior longitudinal ligament, possibly affecting the stabilizing capabilities of these structures.
- Muscle imbalance – between the erector spinae posteriorly and the abdominals, (also in hamstrings and gluteus maximus).
- ?early degenerative changes in lumbar discs.
- ?osteoarthritis is facet joints of this region.
- ?increased risk of spondylolysis.
- Reduced ability to withstand compressive forces – ?increased risk of injury.
- ?changes to pelvic floor muscle activity.
- PAIN

Ideas for reducing lumbar lordosis: what you can do as a therapist

- Encourage your client to identify and avoid exaggeration of this posture – in standing for example.
- Demonstrate what the posterior pelvic tilt position feels like.



- Lengthen shortened tissues using gentle passive stretches.

There are many different ways to do this, in both supine and prone position and each has advantages and disadvantages.



- Massage the extensors of the lumbar spine.

Again, there are many different ways to do this, in prone and side-lying position.

- Apply taping to inhibit anterior tilting of the pelvis in the short term. There are some disadvantages in attempting to correct lordosis with taping but taping could help a client experience what it feels like to walk with the pelvis in a less lordotic position.

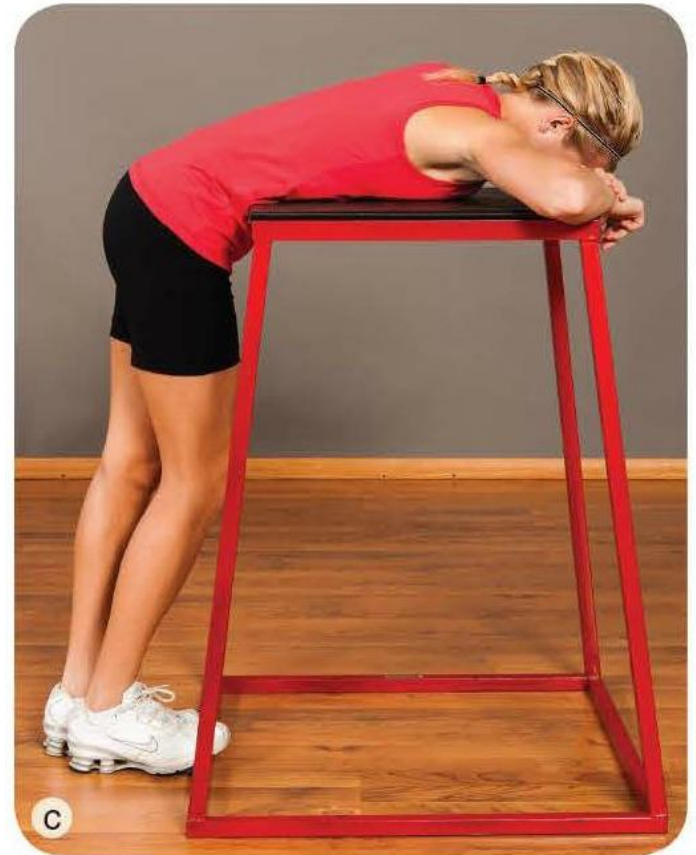
- Passively stretch the psoas muscle.
- Use myofascial release techniques to release fascia in the lumbar region.
- Consider the position of the thorax. Many bodyworkers argue for a whole body approach. Some argue that that it is impossible to correct certain postures locally unless other areas of the body are addressed first.

Ideas for reducing lumbar lordosis: what your client can do

- Identify and avoid activities that may be contributing to maintenance of an increased lumbar lordosis. For example...letting the pelvis tilt anteriorly in standing, sleeping on the stomach, ?wearing high heeled shoes...
- Frequently adopt resting positions in which the lumbar lordosis is decreased. Resting with the lumbar spine in a more neutralized position is likely to facilitate the stretch in soft tissues of this region.



- Actively stretching the lumbar spine



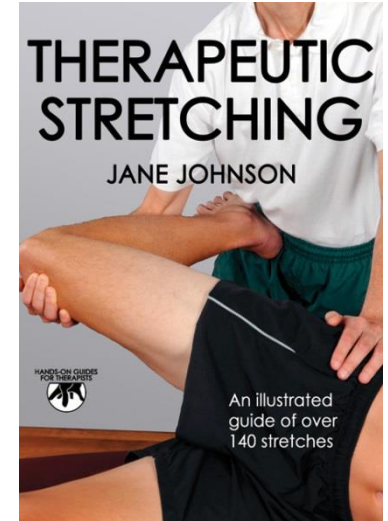
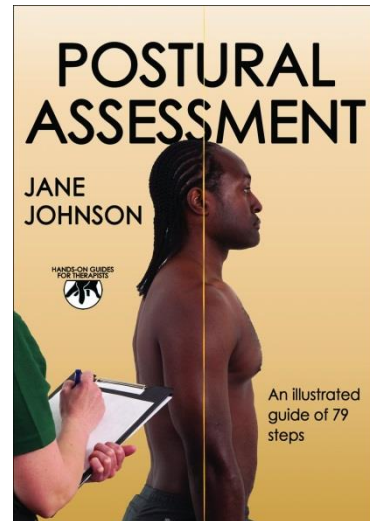
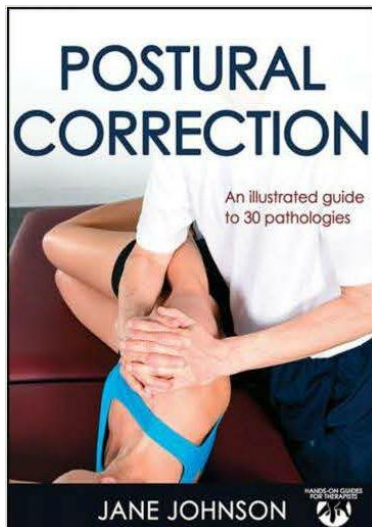
- Practice posterior pelvic tilting in supine or sitting or standing.



- Actively stretch psoas. There are many different ways to do this.
- Wear a lumbar corset – has disadvantages. Used in the short term this could be beneficial for reducing pain from movement of the lumbar spine and overextension but likely to affect function of hip joint.

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Any Questions

This has been one of best attended webinars Human Kinetics has organised and we received a very large number of questions. We will now try and answer as many as possible in the time remaining.

It is almost inevitable that that some will remain unanswered and these will be forwarded to Jane who has promised she'll try and email you a personal reply in due course.

Join us again



Please join us for our next webinar on Wednesday 3rd February 2016 at 3.00pm GMT when renowned applied performance psychologist Bill Beswick will present “Developing the Mindset of Winning Teams”

In his presentation Bill will draw upon his work as performance psychologist with national and elite teams in a variety of sports, Premier League and European football clubs and USA college soccer teams.

Do not miss this webinar.

You can register at <http://bit.ly/1ULZAaY>

Thanks

Thank you to everyone for joining us today and thanks also to Jane Johnson for what I'm sure you will agree was a great presentation.

Please take a few moments when your webinar window closes to complete a short survey on today's webinar – we appreciate your feedback as it helps us continually improve our webinars.

We will email everyone a link to the recording of today's presentation, so you can view it yourself or pass it along to friends or colleagues.

Thanks and enjoy the rest of your day.