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Level 3 Bespoke exercise programme design 2018

Level 3 Bespoke exercise programme design

Postural assessment

Learning outcomes

By the end of this session you will be able to:

- Explain how an analysis of posture could inform programme design
- Demonstrate knowledge of optimum posture with reference to anatomical terms of location
- Identify postural deviations, with reference to anatomical terms of location
- Identify methods of analysing both static and dynamic posture
- Identify appropriate methods of correcting postural deviations that are limiting the client ability

Postural analysis

- Postural dysfunction creates:
  - Movement restriction
  - Imbalances
  - Misalignment
  - Injury risk

- Postural dysfunction has a compounding effect on both the efficiency of movement and the aesthetic representation of the body

Postural analysis

- Analysis of posture will influence exercise selection
    - Strengthening areas
    - Stretching areas

Postural analysis

Be aware of:

- Optimum posture with reference to anatomical terms of location
- Ideal posture from the anatomic position
- Awareness of common deviations in posture

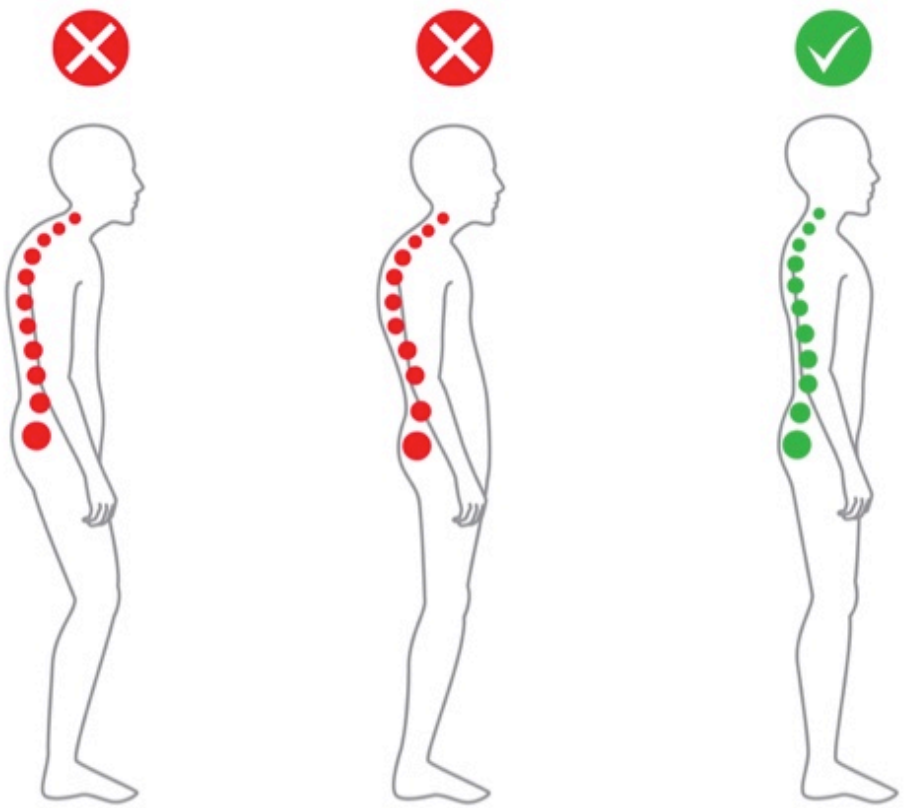
Neutral posture assessment

Lateral view

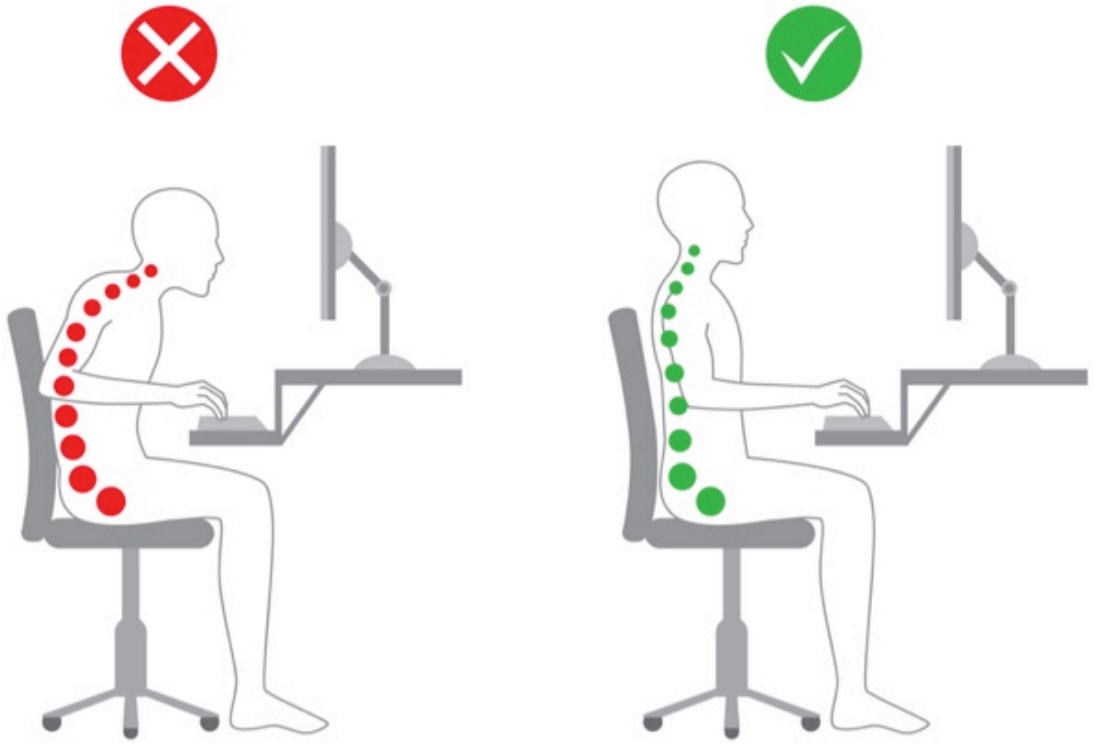
If an imaginary plumb line were hung from the top of the head, it would pass through:

- The ear lobe
- The centre of shoulder
- The elbow
- The centre of hip
- Slightly anterior to midline of knee
- Slightly anterior to ankle bone

Postural analysis



Postural analysis



Neutral posture

The body works most efficiently in a neutrally aligned posture

Any kind of imbalance will affect:

- Muscular length-tension relationships
- Joint movement and stresses
- Nervous input (sensory information) and output (motor responses)

Leading to injury and dysfunction

Dynamic posture

- The position the body is in at any moment during a movement pattern
- A snap shot of the body during a movement
- For example
- Assessing movement is important of you are going to load it and if you load inefficient movements you simply increase the risk of injuring clients

Dynamic posture analysis

The following assessments can be completed:

- Client putting their hands above their head
- Client sitting down on the edge of a chair and getting up again
- Client standing on one leg
- Client attempting any form of push up they think they are capable of

Dynamic posture analysis

- Each of these tasks involve some element or all of a primary movement pattern and are common tasks that will give a good view of the natural movements of a client
- It is important to just ask the client to perform the movement and watch how they do it, rather than telling them what you want them to do or showing them
- This is because you want to see their natural movement patterns

Scoliosis

- A spine with an excessive sideways curve
- More common in women than in men

Hyperkyphosis

- Excessive forward curvature in the upper region of the spine
- Affects more men than women
- The spine may be curved due to Scheuermann's disease or by poor posture and/or getting older

Hyperlordosis

- Excessive arched posture in the lower region of the spine
- May be caused by genetic conditions like achondroplasia, or by environmental factors such as obesity
- Common amongst professional dancers, who can develop curvature of the spine due to the amount of stress they exert on that part of the body

Upper crossed syndrome

- Head pokes forward.
- Spine is hyperkyphotic.
- Shoulders are protracted.
- Shortened and lengthened musculatures form a ‘cross’ shape

Upper crossed syndrome

Lengthened/inhibited/underactive muscles

- Deep neck flexors (longus capitis and colli) Serratus anterior
- Lower and middle trapezius
- Teres minor
- Infraspinatus and supraspinatus
- Thoracic erector spinae

Upper crossed syndrome

Shortened/dominant/overactive muscles

- Scalenes
- Sternocleidomastoid
- Upper trapezius
- Levator scapulae
- Pectoralis major
- Anterior deltoids
- Latissimus dorsi
- Teres major
- Subscapularis
- Pectoralis minor)

Lower crossed syndrome

- Anterior pelvic tilt
- Spine is hyperlordotic
- Shortened and lengthened musculatures form a ‘cross’ shape

Lower crossed syndrome

Lengthened/inhibited/underactive muscles

- Rectus abdominis
- Obliques
- Transversus abdominis
- Gluteus maximus, medius and minimus

Lower crossed syndrome

Shortened/dominant/overactive muscles

- Iliopsoas
- Lumbar erector spinae
- Rectus femoris
- Adductors
- Tensor fasciae latae
- Quadratus lumborum
- Lumbar multifidus

Sway back

- Head pokes forward
- Short and overactive upper trapezius
- Short and tight pectorals
- Lengthened and inactive lower trapezius, middle trapezius and rhomboids
- Posterior deltoid lengthened
- Hip flexor lengthened
- Reduced lumbar curve
- Short and tight hamstrings

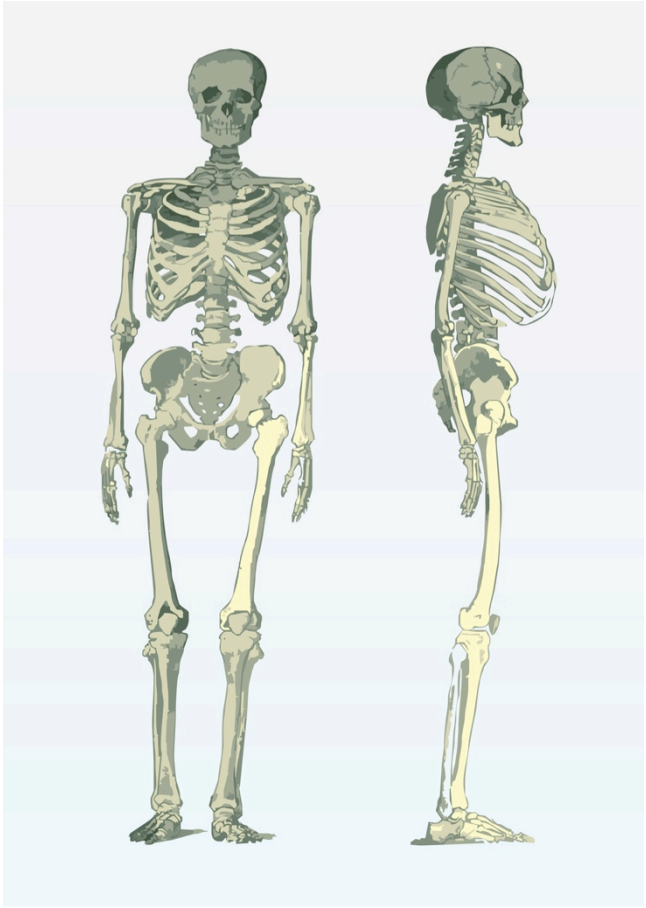
Flat back

- Flattened lumbar curve
- Stiffness in lumbar spine
- Posterior tilt of pelvis
- Hip flexors lengthened
- Hamstrings tight
- Rectus abdominis tight

Neutral posture assessment

Anterior view

- Asymmetry
  - Shoulders
  - Hips
- Knee over second/third toe
- Feet turned out
- Arch of foot - supinated/pronated



Neutral posture assessment

Posterior view

- Asymmetry
  - Shoulders
  - Hips

- Feet turned out
- Arch of foot-supinated/pror

Correcting postural deviations that are limiting the client ability

- Strengthening protocols
- Stretching protocols
- Mobility
- Awareness
- Proprioception
- Stress
- Daily habits
- Nutrition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