



FREE WEBINAR
Nov. 15, 2017
12 - 1 pm

How's Your Posture? Postural Awareness for Older Adults



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How's Your Posture?

Postural Awareness for Older Adults



Presenters

Sanjay Sarkar, Concordia University
Jane Pederson, Stratis Health
Meghan Coleman, Metropolitan State University

Changes that Occur with Aging

- ▶ Decline in sensory and motor neurons
- ▶ Lean muscle mass decreases
- ▶ Muscles can become more rigid and lose tone
- ▶ Decline in bone mass
- ▶ Loss of fluid in intervertebral discs
- ▶ Fluid in joints decreases

- ▶ Increase prevalence of diseases such as osteoporosis and different forms of arthritis

Common Clinical Assessment Domains

- ▶ Functional status
 - ▶ ADLs and IADLs
- ▶ Mobility
 - ▶ Gait speed
- ▶ Nutrition
- ▶ Vision
- ▶ Hearing
- ▶ Cognitive function
- ▶ Depression/mental health

Introduction

- ▶ Posture as Wellness Indicator
- ▶ Connection to Self Image
- ▶ Pain, Mobility
- ▶ Quality of Life

- ▶ Common Changes, Assessment, Prevention

Objectives

- ▶ Discuss importance of postural awareness
- ▶ Understand and identify optimum posture
- ▶ Recognize and avoid poor posture
- ▶ Understand some of the conditions associated with postural imbalances
- ▶ Develop postural self-care plan

Posture

- ▶ **Alignment** of body in space **against** force of **gravity** while interacting with the environment **efficiently**

Importance of Proper Posture

- ▶ Quality of life
- ▶ Self confidence
- ▶ Slimmer and younger
- ▶ Cognitive feedback
- ▶ Breathing mechanics
- ▶ Reduced chances of
 - ▶ Circulation and digestion issues
 - ▶ **Muscle and joint problems**
 - ▶ Spinal health
 - ▶ **Risk of falls**

Poor Posture Can Cause

- ▶ Joint pain
 - ▶ Low back= 63%
 - ▶ Neck= 53%
 - ▶ Shoulder= 38%
- ▶ Reduced function
- ▶ Increased falls risk
 - ▶ 1 of 3 elderly adults
 - ▶ 2.3 million non-fatal fall injuries /year
 - ▶ >662,000 hospitalized
- ▶ Behavioral changes
 - ▶ Depression
- ▶ Stress
- ▶ Constipation
- ▶ Look heavier
- ▶ Poor circulation, digestion, and lung function
- ▶ Headache and jaw pain

Optimum Posture Identification

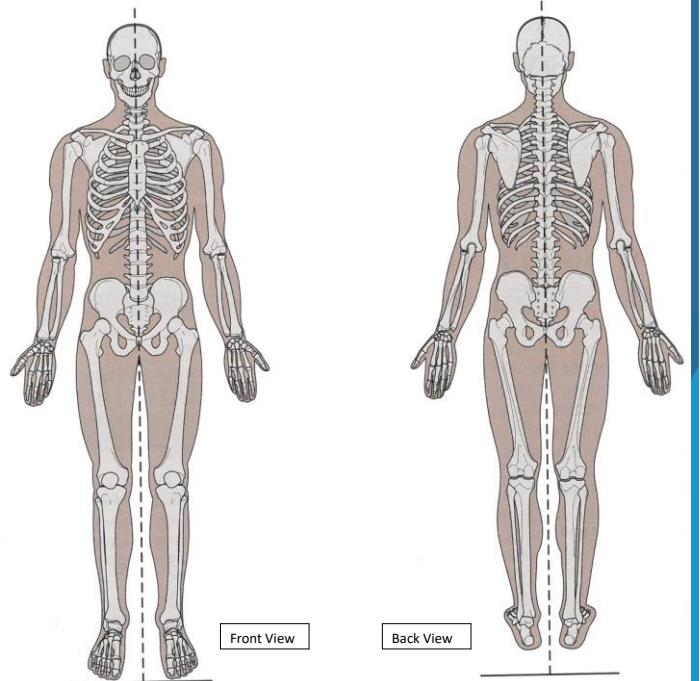
- ▶ Regular Assessment
 - ▶ Reduce pain and dysfunction
 - ▶ Prevent long term structural changes

Postural Assessment

- ▶ Check yourself in a mirror if you are near one
- ▶ Or, you can check your self later
- ▶ Or, if you have a partner you can check him/her as we go along

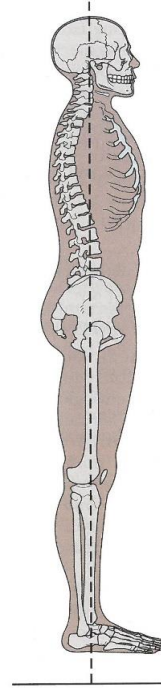
Postural Assessment

- ▶ Ears level
- ▶ Shoulder level
- ▶ Hips level
- ▶ Nose, chin, breastbone midline
- ▶ Knees, feet



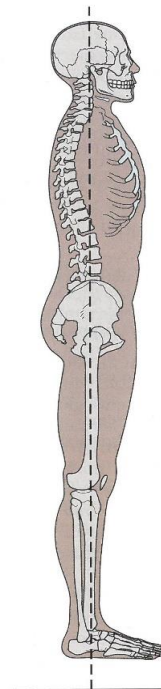
Postural Assessment (contd..)

- ▶ Ear over shoulder
- ▶ Shoulder joint center
- ▶ Arm bisecting the rib cage
- ▶ Hand over hip joint center
- ▶ Knee joint center
- ▶ Ankle joint center



Postural Assessment (contd..)

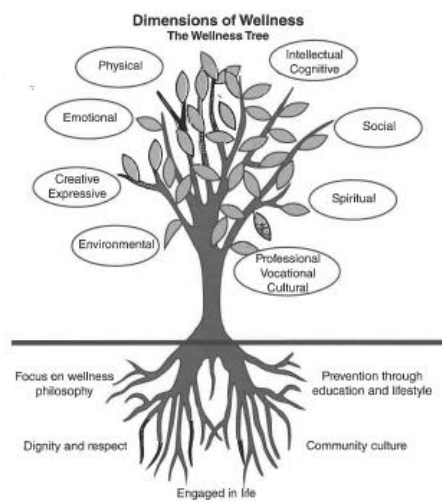
- ▶ Curvatures
 - ▶ Cervical
 - ▶ Thoracic
 - ▶ Lumbar



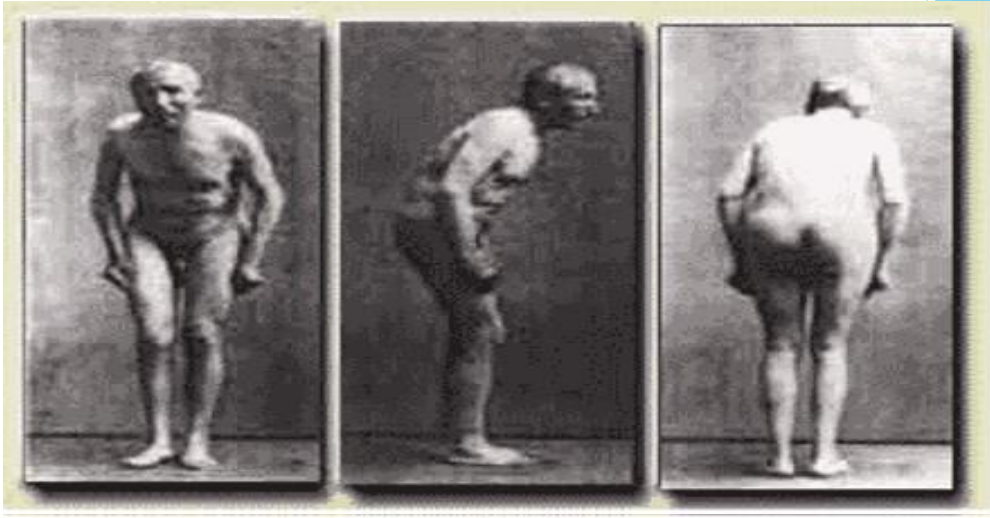
Postural Assessment

- ▶ Muscular interconnectedness
 - ▶ Tight/weak
 - ▶ Imbalance

Wellness Tree



Best-Martini, E.; Weeks, M.A.; and Wirth, P. Long term care for activity professionals, social services professionals, and recreational therapists. 6th ed.



http://www.google.com/search?biw=1280&bih=615&tbm=isch&sa=1&q=parkinson+patient+standing&oq=parkinson+patient+standing&gs_l=psy-ab.3...43179.44563.0.45183



<https://www.youtube.com/watch?v=o625rylh3bY>

Effect of Poor Posture

- ▶ Associated dysfunction
 - Forward head
 - Rounded Shoulders

- ▶ Our Study, Sarkar and Ludewig, 2014:
 - Shoulder motion
 - Thoracic kyphosis
 - Shoulder strength



Long Standing Poor Posture Can Lead To

- ▶ Abnormal body alignment

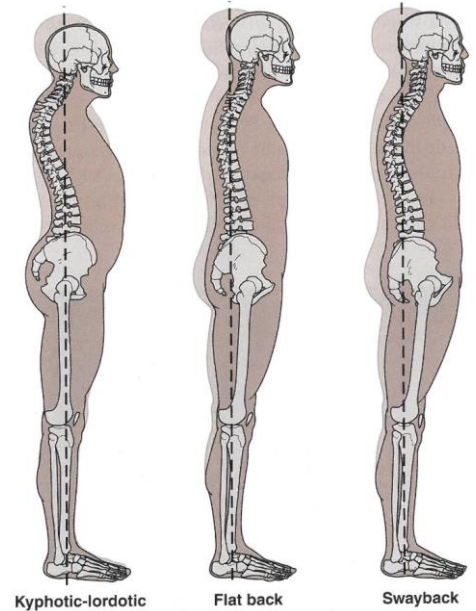
- ▶ Spinal stress and strain
- ▶ Muscular imbalances



<http://www.spineuniverse.com/professional/case-studies/>

Common Abnormal Spinal Posture

- ▶ Kyphotic-lordotic
- ▶ Flat back
- ▶ Sway back

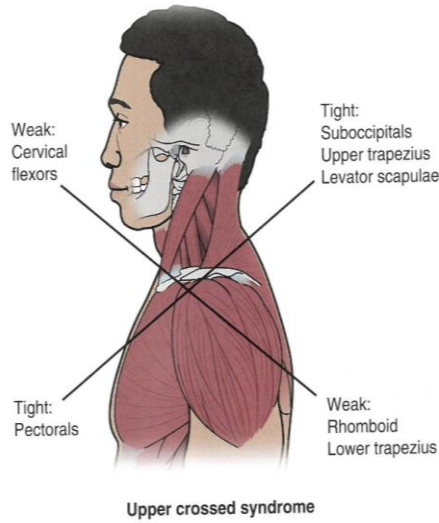


Common Abnormal Postures

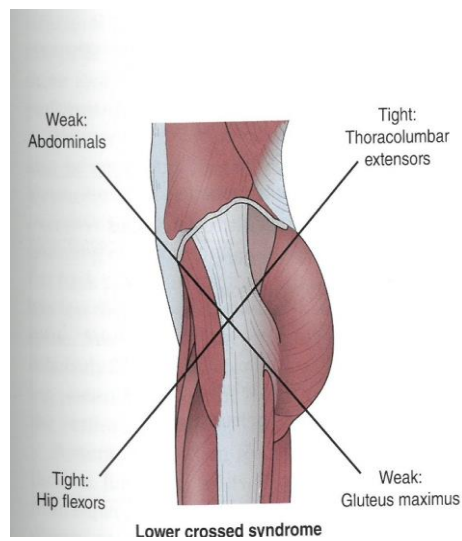
Hyper-kyphosis (Hunched back)

- ▶ Anterior translation of head
- ▶ Internal rotation of scapular blade
- ▶ Internal rotation and adduction of humerus
- ▶ Forward leaning posture
 - ▶ Increased risk of falls
 - ▶ Neural impingement
 - ▶ Facet joint arthropathy
 - ▶ Stress on disks

Crossed Syndromes - Upper Crossed



Crossed Syndromes - Lower Crossed



Poor Habits

▶ Sitting duration and position



Frailty

▶ 5 criteria:

1. Weight loss: Sudden, unexplained
2. Exhaustion: Short distance
3. Low physical activity: Mostly sedentary
4. Weakness: Inability to perform ADL
5. *Walking speed*

▶ Pre-frail stage: 1-2/5

▶ Frail stage: 3/5

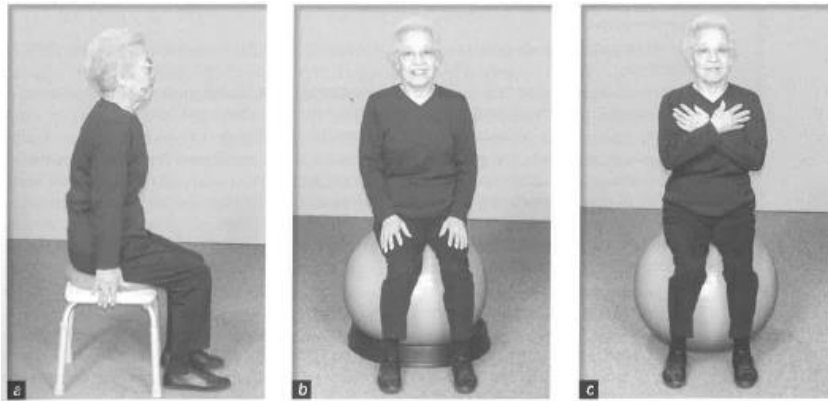
Xue, 2011

Walking Speed = The Sixth Vital Sign

- ▶ Correlates with functional ability and balance confidence
- ▶ Potential to predict the following:
 - ▶ Future health status
 - ▶ Functional decline
 - ▶ Hospitalization, discharge location, and mortality
- ▶ CEEAA Classification
 - Fun
 - 1.5 m/sec or greater
 - Functional
 - 1.0 to 1.5 m/sec
 - **Frail**
 - Less than 1.0 m/sec
 - **Failure**
 - Less than 0.5 m/sec

Fritz and Lusardi, 2009

Postural Corrective Exercises



Different Levels of Balance

Postural Corrective Exercises



Postural Corrective Exercises



Level 1



Level 2

http://casperjournal.com/sports/article_4d273574-5591-56d7-8db7-cb7638a1ee7b.html

Postural Corrective Exercises



Recommendations

- ▶ Prevention
- ▶ Lengthen/Strengthen
- ▶ Cautionary Notes

Take Home Message

- ▶ Be aware of yourself and the environment you interact with
- ▶ Remaining unaware of your posture and allowing yourself to be in bad posture throughout your day causes compensation in the spine
- ▶ Regular assessment will help prevent development of bad postural habit
- ▶ Care should be taken if you see any postural distortion from normal
- ▶ It is important to appreciate that poor posture can present without pain or pathology
- ▶ One should be cognizant of such information and be careful to determine relevance of abnormal posture

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By: Kate Ingalls-Maloney & Sharon Blume