



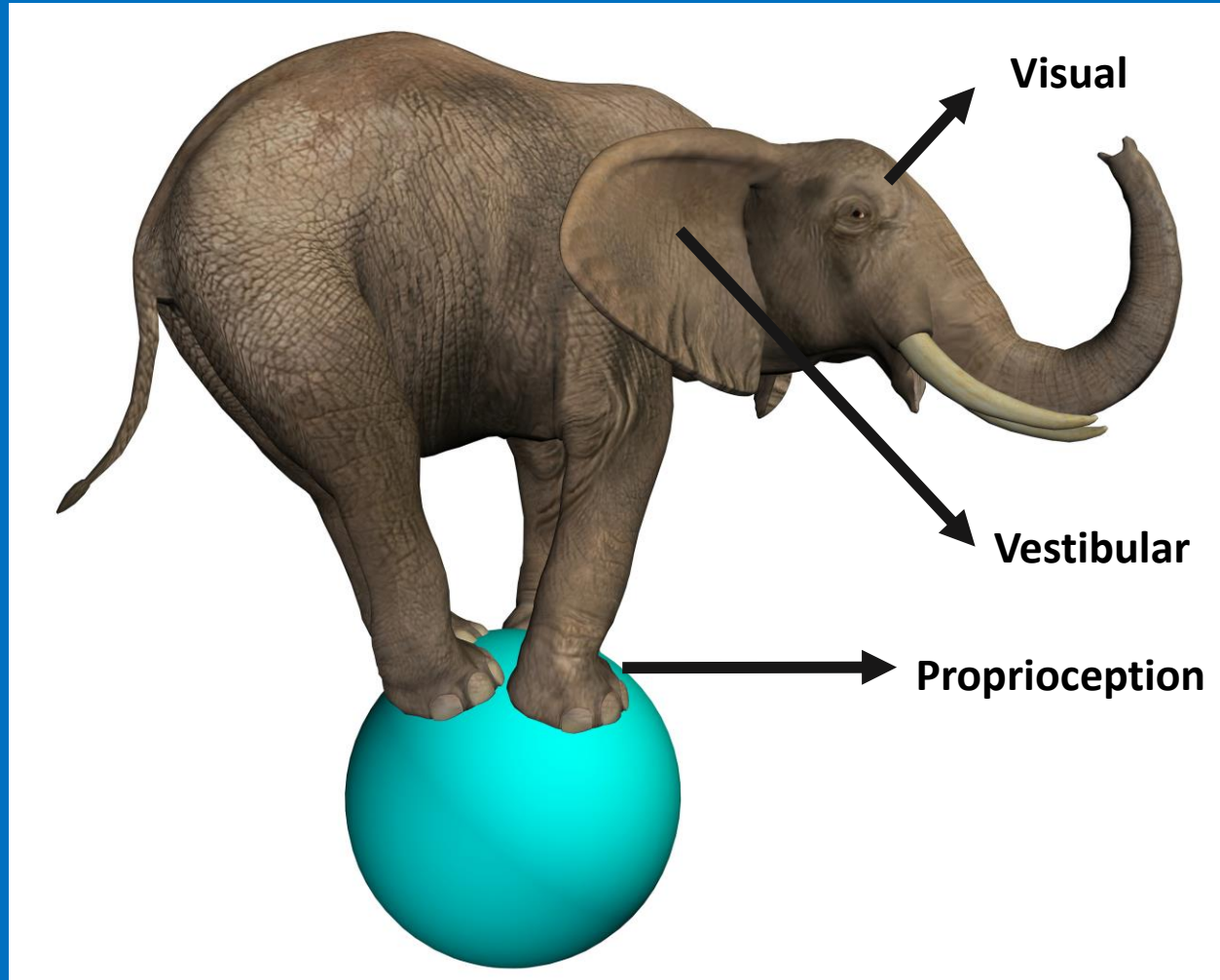
All things balance

8th May 2021

active
CANTERBURY NETWORK
SUPPORTING PHYSICAL ACTIVITY PROVIDERS

**LIVE STRONGER
FOR LONGER**
PREVENT FALLS & FRACTURES

What 3 body systems are responsible for sending information to the brain?



Visual Vestibular Proprioception



Motor Response

- Eye movement
- Positional movement



What factors play a part in determining if someone loses balance?

Internal / External

Internal

Low blood pressure

Alcohol

Cognitive decline /dementia

Illness/disease

Medications

Vestibular issues

Visual issues

Joint ROM

Sleep/Fatigue

Posture

↓ Muscular strength

↓ Power

↓ Reaction time

External

Surface

Trip hazards

Base of Support (BOS)

Footwear

Lighting

Perturbation

Distraction on both sides!



BOS

Put in order of most to least stable

Wide squat

Feet together

Lunge stance – back heel off ground

Semi Tandem – as if on a narrow beam

Weight on one leg – with toe on ground

Stand on one leg use stick

Tandem – heel to toe

Stork Stand - one leg



Devise 3 different drills using object transfer with different BOS

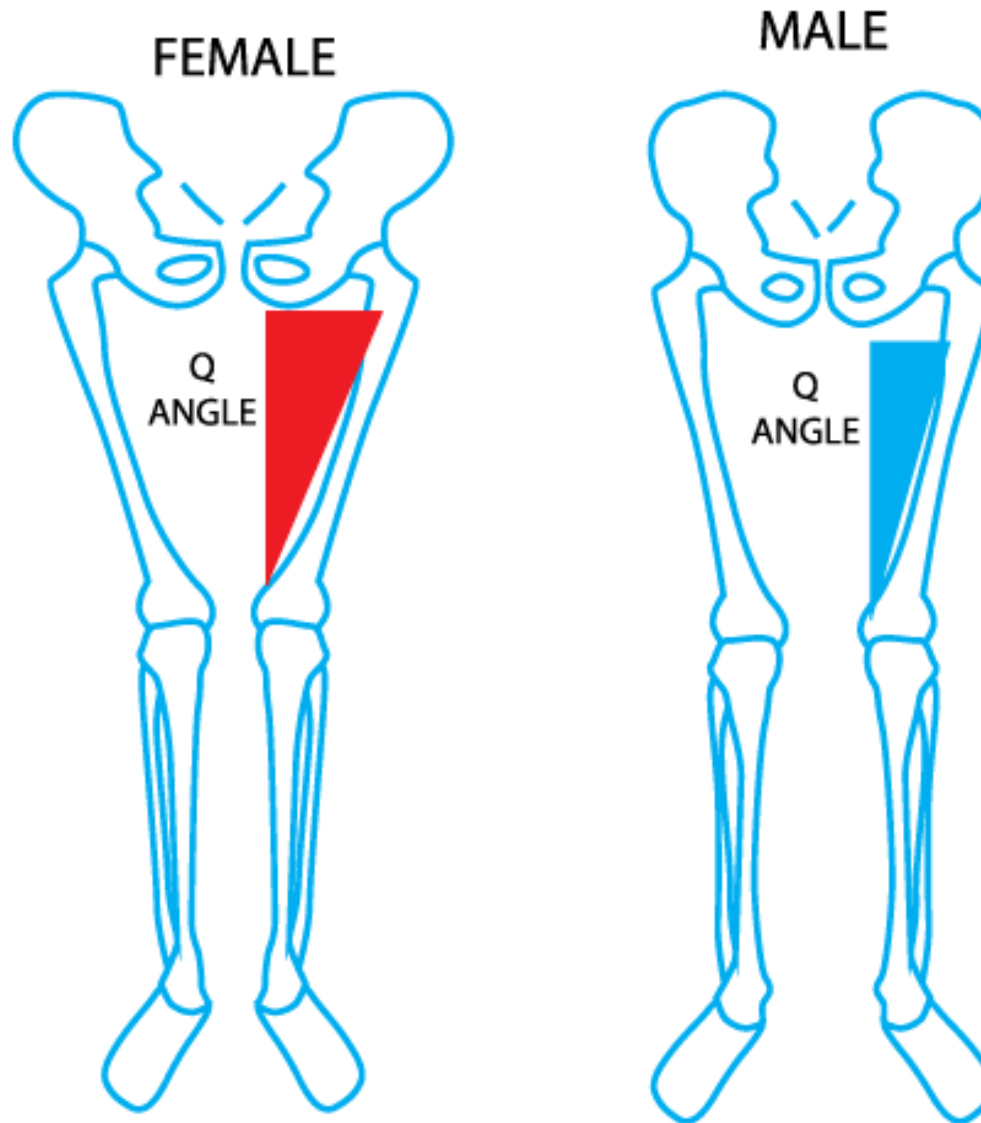
CHOICE OF OBJECTS: - balls, bags, DBs, milk containers

At least one drill must be in pairs or groups

Q Angle

Why is lateral shift important to balance?

Relevant Exercises





Devise 3 different drills to challenge BOS with distraction thrown in.

Include physical and cognitive distraction

At least one drill must be in a team or pair

Good balance is maintained when our COG/COM is within our BOS

Balance is compromised when COG extends out of circle of BOS

What are the corrective strategies our bodies employ when our COG goes outside our BOS ?

1. Ankle – scrunch toes, contract calf muscles - Corrective strategy
2. Hip – sideways, backwards - Corrective strategy
3. Stepping – Protective strategy
4. Grab or grasp something – Protective strategy
5. Put arm out – Protective strategy



Devise 2 different drills to train for the stepping strategy

Dots

Weight transfer

7 Principles of Balance Training

1. Power vs Strength
2. Dynamic vs Static
3. Perturbation
4. Dual tasking/distraction
5. ABC – Embrace the wobble – but safely
6. Options/modification
7. Relate to ADLs

Props/equipment

Chairs – with or without arms
Step Box or steps
Swiss ball
Bosu ball
Activ motion bar
Bamboo/ broom sticks
Agility ladder
Bands
Pom poms
Sticks (magazines or para rubber)
Scarves
Dots or discs
Cones / cups
Foam rollers
Sliders/plates
Bean bags
Balls – small (tennis) medium

Weights

Dumbbells
Plates
Milk bottle (water/sand)
Pillowcase weight (rocks/tins/books – wrapped in towel)
Backpack with weight (rocks/tins/books)

Wobble board
Foam
Pillow
Yoga blocks
Spiky half ball