PATHOLOICAL GAIT PATTERNS

limping

Pt. Avoids weight bearing on affected side as far as possible i.e. dimished stance phase.

Lurching

- Pt. prolongs stance phase to improve stability.
- It denotes variable failure muscle power.

Pathological gait

- Muscle weakness
- Structural deformities of bone and joint
- Neurological disorders
- miscellaneous

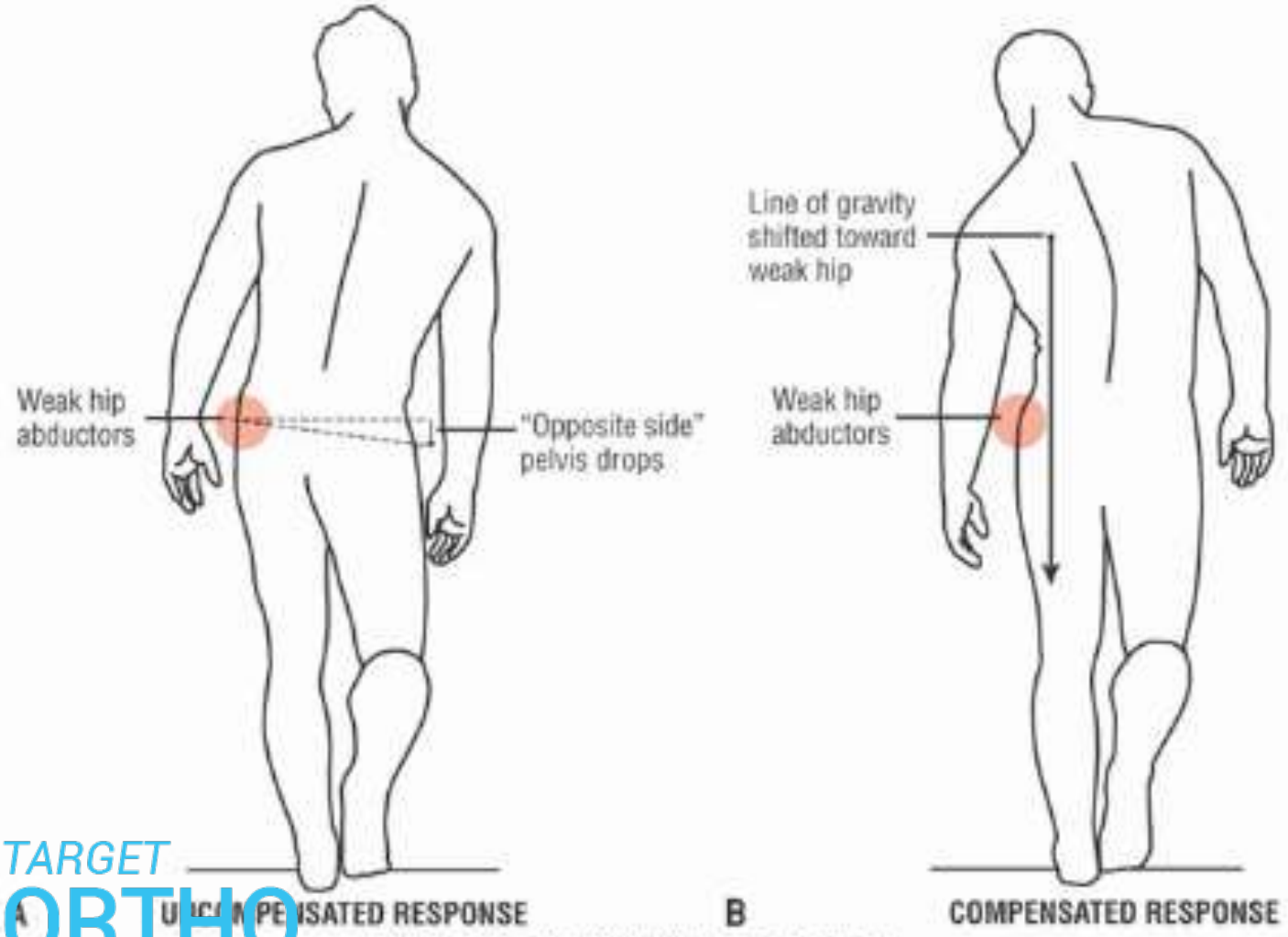
Gluteus medius gait

Only slight R & L pelvic tilt
~5° L and 5° R

- R gluteus medius weaknkess [OR R superior gluteal nerve lesion]
  - R stance
    - R pelvic elevation [>>>5°]
    - L pelvic drop [>>>5°]

- Trendelenburg Gait
  - This type of gait is due to weakness of the hip abductors (gluteus medius and minimus)
  - The normal stabilizing affect of these muscles is lost and the patient demonstrates an excessive lateral list in which the trunk is thrust laterally in an attempt to keep the center of gravity over the stance leg

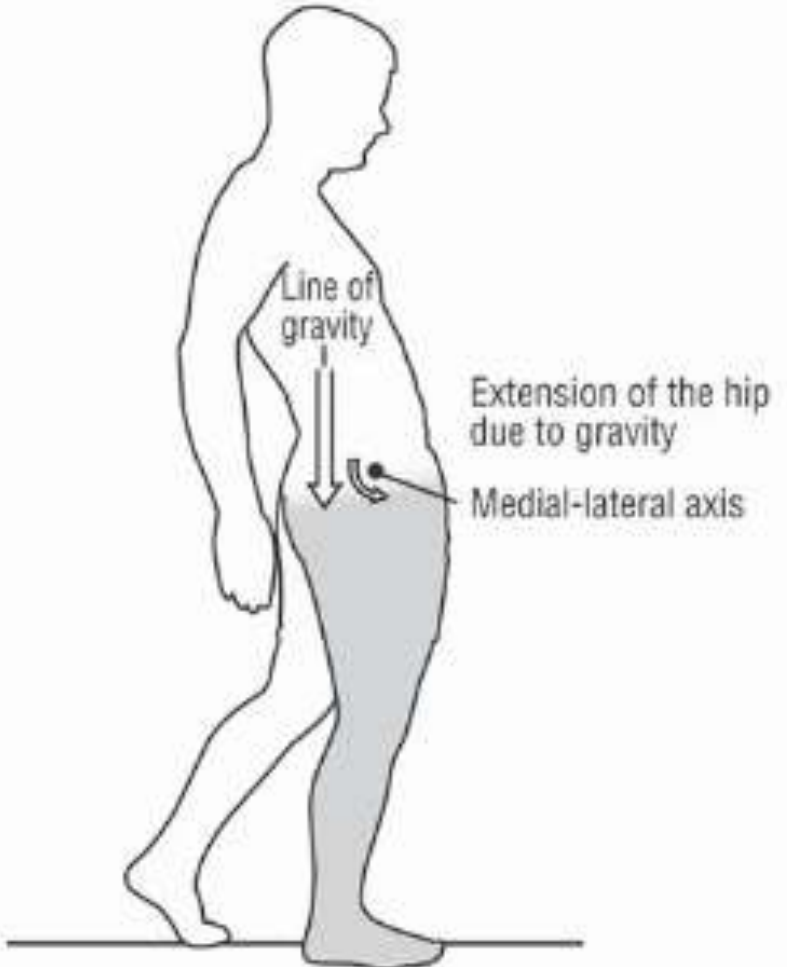
Trendelenburg Gait



Gluteus maximus

- Extension lurch at heel strike on the weakened side which interrupts the forward motion of the trunk.

- Backward lean of trunk during foot-flat phase
- Impairment
  - Weakness of hip extensors—gluteus maximus
- Reason for deviation
  - Leaning backward during stance phase shifts body's line of gravity posterior to hip, reducing need for active hip extension torque

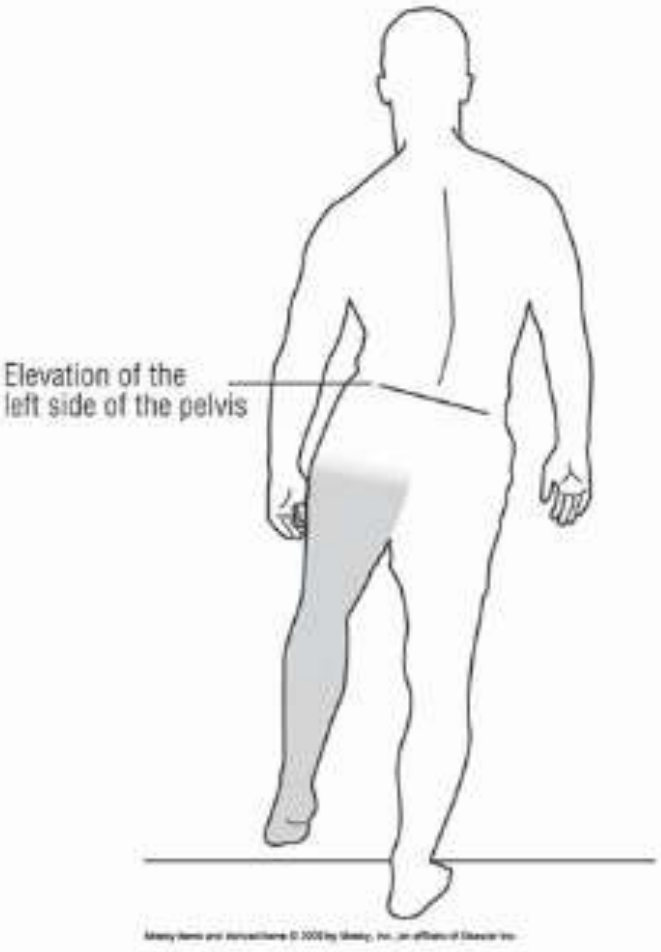


Quadriceps

- Knee remains fully extended throughout stance

Hip flexor

- Excessive elevation of pelvis on "swing" side
- Impairment
  - Inability to functionally "shorten" swing-leg
  - Possibly due to weak hip flexor muscles

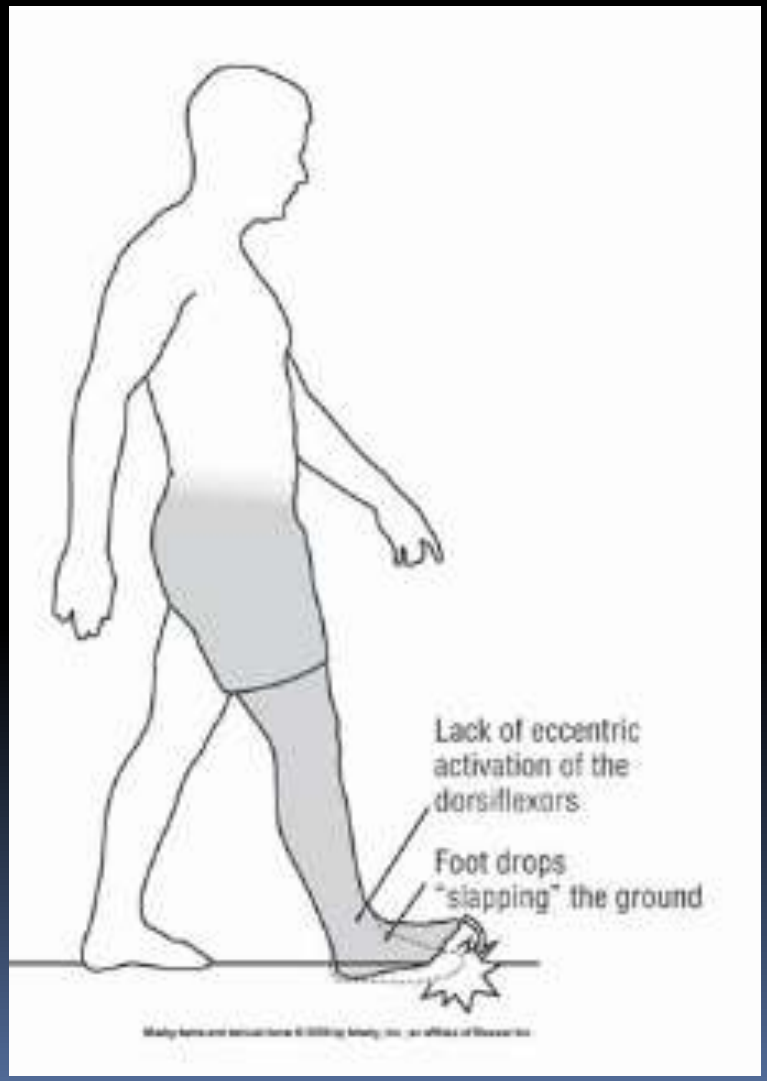


Calcaneus

- Due to weakness of plantarflexors.

High stepping gait

- Foot slap in ground on heel strike and then drops in swing phase.



Structural deformities of bone and joint

- Coxa vara
- Non union or pseudoarthrosis of neck of femur
- Lower limb Shortening

Antalgic gait

- Synovitis hip, knee ankle
- Arthritis
- Tumourous conditions
- traumatic

Stiff hip gait

- Due to spastic muscles
- Due stiffness of joints

Shortening

- Short limb gait

Neurological disorders

- Hemiplegic/flaccid
- diplegics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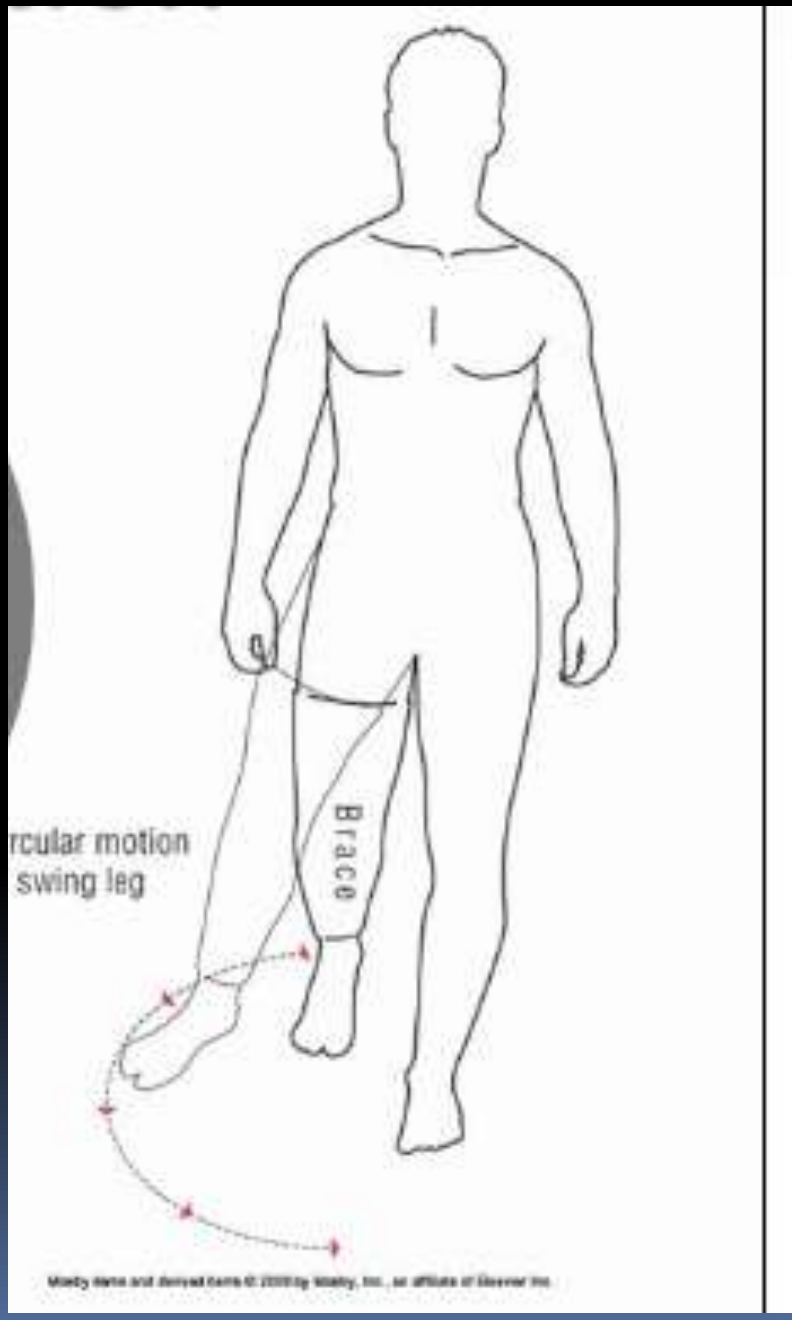
Scissoring/spastic gait

Circumduction gait

- Swing leg is advanced in semi circle arc



Crutch walking-patterns of walking

Swinging crutch gait

- Swing to crutch gait
- Swing through crutch gait

Four point crutch gait

- Right crutch----left foot----left crutch----rigth foot

Two point crutch gait

- Right crutch and left foot followed by left crutch and right foot

Three point crutch gait

- Both crutches and weaker lower limb together f/by stronger lower limb