

# Types of joint motions during Walking

## Open Kinetic Chain

The smaller distal bones move against the fixed more proximal larger bones

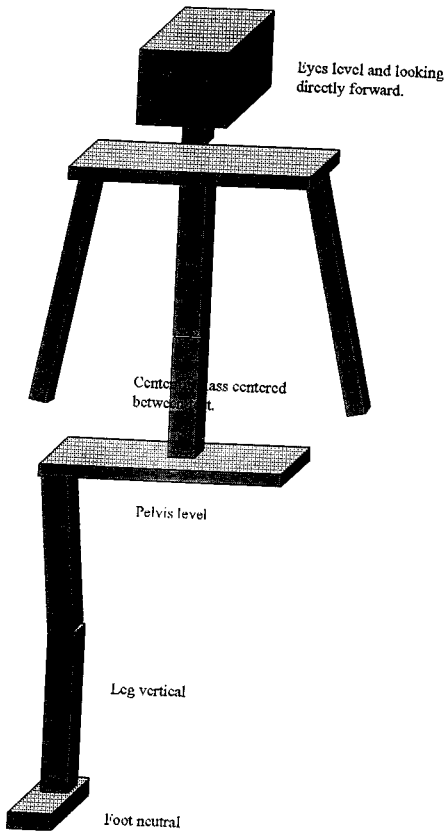
1/3 of the time spent walking is with the joints of the foot and leg moving in open kinetic chain.

## Closed Kinetic Chain

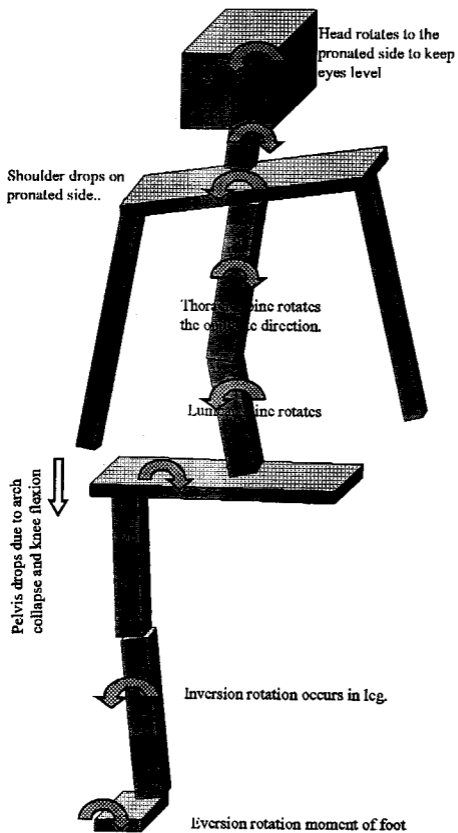
The smaller distal bones stay stable and the larger proximal bones move.

2/3 of the time spent walking is with the joints of the foot and leg moving in closed kinetic chain.

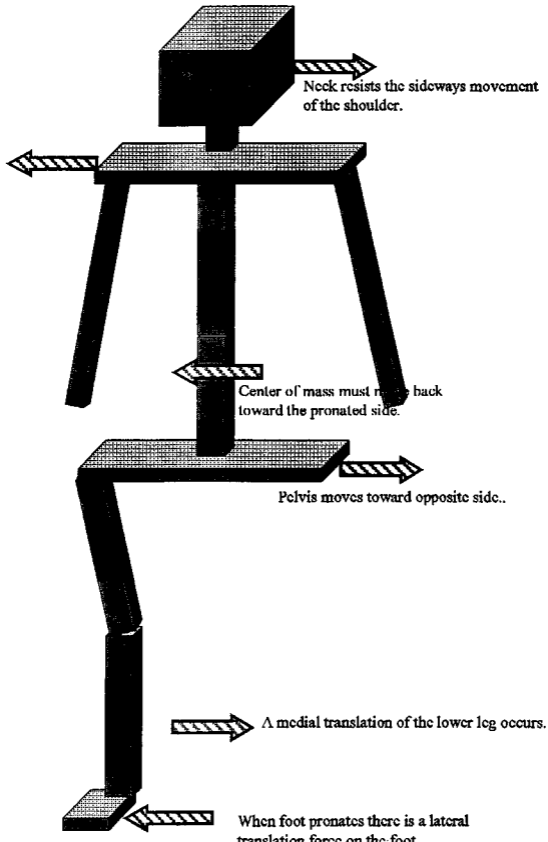
# Normal Posture



# Frontal Plane Rotations when Foot Pronates In Closed Kinetic Chain



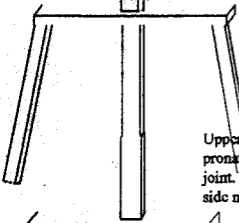
# Frontal Plane Translations when Foot Pronates In Closed Kinetic Chain



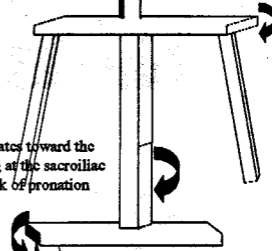
# Transverse Plane Rotations when Foot Pronates In Closed Kinetic Chain.



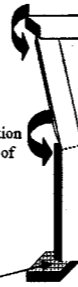
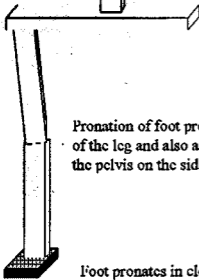
Neck must rotate opposite direction of shoulders in order to keep eyes pointed straight ahead.



Upper half of body rotates toward the pronation side, starting at the sacroiliac joint. Shoulder on back of pronation side moves backward.



Pronation of foot produced internal rotation of the leg and also a forward movement of the pelvis on the side that rotates.



Foot pronates in closed kinetic chain.

# Sagittal Plane Rotations when Foot Pronates In Closed Kinetic Chain.

