



# Examination of Gait

Tim Coughlin

1. Normal Gait - there are 4 phases to the normal gait. These are; heel strike, stance phase, toe off and swing through.

Look at the overall pattern of gait for symmetry, cadence, base width, stride length, arm swing and trunk movement. Also consider if the patient usually uses a walking aid.

2. Antalgic Gait - this is found in people who are trying to reduce the pain felt in a limb. The patient exhibits a short stance phase and leans to the side of the painful hip taking a short step followed by a slower step on the affected side.

3. Trendelenburg Gait - this gait is caused by weakness of the proximal hip abductors. Therefore the pelvis falls on the opposite side to the injury and the swinging limb passes the other lower than normal. In an attempt to compensate for this the patient will lean away from the unsupported side creating a waddling gait or step very high on the unsupported side to clear the ground, creating a steppage gait.

4. Short Leg Gait - in patients who have true shortening in a limb, compensation usually occurs by pronating the long leg and supinating the short leg. There will also be a pelvic drop which in turn causes the vertebral column to bend convexly to the short side and the shoulder to drop on the long side.

5. Stiff Leg Gait - this is caused by a stiff knee or hip joint on one side. In order to complete the swing through phase the patient must rotate the pelvis to allow the stiff leg to clear the ground.

6. Foot Drop Gait - this is caused by an inability to flex the affected foot. It therefore scuffs along the ground in the swing through phase. The patient compensates by flexing the knee on the affected side excessively. This is also called a steppage gait.

7. Ataxic Gait - this has multiple causes including head injury and cerebellar disease. The patient has a broad based gait with marked unsteadiness. They often bang their feet down and look at them throughout the cycle.

8 - Scissor Gait - this occurs in patient with spasticity of the hip adductor muscles as with cerebral palsy. The features of the gait are rigid and excessive adduction of the leg in the swing through phase, plantar flexion of the ankle, flexion of the knee and adduction and internal rotation at the hip. This causes the knees to rub together during gait mimicking the shape of a pair of scissors.