

Fact Sheet

Gait Analysis

What is a Gait Assessment?

Gait analysis is a method used to assess the way we walk or run to highlight biomechanical abnormalities.

What are Biomechanics Abnormalities?

Being able to move efficiently is important in avoiding injuries. Having joints capable of providing sufficient movement and muscles capable of producing sufficient force is vital to generate an efficient gait cycle. If joints are stiff (usually caused by muscle tightness), limiting range of motion, or muscles are weak, the body must find ways of compensating for the problem, leading to biomechanical abnormalities.

Common gait (walking) problems

- Your hip may dip down during stance phase, which can lead to hip bursitis or back pain.
- Clearing the ground during swing phase may be difficult. This may cause hip pain.
- You may be unable to pull up your toes (foot drop) which could lead to instability, a trip or not being able to place your heel on the ground.
- You may lean too far forward and potentially stumble or trip.
- Your walking aid may be pushed too far forward resulting in an inefficient gait.
- You may be placing your weight too far back on your heels, causing you to fall backwards.
- You may have poor balance, which could lead to falling during exercise.
- If you've had an injury or suffered a stroke or neurological disorder, you may not be able to support your weight fully which may result in a fall or potential fracture.



Highett
Podiatry

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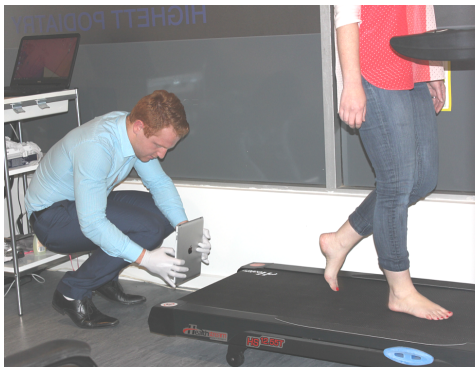
Gait Analysis

What is involved in a Gait Analysis?

Gait analysis usually involves walking or running on a treadmill. In some cases the podiatrist will simply watch the way that you move, looking in particular at your feet, ankles, knees and hips.

We use an advanced form of motion analysis to assist us in diagnosing complex motion related to pathology of the foot, ankle, knee, hip and lower back. There are three basic stages to the human gait cycle and it is impossible to view the detail of this intricate motion with the naked eye.

With a computerised video gait analysis, we are able to break down each second of time into tiny segments (frames), allowing detailed assessment. The software we use allows us to obtain calculated kinematic angulations (motion of body planes), enabling us to provide instantaneous comparisons with different shoes, or changes over time.



Why is having your gait assessed so important?

Many injuries are often caused, at least in part, by poor biomechanics. Injuries such as shin splints, plantar fasciitis, achilles tendinopathy and many other lower limb injuries can be attributed to poor mechanics.

Addressing the cause of the injury is vital to an appropriate treatment plan.



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