



Conrad Barnard Orthotics & Prosthetics Gait Analysis Facilities

Introduction to Gait Analysis

A gait analysis is a detailed look at how a person walks or run. Gait analysis is normally preformed to determine the cause of a specific injury by evaluating the foot's function and a person's biomechanics. (Biomechanics is the science of how movement takes place in the body and how muscles, bones, tendons and ligaments work together to produce movement.)

Gait analysis is therefore used to identify the cause or mechanism of an injury and assist with orthotic or exercise prescription.

The foot when walking is on average in contact with the floor for approximately 0,8 seconds and 0,25 second when running. The foot function is therefore difficult to evaluate using just using one's naked eye.

For this reason at we have gait analysis equipment consisting of a RSscan Footscan and Dartfish video Analysis software and high speed recording camera's.

The gait analysis facilities at Conrad Barnard Orthotics & Prosthetics is one of the most technologically advanced gait analysis facilities in South Africa and is in line with international protocols for gait evaluation.





RSSCAN footscan

The RSscan Footscan® System is a force plate that is used to measure pressure distribution of the feet as well as ground reaction forces to determine a foot's function.

The footscan® systems can record up to 500 frames of data a second using small sensors that are 5mm x 7mm, these allow accurate analysis of pressure deviations under all regions of the foot as well as movement of ground reaction forces. This allows in depth analysis of the pressure and force distribution and their association with the biomechanics of the foot.



The data collected from the measurements can then be compared with the “norm” and an orthotic prescription can be formulated accordingly.

Foot orthotics can further be evaluated, by comparing ground reaction forces between different measurements- e.g. Measurements of to the barefoot walking to walking with a foot orthotic.





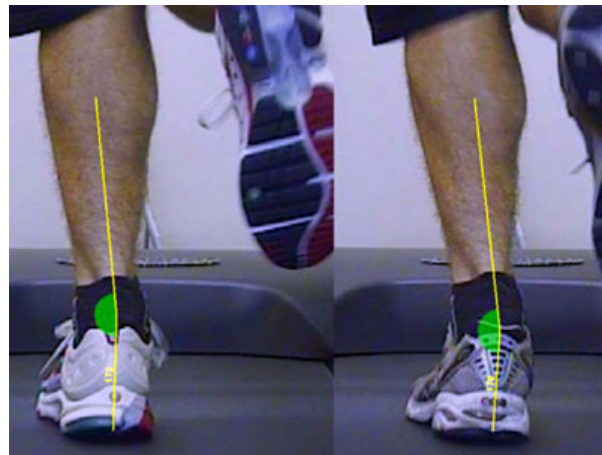
DartFish Video Analysis System

Dartfish video software enables us to view, edit and analyze videos for gait analysis and was founded in 1999 at the Swiss Institute of Technology. DartFish is rated as the world's leading video analysis software. It is used by numerous National Governing Bodies of sports, professional teams, universities, academies, as well as individual coaches and biomechanists.

Conrad Barnard Orthotics & Prosthetics is making it available to you!

The use of Dartfish video software enables an orthotist to record and scientifically analyze an athlete's or patient's movements (gait analysis).

The orthotist and athlete can view the running form via slow-motion or frame-by-frame playback on a computer screen.



With the information gathered in the analysis, an orthotist will recommend appropriate orthotics invention, gait modification strategies or footwear changes and recommendations to change or improve gait for management of an injury or to better performance.

An athlete's use of biomechanical gait analysis can be a preventative measure to identify poor movements or habits, and change them before injury occurs.

In short video gait analysis enables us to study any abnormal movements of both muscles and joints as the body moves and enables the orthotist to formulate the best possible orthotic solution for the presenting problem.

Contact Us

Please feel free to contact us for further information or book an appointment



CONRAD
BARNARD
ORTHOTICS & PROSTHETICS

E INFO@CONRADBARNARD.CO.ZA
T 033 342 4330 / 9464
C 083 301 4421
W CONRADBARNARD.CO.ZA
A 317 BULWER STREET, PIETERMARITZBURG, 3201