

# BIOMECHANICAL Analysis



Biomechanical Analysis is the study of the physics of human movement and describes the forces and patterns involved in movement.

Our Biomechanical Analysis program breaks down your movements by utilizing high speed cameras operating at great than 240 frames per second. This highly detailed footage coupled with video analysis software provides the perfect platform for understanding how you move and how we can make you better at it.

## Why Biomechanical Analysis?

In the clinic, the study of biomechanics is important when determining what causes injuries and how we can prevent them re-occurring. Identifying these movement or posture related issues allows better management, reduced recovery time and dramatically reduces the risk of recurrence.

On the sporting field, biomechanical studies help us perform better, run faster, kick further or jump higher with greater efficiency and reduced risk of injury. Be it a runner, cyclist, rower or golfer looking to improve their performance, re-training the pattern of movements in many cases can improve sporting technique, rectify posture-related or movement-related problems, and reduce the risk of injury.

The benefit of video analysis is that human eye cannot observe, tabulate and interpret all of the complex movements of the human body. It provides the ability to freeze movements and review, allowing us to identify complex compensatory movements from the underlying cause of injury or poor performance. It is only when the cause of the problem has been identified and treated, that such compensatory actions can be resolved and a patient can return to pre-injury activity levels.

## What is involved?

Our Biomechanical Analysis program is an in depth assessment of your movement patterns, looking at all the elements that may affect the way you walk, run and play. Assessments are usually performed in the clinical setting, however we can modify this where the clinic setting is not appropriate.

The assessment includes an initial data collection appointment followed by a second appointment for discussion of the results.

## The First consultation includes. :

- Comprehensive history relating to your sporting history, current and previous injuries, management, and goals (both sporting and treatment).
- Assessment of footwear or equipment used for activity.
- Range of motion and strength testing
- Video recording of your technique (posterior, anterior and lateral views).
- An initial explanation and run-through of footage frame-by-frame to give an initial "impression" of your individual technique and reasons for your particular injury.

## At your second consultation you will receive:

- A detailed discussion of your technique and explanation of the findings.
- Print out of test results, and a USB with video footage is given to each patient.

- A discussion of a management and/or strengthening program tailored to your individual needs.

#### Follow Up for Best Results.

It is important to note that Biomechanics and Video Analysis is a process of pre-testing, intervention and post- testing. Meaning that video analysis works best when the athlete makes use of video analysis over time. During you initial review our team will make multiple suggestions of how best to change your movements and technique. However the success of these changes can only be assessed and comparisons made over time as the athlete adapts to these changes. This is why re-assessment becomes a vital part of the chain.

#### Who should have Biomechanical Analysis?

Persons of any age and ability can benefit from a Biomechanical Analysis. We assess all individuals and all sports from the weekend warrior to elite levels. In particular gait assessment is useful if:

- You are suffering from persistent or recurring injury. For example we often see patients with leg injuries including heel pain, shin splints, knee, hip or low back pain.
- Are seeking a more comprehensive management of your current injury with particular focus on preventing re-injury.
- You are about to embark on a training program focussed on a particular event.
- You are seeking to improve your sports performance.

#### What are the costs?

The initial biomechanical analysis package including both consultations and take home material is \$255. If you have private health insurance these services will qualify for a rebate under your ancillary or "extra's" cover. The rebate varies depending on your health insurer and level of cover so check the details of your policy.

#### Making an Appointment.

Our Biomechanical Assessments vary based on your sport. If you wish to have a Biomechanical Assessment please contact the clinic to discuss your needs. Appointments can be made by calling the clinic on 03 9889 1078.



1431 Toorak Road Camberwell 3124 | t/ 03 9889 1078 | [www.cssm.com.au](http://www.cssm.com.au)

#### Open 7 Days

Monday 8 am - 8:30 pm  
Tuesday 7 am - 8 pm  
Wednesday 7 am - 8:30 pm  
Thursday 7 am - 8:30 pm  
Friday 7 am - 5 pm  
Saturday 8 am - 4 pm  
Sunday 9 am - 5 pm