

## 26% REDUCTION IN RUNNING ASYMMETRY IDENTIFIED WITH ViPerform WEARABLE SENSOR TECHNOLOGY

### The Problem

An 18 year old athlete who has played indoor 5v5 soccer for Australia and representative-level soccer was referred to a clinical pilates physical therapist after re-rupturing his right ACL. This occurred after a previous ACL injury which resulted in a hamstring allograft and thorough rehabilitation program. To objectively assess the stability of the athlete's knees and the change in performance after a patient-specific exercise program, ViPerform was used.

### ViPerform Knee Live Assessment

Using ViPerform's Knee Module, both the stability and consistency of movement in the athlete's knee were confirmed. The results of this assessment allowed the physical therapist to gain insights into the speed at which the athlete dropped into varus and valgus. This led the physical therapist to adjust the athlete's recovery program to include more box drop exercises.

### ViPerform Running Live Assessment

Acceleration / Deceleration testing using ViPerform identified changes in symmetry when the athlete ran at controlled speeds compared to sprint-level speeds over 30 meters. When sprinting the athlete reached high levels of asymmetry, and during runs at controlled speeds the athlete achieved greater symmetry.

### Prescribed Recovery Program

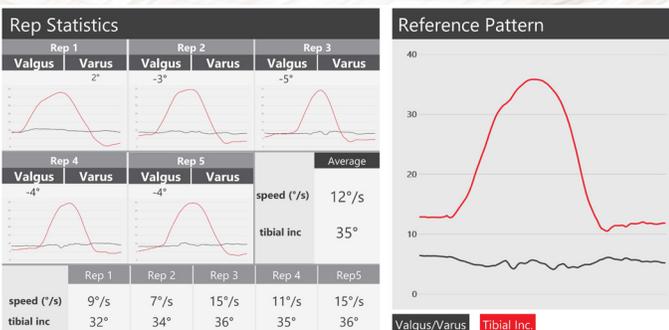
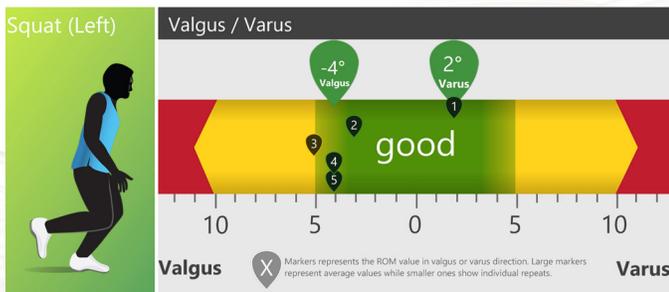
Following these initial baseline assessments, the athlete commenced a recovery program specific to the movement deficits that had been identified by the ViPerform assessments. The aim of this program was to improve proprioception through better movement control.

### Results

At the conclusion of this program, the athlete was retested with ViPerform. From the modified recovery program:

- A 26% reduction in asymmetry during ViPerform's Acceleration / Deceleration Running test was identified.
- Significant improvements in knee stability were reported.
- The athlete was able to return to playing indoor 5v5 soccer without requiring surgery.

4 months later, the athlete competed in 2 indoor 5v5 soccer games over 4 days. 2 months after that, the athlete played 9 indoor 5v5 soccer games over 5 days without injury or pain.



POST RECOVERY SQUAT DATA



The logo for ViPerform, featuring a stylized green 'V' icon followed by the text 'ViPerform' in a grey sans-serif font with a trademark symbol.

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