

## The Melbourne Return to Sports Score (MRSS) – An Assessment Tool for Return to Sports Following Anterior Cruciate Ligament Reconstruction

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### Summary:

Return to Sport assessment tool following ACL Reconstruction

### Abstract:

#### Introduction:

A return to sports at the pre-injury level of ability after ACL tear is a major goal of the athlete and surgeon. The aim of this study was to examine the value of an end of rehabilitation scoring system by comparing the score with an actual 'return to sports' and 'return to form'.

#### Methods:

In a prospective study, 94 patients previously involved in pivoting or cutting sports underwent primary ACL reconstruction by the same surgeon. They were assessed physically and subjectively 6-9 months following surgery and were given a Melbourne Return to Sports Score (MRSS). The score, out of 100, is multifaceted awarding a maximum of 25 points for knee examination (performed by the surgeon), 25 points for subjective questionnaire (IKDC score) and 50 points for physical testing (10 each, for single & triple hops, balance, agility and single leg squats). At a minimum of 2 years after surgery patients completed a further IKDC score, a Tegner activity score and a questionnaire designed by us to establish which patients had returned to their pre-injury sport. Competitive level (eg. professional, semi-professional, elite amateur, amateur, social, recreational) and subjective form was recorded pre-injury, in the first year of return to sports and at 2 years. Results were examined with non-parametric statistical analysis to look for differences between groups according to MRSS score.

#### Results:

84/94 patients (40M, 44F, mean age 25 years) responded with 10 lost to follow-up. 57/84 (68%) patients had returned to their pre-injury sports. Patients who returned to sports had significantly higher MRSS scores (mean 94.1 (5.56)) than those who did not return to sports (mean 87.8 (7.13)) ( $p=0.001$ ). Of those who returned to their sports, 65% returned at a lower competitive level initially than their pre-injury level and these patients had significantly lower scores than those achieved their pre-injury level ( $p=0.015$ ). By two years 68% had achieved pre-injury level showing no difference in MRSS score ( $p=0.65$ ) Form dropped from 'normal' to 'near normal' in 62% at the commencement of sport. This group had lower MRSS scores (mean 85.5) than those that returned to form more quickly (mean 95.1) ( $p=0.03$ ). Graft rupture occurred in 5 patients with no difference in score to others with intact grafts ( $p=0.31$ ).

#### Conclusion:

A successful return to sports following ACL reconstruction involves overcoming both physical and mental barriers. Despite relatively small numbers higher MRSS scores appear indicate a greater chance of returning to pre-injury sports and in the short term, predicts a quicker return to form. The score is a useful tool for the surgeon and may

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provide a mental aid for the patient assisting a successful return to play.