

following a knee injury. This systematic review aimed to critically appraise and summarize the measurement properties of knee muscle strength tests in young individuals with anterior cruciate ligament (ACL) or meniscus injury.

Materials and Methods Studies evaluating at least one measurement property of a knee extensor or flexor strength test in individuals with an ACL or meniscus injury with a mean injury age of ≤ 30 years were included. The COSensus-based Standards for the selection of health Measurement Instruments (COSMIN) Risk of Bias checklist was used to assess methodological quality. A modified Grading of Recommendations Assessment, Development, and Evaluation (GRADE) assessed evidence quality.

Results Thirty-four studies evaluating 30 muscle strength tests following an ACL or meniscal injury were included. Strength tests were assessed for reliability ($n=8$), measurement error ($n=7$), construct validity ($n=25$) and criterion validity ($n=7$). Concentric extensor and flexor strength tests showed sufficient ratings for two measurement properties, namely for intra-rater reliability (very low quality of evidence) and construct validity (moderate quality of evidence). Isotonic extensor and flexor strength tests displayed sufficient criterion validity (high quality of evidence).

Conclusion This review highlights an important lack of evidence on measurement properties of strength tests following ACL tear and meniscus injury. Concentric strength tests are currently the most promising tests following an ACL injury. High-quality studies on measurement properties are needed to recommend muscle strength tests in research and clinical practice.

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COMPREHENSIVE SUPERVISED HEAVY TRAINING PROGRAM VERSUS HOME TRAINING REGIMEN IN PATIENTS WITH SUBACROMIAL IMPINGEMENT SYNDROME: A RANDOMIZED TRIAL

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Objectives There is no consensus on the best training regimen for subacromial impingement syndrome (SIS). Several have been suggested, but never tested.

In this study, we hypothesized, that a supervised exercise protocol (STR) based on motion, stretching, and muscle and tendon strengthening with heavy slow resistance training and focus on both scapula stabilizing muscles, and rotator cuff tendons, would be superior to a simpler home exercise program that resulted in higher function score, and shoulder satisfaction than the untreated control group

Materials and Methods Randomised control trial with blinded assessor. 126 consecutive patients with SIS were recruited and equally randomised to 12 weeks of either supervised training regimen (STR), or home-based training regimen (HTR). Primary outcomes were Constant Score (CS) and Shoulder Rating Questionnaire (SRQ) from baseline and 6 months after completed training. Results were analyzed according to intention-to-treat principles.

Results CS improved by 22.7 points for the STR group and by 23,7 points for the HTR ($p=0.0001$). The SRQ improved by 17.7 and 18.1 points for the STR and the HTR groups respectively ($p=0.0001$). The inter-group changes were non-significant. All secondary outcomes (passive and active range of motion, pain on impingement test, and resisted muscle tests) improved in both groups, without significant inter-group difference.

Conclusion We found no significant difference between a comprehensive supervised training regimen including heavy training principles, and a home-based training program in patients with SIS.

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'I FEEL I'M LEADING THE CHARGE.' A QUALITATIVE ANALYSIS OF A VIRTUAL PHYSIOTHERAPIST-GUIDED PROGRAM FOR PERSONS WITH SPORT-RELATED KNEE TRAUMA

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Introduction SOAR (Stop OsteoARthritis) is a virtual, physiotherapist-guided knee health program that aims to reduce osteoarthritis risk after sport-related knee trauma. This study qualitatively explored individuals' experiences of the SOAR program.

Materials and Methods Individuals with varied lived experience of knee trauma completed a 4-week SOAR program consisting of 1) Knee Camp (interactive group education and 1:1 exercise and activity goal-setting); 2) weekly home-based exercise and activity program with tracking, and; 3) weekly 1:1 physiotherapy counselling. On completion, participants attended semi-structured 1:1 interviews responding to open-ended questions about their experiences. Content analysis was conducted.

Results 12 women and 4 men [median (range) age; 30 (19-46) years, 75% with past ACL tears] were interviewed. Most participants reported being satisfied with SOAR. Knee Camp and weekly 1:1 physiotherapy counselling were the components that most influenced participants' exercise participation by promoting autonomy and accountability. Participants had mixed feelings about using an activity tracker (i.e., Fitbit) and exercise tracking app. Data analysis identified three main themes: 1) Regaining control of knee health; 2) Importance of social support 3) Program limitations and strengths. Suggestions to improve the program included: more opportunities to connect with other persons with knee trauma, and access to web-based resources beyond the study.

Conclusion Persons with a past sport-related knee trauma report the SOAR program as acceptable and relevant. Strategies that include education, promote therapeutic alliance and social support, and foster autonomy may be important methods for long-term management of osteoarthritis risk after knee trauma.