increased pain during walking compared to active individuals. Further research is required to investigate subgroups in a clinical population with GTPS.

48 HAMSTRING MUSCLE ACTIVATION DURING SINGLE LEG JUMP AFTER ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION WITH A SEMITENDINOSUS GRAFT

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Introduction Few studies have used electromyography (EMG) to assess hamstrings function after anterior cruciate ligament reconstruction (ACLR). The purpose of this study was to identify inter-limb differences in muscle activity of the semitendinosus (ST) and the long head of the biceps femoris (BFLH) after ACLR while accounting for the muscles’ mass, as measured with ultrasound.

Materials and Methods Twenty athletes (age 18–28) who had undergone ACLR with a graft harvested from ST partook in the study. Electrodes were placed over the midbelly of ST and BFLH bilaterally. Peak muscle activity was measured during three good trials of a single leg jump and normalized to the signal obtained during a maximal voluntary isometric contraction. Ultrasound was used to measure muscle mass. Processing was conducted in Visual 3D, while mixed model statistical analysis was performed with Jamovi.

Results Peak activation of BFLH was higher than ST across both sides (p<0.001) and activation of both muscles was generally higher on the injured vs. uninjured side (p<0.001). Muscle mass of ST on the injured side was negatively correlated with muscle activity, while the correlation was positive on the uninjured side (interaction; p<0.001). No correlation was found between muscle mass and BFLH muscle activation (n.s.).

Conclusion The use of ST for ACLR not only has a significant effect on the muscle’s mass but also influences muscle contraction levels of the injured limb. Prospective intervention studies are needed to determine whether specific post-surgical intervention may positively influence long-term muscle mass and activation, and lower limb function.

50 THE SPRINT MECHANICS ASSESSMENT SCORE (S-MAS): A RELIABLE TOOL ASSESSING IN-FIELD SPRINT RUNNING MECHANICS ASSOCIATED WITH HAMSTRING STRAIN INJURIES

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Introduction Sprint running mechanics are thought to be a risk factor for Hamstring Strain Injuries (HSI). However, there is limited evidence to support this association, which may be explained by the lack of in-field assessment methods to evaluate sprint running mechanics.

This study aimed to investigate whether a new qualitative screening tool, the Sprint Mechanics Assessment Score (S-MAS), can identify differences in running mechanics between players who have sustained a HSI in the last 12 months (Prior HSI), those prospectively sustaining a new HSI, and controls.

Materials and Methods Maximal velocity sprint running videos (240fps) were collected from 79 elite football players (18 female, 61 male) in the English Football League. A blinded assessor scored all videos using the S-MAS (12-point qualitative screening tool for sprint mechanics).

Mann-Whitney U tests were used to compare S-MAS between injured groups (Prior HSI, n=12 and New HSI, n=3) to sex-matched controls (n=41).

Results Mean S-MAS for the Prior HSI group (6.2, SD 1.9) were significantly greater than controls (4.4, SD 2.4) (p <.05, Effect size (ES) = 0.76). Players sustaining a new HSI also displayed greater S-MAS scores compared to controls (mean...