

risk factors underwent semi-quantitative synthesis. The GRADE approach for prognostic factors guided assessment.

Results Across 66 included studies, 81 unique risk factors were identified. 64% and 49% of studies had high risk-of-bias from attrition and confounding. Semi-quantitative syntheses identified limited high-quality evidence that cruciate ligament, collateral ligament, meniscal, chondral, dislocation, fracture, and multi-structure injuries increase symptomatic osteoarthritis odds. Ten risk factors for structural osteoarthritis underwent meta-analysis (sex, rehabilitation for ACL tear, ACL reconstruction (ACLR), ACLR age, ACLR body-mass-index, ACLR graft source, ACLR graft augmentation, ACLR+cartilage injury, ACLR+partial meniscectomy, ACLR+total medial meniscectomy). Very-low quality evidence suggests increased odds of structural osteoarthritis related to ACLR+cartilage injury (OR=2.31; 95%CI 1.35,3.94), ACLR+partial meniscectomy (OR=1.87; 1.45,2.42), and ACLR+total medial meniscectomy (OR=3.14; 2.20,4.48).

Conclusion Limited high-quality evidence suggests that various knee injury types (not just ACL tears) increase symptomatic osteoarthritis. Risk factor heterogeneity, low-quality evidence, and inconsistency in risk factor and osteoarthritis definition make identifying modifiable targets for preventing symptomatic post-traumatic knee osteoarthritis challenging.

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RADIOGRAPHIC ASSESSMENT OF THE PUBIC SYMPHYSIS. DEVELOPMENT AND RELIABILITY OF THE MATURING ADOLESCENT PUBIC SYMPHYSIS (MAPS) CLASSIFICATION

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Introduction Pubic-related groin pain can affect young athletes and pubic apophysitis is a potential cause of pain. We aimed to describe the maturation of the pubic symphysis in adolescent football players on x-ray.

Materials and Methods 105 anteroposterior radiographs of healthy adolescent male football players between 12 and 24 years old were used to develop the Maturing Adolescent Pubic Symphysis (MAPS) classification. Our understanding and radiological scoring of the symphyseal joint was developed in 6 rounds. The final MAPS-classification items were scored in random order by two experienced observers, blinded for the age of the participant. The inter-observer reliability was examined using weighted kappa (κ).

Results We developed a classification system with clear definitions and a pictorial atlas. We divided the joint into three regions: the superior corners, the upper and the lower regions of the joint line. The superior corners were classified as rounded, squared or beaked. The upper region of the joint line: round or straight. The lower region of the joint line: straight, diagonal, or in between. Inter-observer reliability was moderate to almost perfect: superior region: $\kappa = 0.70$ (95% CI 0.60 - 0.79), upper region of the joint line: $\kappa = 0.89$ (95% CI 0.86 - 0.92), lower region of the joint line: $\kappa = 0.65$ (95% CI 0.55 - 0.75).

Conclusion The MAPS-classification is reliable and can be used to assess the maturation of the pubic symphysis joint. Maturation starts at the superior corner, followed by ossification of the joint line from superior to inferior.

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MANAGEMENT OF GLUTEAL TENDINOPATHY: A SYSTEMATIC REVIEW WITH META-ANALYSIS OF ALL INTERVENTIONS

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Introduction Gluteal tendinopathy (GT) is a common source of hip pain with reported pain, function, quality of life being equivalent to end stage hip osteoarthritis. This systematic review aims to clarify the best management for people with GT.

Materials and Methods 9 electronic databases and the grey literature were searched from inception to March 2021. High-quality, randomised controlled trials of any intervention for GT were included. The PEDro scale was used for quality assessment, with risk of bias assessed using the Cochrane Risk of Bias tool 2.0.

Results Meta-analysis of four studies of exercise and education (EDX) for pain and function demonstrated that EDX has a large effect on pain outcomes in the short term (SMD 0.95, 95% CI 0.58, 1.33), medium effect in the medium term (SMD 0.60, 95% CI -0.21, 0.96) and a small effect on in the long term (SMD 0.46, 95% CI 0.10, 0.81). EDX has a large effect on functional outcomes in the short term (SMD 0.91, 95% CI 0.53, 1.28), medium effect in the medium term (SMD 0.79, 95% CI 0.42, 1.16) and a small effect in the long term (SMD 0.41, 95% CI 0.05, 0.76).

Conclusion Education and exercise has a positive impact on pain levels and function at every time point. Education and exercise interventions should form part of GT management.

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PIVOTING IN A PANDEMIC: OPPORTUNITIES FOR INJURY SURVEILLANCE USING VIDEO ANALYSIS IN SPORT

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Introduction Prospective cohort studies represent the gold standard in injury surveillance. However, these methods require longitudinal monitoring and are highly resource intensive. We describe the use of video-analysis to inform injury prevention where no other surveillance data is available.

Materials and Methods Forty-eight female varsity rugby union matches were analysed through video-analysis. A three-stage approach to informing injury prevention included match event coding, suspected injury and concussion analysis, and tackle