Sports injury surveillance during the 2007 IAAF World Athletics Championships

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Effect of the HamSprint Drills training programme on lower limb neuromuscular control in Australian football players

Evidence-based rating: 7.5/10
Clinical interest rating: 7/10
Type of study: Randomised, clinical trial
Methodological considerations: Well-conducted study
Keywords: muscle, injury, hamstring, proprioception, exercise therapy

Risk factors for the development of hip osteoarthritis: a population-based prospective study

Evidence-based rating: 7.5/10
Clinical interest rating: 7/10
Type of study: Randomised, clinical trial
Methodological considerations: Well-conducted study
Keywords: muscle, injury, hamstring, proprioception, exercise therapy

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Research question/s:
What are the risk factors for the development of osteoarthritis of the hip?

Methodology:
Subjects: 840 subjects (from a group of 1286) who initially participated in a comprehensive health survey (1978–80) were free from hip OA (clinical examination), were invited for a re-assessment 22 years later.
Experimental procedure: All the subjects underwent detailed baseline assessments (questionnaires, interviews and laboratory and function tests). At follow-up, hip OA was diagnosed (clinical criteria) in 41 subjects (4.9%).
Measures of outcome: Risk factors for hip OA that were assessed included: age, sex, education, BMI, physical workload (6 categories), smoking, alcohol, leisure time physical activity and injury history.

Main finding/s:
Factors such as increased BMI, smoking, alcohol intake and leisure time physical activity were not risk factors for hip OA, but permanent damage following any musculoskeletal injury was an independent predictor of hip OA (adjusted OR 5.0; 95% CI 1.9, 13.3).

Conclusion/s:
In a large prospective cohort study, heavy manual work and previous major musculoskeletal injuries were associated with an increased risk of developing clinically diagnosed osteoarthritis of the hip – participation in regular leisure-time physical activity was not related to an increased risk.

Evidence-based rating: 8/10
Clinical interest rating: 8/10
Type of study: Prospective cohort study
Methodological considerations: Well-conducted study, diagnostic criteria for OA did not include the ACR criteria, genetic factors could not be accounted for in this study
Keywords: injury, hip, osteoarthritis, risk factors

Combined glucosamine and chondroitin sulfate provides functional and structural benefit in the anterior cruciate ligament transection model

Research question/s:
Does glucosamine sulfate and chondroitin sulfate (alone or combined) reduce joint pain and cartilage damage in laboratory animals using an anterior ligament transection (ACLT) model?

Methodology:
Animals: Wistar rats
Experimental procedure: Rats underwent a sham operation (SHAM) or anterior ligament transection of the right knee (OA). The OA rats then received treatment in a randomised fashion of 1) glucosamine (Glu, 500 mg/kg), 2) combined glucosamine/chondroitin (GluChon, 500 mg/kg glucosamine, 400 mg/kg chondroitin) or 3) placebo (CON) for 7 days prior to surgery until 10 weeks post surgery. The following were assessed: daily joint pain (rat-knee joint articular incapacitation test), structural joint damage (histology and biochemistry - chondroitin sulfate (CS) content of cartilage by densitometry (μg/mg dried cartilage))
Measures of outcome: Pain, CS content, histology (grading score)

Main finding/s:
The increase in CS content was significantly less in the GluChon group compared with the Chon group.

Conclusion/s:
In a rat model of knee joint injury, the administration of combined glucosamine and chondroitin resulted in reduced pain and improved structural benefits (including histology).

Evidence-based rating: 8/10
Clinical interest rating: 8/10
Type of study: Randomised, controlled, clinical trial (laboratory study) (animal model)
Methodological considerations: Well-conducted study, animal model
Keywords: chondroitin sulfate, glucosamine sulfate, pain, histology, biochemistry, cartilage, osteoarthritis