

2nd International Conference on
Sports Medicine and Fitness

April 18-20, 2016 Dubai, UAE

An investigation into two modes of eccentric hamstring training on parameters of strength and fatigue resistance

David Roche

University of Salford, UK

Purpose: Despite the high incidence of hamstring strain injuries in several popular sports, definitive research on their causation and prevention is limited. Studies show fatigue and also hamstring eccentric weakness as causes for hamstring injuries. It begs the question “which way may be the best to train hamstrings to prevent injury.

Methods: Eccentric hamstring peak torque and angle of peak torque were measured using the Kin Com dynamometer at 60°/s before and after a modified L.I.S.T fatigue protocol. Participants were divided into two groups and underwent four weeks of eccentric hamstring training, then retested. The strength group used Nordic Hamstring Curls and the endurance group used Assisted Nordic Hamstring Curls.

Results: The results showed a significant difference in peak torque in both groups (strength- 0.00, Endurance- 0.01). Both groups did not show a significant difference in angle of peak torque, however the results showed an increase to longer muscle lengths of 18.28% and 26.95% for endurance and strength groups respectively.

Conclusions: The strength training intervention shows the greatest improvement on both peak torque and angle of peak torque.

pdizzle10@yahoo.co.uk

Prevalence of generalized joint laxity among multisport young male Arab athletes and its relation with musculoskeletal disorders

Jihad Haddad^{1,2,3} and Abdallah Rajeb³

¹Order of Physiotherapists in Lebanon, Lebanon

²Lebanese Olympic Committee, Lebanon

³ASPIRE Academy for Sports Excellence, Qatar

Objective: It was repeatedly cited in the sports medical literature that Generalized Joint Laxity (GJL) or hypermobility was an intrinsic risk factor for injury and was associated with musculoskeletal complaints. The aim of the current study is to determine the prevalence of GJL among multisport young male Arab athletes and its relation with musculoskeletal disorders.

Methods: Design: Multisport athletes were screened for GJL over a 15 months period. Musculoskeletal disorders and injuries were reported during this period. The results were analyzed and compared. Subjects: 60 male multisport athletes aged between 12 and 17 years with an average of 14.1±1.3 y, participated in this study. Measurements: Joint laxity was measured by using Beighton and Horan Joint Mobility Index (BHJMI), which uses five components. A total score of ≥ 4/9 was considered positive.

Results: The analysis of the BHJMI revealed an overall GJL prevalence of 38% with a score of 2.9±2.9 and Judo had a 26% of the subjects with positive results. Overuse was the leading mechanism of injuries within the population; although a clear lead was for positive subjects (43 vs. 76) overall injuries. There was a non significant difference for athletes to have trauma injuries (45.7% vs. 54.3%) and a clearly significant difference to have overuse injuries (30.1% vs. 69.9%) between negative and positive BHJMI subjects. A clearly significant difference between athletes with negative and positive BHJMI for disorder grading with zero days of absence (26 vs. 42) and for minor injuries from 0 to 3 days of absence (14 vs. 21).

Conclusion: GJL had direct relation with musculoskeletal disorders in multisport young male Arab athletes and with sport discontinuity. Specific and standardized musculoskeletal screening procedures should be adopted and athletes with positive BHJMI should be oriented to low risk sports.

contact@reform-lb.com