

Changes of maximal power output of lower extremity during a decathlon

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Objectives.– To determine the variation of the power of the lower limbs during a decathlon to better define/understand:

- the functional requirements represented by decathlon;
- muscle mechanical capabilities determining the performance of the decathlon;
- their potential relationships with risk factors for injury.

Method.– Six national level athletes and 11 control subjects were included in this cross-sectional field study that took place during the French National Championships Decathlon 2010. The power of the lower limbs was tested squat jump and cycle ergometer at the beginning and the end of the two days of competition.

Results.– No difference in power was found between each testing time ($P > 0.05$).

Conclusion.– No significant change in muscle power of the lower limbs have been reported in a decathlon, suggesting the absence of significant neuromuscular fatigue induced by a two-day decathlon competition. It is therefore reasonable to assume that the accumulation of fatigue (and/or neuromuscular fatigue, if applicable) does not play an important role in the risk of injury in the decathlon. The higher risk of injury reported in decathlon could be due to the sum of the risk of injury to 10 events.

<http://dx.doi.org/10.1016/j.rehab.2014.03.1197>



Role of physical therapy in the treatment of diseases painful shoulders

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Keywords: Physical therapy; PHS; VAS; MMT; Range of motion

Introduction.– Periarthritis humeroscapularis (PHS) joint belongs to a group of non-articular rheumatism, characterized by present pain and limited movement.

Objective.– To describe the effects of physical therapy on the PHS in the outpatient setting.

Materials and methods.– The study was conducted on a sample of 60 patients, divided into two groups, aged 30 to 65 years. They were treated in the period of six month. The first 30, applied therapy is DD, exercise program; second group was treated DD, IMP and an exercise program. Rough driving force (GMS) was measured by manual muscle test (MMT). Range of motion of the shoulder was measured by goniometer. VAS scale of pain from 1 to 10.

Results.– After three weeks of therapy in both groups there was a significant difference. Abduction of the initial 40°, after treatment was increased to 70°. GMS measured MMT in the first group was 3 ± 0.75 , while in the second group of 4 ± 0.25 . In the second group VAS 7 before treatment, and after three weeks VAS 3.

Conclusion.– Outpatient physical therapy gives good results in the treatment of PHS, reduces the intensity of pain, increases range of motion and strengthen the muscular strength of the shoulder belt.

<http://dx.doi.org/10.1016/j.rehab.2014.03.1198>

