

The title of the master thesis: Clinical evaluation of ROM of shoulder joint in cadet and junior category players of so-called overhead sports

Abstract in English language:

The goal of this thesis is to elucidate whether the „overhead“ athletes like handballers and volleyballers suffer from extension changes and local hypermobility in their shoulder joints. These changes are going to be described by trigonometric measurements and hypermobility tests by Sachse. It is going to be determined which „overhead“ athletes are affected the most. Their sex is going to be taken into consideration.

The theoretical part of the thesis describes selected „overhead“ sports and their strain on a human body from a kinesiological point of view. Especially the impact of offensive blows in volleyball and throws in handball on shoulder joints are going to be examined. The thesis is going to examine a shoulder girdle from an anatomy, kinesiology, biomechanics, and physiology point of view. A chapter focused on hypermobility and its classification is included too.

95 people without a prior injury of a shoulder joint in the age from 16 to 19 years old including 73 „overhead“ athletes were tested. There were 30 men, 40 women, 34 handballers, and 39 volleyballers. In the control group, there were 22 people, of which 11 men and 11 women. The majority (86) of the study participants were right-handed. Only 9 people were left-handed. The measurement was done by a goniometer with a digital display, by Sachse hypermobility tests and Beighton score. The type of research meets the conditions of the quasi-experiment.

The conclusion of the thesis is that for "overhead" athletes the extent of their shoulder joints of a dominant arm is significantly bigger in three ways: in extension, horizontal adduction and external rotation. On the other hand, the extent of their shoulder joints is smaller in internal rotation, and the "overhead" athletes have significant hypermobility in their glenohumeral joint compared to the control group. The study showed that women playing „overhead“ sports have compared to men playing „overhead“ sports a significantly higher extent in internal arm rotation of both dominant and non-dominant arm. When comparing volleyball and handball players, no significant differences in shoulder joint extension were shown. The difference in the range of motion

between the dominant and non-dominant arm of „overhead“ athletes was shown in extension and external rotation

Keywords: goniometry, range of motion, hypermobility, handball, volleyball

Language of the thesis: CZ