

ABSTRACT

Title: Reconditioning of sport performance track and field athlete after injury
(explained by an example of heptathlete)

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Aims: The main goal of this bachelor's thesis was to orientate based on systematic research of Czech and foreign sources in the issue of injuries in athletics, find and make the occurrence of the most common and most serious injuries that lead to suspension of the training process. Also outline possible reconditioning programs (by an example of hamstring injuries). The partial goal of this thesis is to determine the most common injuries occurring in a group of athletes from the Czech Republic and their severity. Another partial aim is elaboration of case study of professional female heptathlete and an insight into the issue of her injuries during her active athletic career with objective evaluation and search for the cause of problems with insight into reconditioning and rehabilitation procedures for hamstring injuries.

Methodology:

The bachelor's thesis was designed in three ways:

- 1) Firstly, it was processed as a systematic literature research based on verified sources. I drew information from publications about injuries and magazines from verified sources, articles from the PubMed portal, Google Scholar, Research gate and I also relied on diploma and bachelor's theses. The key words for searching the literature were: injury, recondition, athletics
- 2) Secondly, to determine the views on injury of athletes, I developed a structured non-standardized questionnaire, with 19 questions, for a selected group of athletes. The questions were asked with the possibility of open or closed-ended responses and through these questions I tried to find out the views of respondents, in various athletic disciplines (mostly decathlete and heptathlete disciplines), on injuries and what types and courses of injuries they encountered in their sports career.
- 3) This bachelor's thesis was also conceived as a case study of a proband, who is a professional female heptathlete, university student and has suffered several hamstring injuries during her career.

Results: I studied the available literature regarding the issue of injuries in track and field and possible treatment and reconditioning procedures. These were (28 foreign language articles and 11 foreign language books, 5 Czech articles and academic thesis and 3 books). A total of 46 sources. This research, together with results of a questionnaire survey tell us about the high frequency of muscle injuries to lower extremity. Based on the questionnaire survey(n=56), the most common injuries among athletes are muscles problems in the area of thighs and buttocks, or Achilles' tendon and ankle. Hamstrings as one of the more frequently affected areas of sprinting and multi-combat events injuries, also corresponds to both: injury of the proband-heptathlete and literature research. Therefore, I have subsequently outlined a reconditioning program for athletes with hamstring injuries, which should include strengthening of the problematic area, aerobic training and the development of mobility and flexibility (especially in the hip area). It has to be noted that this program should not be generalized and that individual attributes have to be taken into account.

Key words: Athletics/Track and field, injury, reconditioning, rehabilitation, questionnaire, case study, hamstring