

## **Abstract**

**Title:** Different approaches and their impact on musculoskeletal system of tennis players.

**Objectives:** The central aim of master thesis was the comparison of flexibility and agility of Norwegian tennis players and tennis players from Czech Republic at the competitive level. The comparison was respecting and taking into consideration applied compensatory program which was a building part of the study. The another aim was to acquire information regarding training preparation of tennis players from Norway and their comparison to training preparation of Czech players.

**Methods:** Thesis is an quasi-experimental study. In the beginning and the end of this study all players underwent the opening and final measurements of flexibility and agility. Final measurements were done after five days of intervention with emphasis on unilateral load compensation. Intervention contained predominantly flexibility and agility exercises. The specialized questionnaire was filled by trainers of Oslo Tennis Club, chosen trainers from all around the Czech Republic and ten professional tennis players from Czech national team. Obtained data were analysed using statistic methods.

**Results:** The first hypothesis assuming statistically more significant data from opening flexibility measurements of Norwegian players compared to Czech players was not verified. However, the first hypothesis was verified in case of opening agility measurements. The second hypothesis involved the assumption that both Norwegian and Czech tennis players would have had statistically more significant results compared to opening measurements. This hypothesis was verified in case of flexibility and also agility measurements. Regarding the statistical significance, these tests were essentially significant.

**Keywords:** early specialization, tennis, training respecting the development, compensation