

Abstract

Title: The influence of sports aerobics on posture and muscle balance

Aim: The aim of the thesis is to find out how aerobic gymnastics (sport aerobics) at the top level affects selected groups of muscles and posture of girls with more than 10 years of competing experience. The thesis compares the results of a group practicing aerobics with the results of a group of girls of the same age category, who engage in physical activities only during school physical education lessons.

Characteristics:

The diploma thesis deals with the effect of aerobic gymnastics on good posture. The basis for this thesis was obtained by testing selected shortened and weakend muscle groups. Two groups of girls were compared. The first group consisted of girls representing the Czech Republic at international championships and practicing aerobic gymnastics at the highest level for more than ten years. On the other hand, the second group consisted of subjects, who were engaged in physical activities only in physical education lessons in school.

Methods: In the thesis there was used a qualitative research and deliberate selection of subjects. Selected tests evaluated posture according to Matthias according to Haladová, Nechvátalová (1997), with the help of lowered plumb line according to Kopecký (2010) and test exercises for shortened and weakend muscle groups according to Hošková, Matoušová (2005).

Conclusion:

The diploma thesis proved that sport aerobics overloads the spine in the area of the loins. According to the research, in posture tests, hyporlordosis was measured in the lumbar region in 12/15 subjects versus 6/15 subjects in the control group. In the other posture tests, girls from the training group performed better than girls from the control group. The results of the investigation show that girls from the training group have less problems with flabby and shortened muscle groups. The girls from the training group had flaccid abdominal muscles only in 2/15 people, however, the shortened deep back muscles were in 12/15 people. The control group most often had weakened flexors of the cervical spine, buttocks and deep back muscles. The most abbreviated were the hind muscles of the thigh, rectus femoris and thigh adductors. Appropriate recommendations, based on early diagnosis that trainers and teachers can perform with the help of lightweight Matthias' test tasks and with the lowered plumb line, could prevent problems with poor posture.