Abstract

Title: Impact of foot and lower limb massage postural stability

Objectives: Find out what impact does sport massage of foot and lower limb has on postural stability.

Methods: The research was realized in the form of a Crossover design experiment and involved 8 subjects. It was a one-group experiment where all participants were part of both the experimental and control groups. The measurement results were based on comparing the input and outcome measurements, with foot and calf massage being performed on the experimental group of subjects, while the control group was passively resting by lying on their backs. A pressure plate called Footscan was used to obtain the results in the Laboratory of Sports Motorics at the Faculty of Physical Education and Sport, Charles University.

Results: In the overall comparison of the results of all measured stances it is possible to see that in the first four stances, without the foam pad, experimental group achieved positive results even by ten percent. Only the results of narrow standing with eyes open (USOO) were negative. There was a deterioration of 21% in delta X and 15% in delta Y. However, these results cannot be considered positive since the control group achieved similar results with the same positive or negative tendencies in almost all evaluated parameters. The tendencies for narrow stances with a foam cushion were also similar. In the narrow stance with open eyes (USOOM), the delta Y parameter worsened by 14.9 %, while the other parameters remained unchanged. A similar result was observed for the same stance with closed eyes (USZOM), but there was a deterioration in the delta X parameter by 15.1 %. The results for the stance on the right leg (FLPM) was positive but similar to control group. The left leg (FLLM) results were also positive, but when compared to the control group they were similar. Overall, it can be concluded that under the given conditions, massage did not have a positive effect on postural stability, and it is possible that any positive influence in some parameters could be attributed to other factors.

Keywords: effect, sport massage, lower limb, balance, posture, sole