UNICYCLING AND BALANCE IMPROVEMENT

Abstract

The aim of the study was to determine whether a 15-hour kinesiology unicycling training might have a statistically significant impact on the development of static and/or dynamic balance of the 58 Physical Education University female (N=25) and male (N= 33) students. The subjects were divided in two groups, experimental and control. The experiment involved the measurements of morphological characteristics (body height; body weight; body mass index and body fat percentage) and balance by the Biodex Balance System SD in the control and the experimental group. The unicycling treatment for the experimental group lasted for 5 weeks and only the subjects without any prior motor knowledge of unicycling were included. In experimental group, the dependent sample t-test showed significant differences between the initial and the final measurement in dynamic balance with males (+12.8 %; p<0.01), as well as with females (+27.3%; p<0,01). Statisticaly significant improvement for static balance are found only with female group (+24.0 %, p<0.01). The independent T-test showed the unicycling treatment has a significantly greater impact on dynamic and static balance of the female than the male subsample. Morphological differences between sexes, different positions of the centre of gravity and differences in body geometry may affect the results in dynamic and static balance of males and females. Unicycling is a very efficient method for balance development in relatively short time of training period. Presented results opens up new possibilities of using the unicycle in training methods aimed to improve balance abilities.

Key words: *dynamic balance, static balance, gender differences*