

Abstract

Title: Changes in swimming speed in para swimmers with spastic diparetic form of cerebral palsy using swimming aids

Objectives: The aim of this thesis is to establish a battery of swimming aids and to determine whether and how these aids affect the swimming speed of individuals with spastic diparetic form of CP in training

Methods: In order to determine the use of swimming aids in the Czech Republic, a questionnaire survey was conducted with 6 para-swimming clubs to establish a test battery. The battery of swimming aids was tested in the pool using a modified Critical swimming speed protocol. 4 para swimmers with spastic diparetic CP aged $30 \pm 3,08$ years at a performance level of at least national championship with sport classification classes S4 to S8 participated in the testing.

Results: We established a fifteen-element battery of swimming aids and tested it in the pool. The probands achieved the best results with the pullboy in between the thighs position. They achieved 0.61 to 11.37% faster time on the shorter measured section of CSS protocol than without the aid, and 2.67 to 8.08% faster time on the longer section. The probands' CSS changed by -1.02 to 14.85 % with the pullboy.

Keywords: critical swimming speed, swimming, swimming drag, Paralympic classification