

Author:

Bjerkefors, Anna (Swedish School of Sport and Health Sciences, GIH, Department of Sport and Health Sciences, Laboratory for Biomechanics and Motor Control)

Thorstensson, Alf (Swedish School of Sport and Health Sciences, GIH, Department of Sport and Health Sciences, Laboratory for Biomechanics and Motor Control)

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Effects of kayak ergometer training on motor performance in paraplegics.

Department:

Swedish School of Sport and Health Sciences, GIH, Department of Sport and Health Sciences, Laboratory for Biomechanics and Motor Control

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Abstract(en) :

The purpose of this study was to assess the effects of kayak ergometer training on functional tests performed in wheelchair by persons with spinal cord injury. Ten post-rehabilitated persons with thoracic spinal cord injury volunteered for the study and performed 30 sessions of kayak ergometer training during a 10-week period. The ergometer was modified with an additional balance demand in the medio-lateral direction. Before and after the training period the subjects performed functional tests in the wheelchair: Sit-and-reach tests (distance), mounting a platform, transfer to a bench (height), propelling the wheelchair: 5 m on the rear wheels; in a figure-8; 15 m on a level surface and 50 m on a 3 degrees inclined surface (time). Test-retests were performed for all tests before the training began. A written questionnaire was distributed to evaluate the subjective experiences of the training. The test-retest resulted in coefficient of variation of 1.3 - 4.6 %. There were significant improvements in sit-and-reach (14 %), mounting a platform (7 %), transfer to a bench (10 %), propelling on level (3 %), and inclined surface (6 %). Furthermore, the training, did not cause any shoulder pain or other problems. This, and the positive subjective experience expressed by the subjects after the training indicate that this type of training is a suitable activity for persons with thoracic spinal cord injury.

In thesis:

[Bjerkefors, Anna. Performance and trainability in paraplegics: motor function, shoulder muscle strength and sitting balance before and after kayak ergometer training. 2006.](#)

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