

Disability and Rehabilitation >

Volume 37, 2015 - Issue 7

1,329 33

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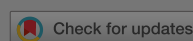
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Review

Effect of trunk-restraint training on function and compensatory trunk, shoulder and elbow patterns during post-stroke reach: a systematic review

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Pages 553-562 | Received 01 Dec 2013, Accepted 04 Jun 2014, Published online: 25 Jun 2014

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Abstract

Purpose: The purpose of this systematic review was to determine the effect of trunk restraint (TR) training on post-stroke compensatory trunk movements during functional reach, and to identify functional gains of TR within the context of the International

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displacement (4/5 RCTs), increased elbow extension (3/5 RCTs) and increased shoulder flexion (2/5 RCTs). All significant between-group differences fell within the Body Structure/Function domain of the ICF. Conclusions: Trunk restraint is a simple, cost-effective technique that may help to reduce compensatory trunk/shoulder/elbow movements in the post-stroke adult population. Synthesis of study outcomes also highlights applications of TR to clinical practice and areas for further research.

Implications for Rehabilitation

- The ability to use the shoulder and elbow to perform functional reach is a primary goal in post-stroke recovery; however, compensatory trunk movements are often used to achieve the reaching goal.
- Long-term use of compensatory strategies may contribute to secondary impairments, such as learned non-use, joint contractures and pain.
- Trunk restraint enables functional reach practice, while limiting compensatory strategies in the moderately to severely impaired stroke population.

Compensatory movement constraint induced therapy kinematics postural control stroke

Acknowledgements

The authors would like to acknowledge Shannon Roberts and Tapas Pain for their assistance with manuscript review and formatting.

Declaration of interest

The authors have no conflicts of interest related to this work.

A review of the literature and/or previous studies showed that, however, the study received

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