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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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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 Classific ases were searched aring the effects o lt post-strok on/exclusion criter < 0.05) were extracte defined within th nstrated significa ry trunk

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

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Declaration of interest

The auth horship and/or p

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