

1,367 Views

33

1

CrossRef citations to date Altmetric

Review

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

Liza M. Pain , Ross Baker, Denyse Richardson & Anne M. R. Agur

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

Cite this article

<https://doi.org/10.3109/09638288.2014.932450>

Check for updates

Sample our
Health and Social Care
Journals

>> [Sign in here](#) to start your access
to the latest two volumes for 14 days

Full Article

Figures & data

References

Citations

Metrics

Reprints & Permissions

Read this article

We Care About Your Privacy

We and our 842 partners store and/or access information on a device, such as unique IDs in cookies to process personal data. You may accept or manage your choices by clicking below, including your right to object where legitimate interest is used, or at any time in the privacy policy page. These choices will be signaled to our partners and will not affect browsing data. [Privacy Policy](#)

We and our partners process data to provide:

Use precise geolocation data. Actively scan device characteristics for identification. Store and/or access information on a device. Personalised advertising and content, advertising and content measurement, audience research and services development.

[List of Partners \(vendors\)](#)

I Accept

Essential Only

Show Purpose



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 thank H. Williams, L. Jones, J. Smith, D. Brown, and T. White for their assistance in data collection and analysis.

Declaration

The authors declare that they have no competing interests in this work.

A review of the literature was conducted to determine the type of study design used in the included studies; however, the authors received no funding for this work.



Related research

- People also read
- Recommended articles
- Cited by 33

The effects of Bobath-based trunk exercises on trunk control, functional capacity, balance, and gait: a pilot randomized controlled trial >

Muhammed Kılınç et al.
Topics in Stroke Rehabilitation
Published online: 3 Feb 2016

Effects of scapular exercises on trunk control in patients with acute stroke: a double-blind randomized controlled study >

Rabia Oz et al.
Somatosensory & Motor Research
Published online: 11 Dec 2023

Effectiveness of task-specific training using assistive devices and task-specific usual care on upper limb performance after stroke: a systematic review and met... >

Samantha G. Rozevink et al.
Disability and Rehabilitation: Assistive Technology
Published online: 17 Nov 2021



View more



Information for

- Authors
- R&D professionals
- Editors
- Librarians
- Societies

Opportunities

- Reprints and e-prints
- Advertising solutions
- Accelerated publication
- Corporate access solutions

Open access

- Overview
- Open journals
- Open Select
- Dove Medical Press
- F1000Research
- Help and information
- Help and contact
- Newsroom
- All journals
- Books

Keep up to date

Register to receive personalised research and resources by email

 Sign me up

