

July 2018 Spasticity in Stroke



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Hello members.

We are continuing our focus on spasticity for July.

The third abstract, article, and the clinical point of view is provided below.

This week's clinical point of view provides a breakdown of systematic reviews on spasticity management.

Enjoy.

[Ann Phys Rehabil Med](#). 2017 Oct 16. pii: S1877-0657(17)30415-3. doi: 10.1016/j.rehab.2017.10.001.

Non-pharmacological interventions for spasticity in adults: An overview of systematic reviews.

[Khan F](#), [Amatya B](#), [Bensmail D](#), [Yelnik A](#).

Abstract

OBJECTIVES:

Spasticity causes significant long-term disability-burden, requiring comprehensive management. This review evaluates evidence from published systematic reviews of clinical trials for effectiveness of non-pharmacological interventions for improved spasticity outcomes.

METHODS:

Data sources: a literature search was conducted using medical and health science electronic (MEDLINE, EMBASE, CINAHL, PubMed, and the Cochrane Library) databases for published systematic reviews up to 15th June 2017.

DATA EXTRACTION AND SYNTHESIS:

two reviewers applied inclusion criteria to select potential systematic reviews, independently extracted data for methodological quality using Assessment of Multiple Systematic Reviews (AMSTAR). Quality of evidence was critically appraised with Grades of Recommendation, Assessment, Development and Evaluation (GRADE).

RESULTS:

Overall 18 systematic reviews were evaluated for evidence for a range of non-pharmacological interventions currently used in managing spasticity in various neurological conditions. There is "moderate" evidence for electro-neuromuscular stimulation and acupuncture as an adjunct therapy to conventional routine care (pharmacological and rehabilitation) in persons following stroke. "Low" quality evidence for rehabilitation programs targeting spasticity (such as induced movement therapy, stretching, dynamic elbow-splinting, occupational therapy) in stroke and other neurological conditions; extracorporeal shock-wave therapy in brain injury; transcranial direct current stimulation in stroke; transcranial magnetic stimulation and transcutaneous electrical nerve stimulation for other neurological conditions; physical activity programs and repetitive magnetic stimulation in

persons with MS, vibration therapy for SCI and stretching for other neurological condition. For other interventions, evidence was inconclusive.

CONCLUSIONS:

Despite the available range of non-pharmacological interventions for spasticity, there is lack of high-quality evidence for many modalities. Further research is needed to judge the effect with appropriate study designs, timing and intensity of modalities, and associate costs of these interventions.

Clinical Point of View

1. No high quality evidence for many modalities.
2. Moderate evidence for the following in adjunct to conventional pharmacological and rehab programs
 - Electro-neuromuscular atom
 - Acupuncture
3. Low evidence for
 - Rehabilitation programs (movement therapy, dynamic elbow splinting, occupational therapy)
 - Extracorporeal shock-wave therapy in Brain Injury
 - Transcranial direct current stimulation in stroke
 - Transcranial magnetic stimulation and Transcranial stimulation electrical nerve stimulation in other neurological conditions
 - Physical activity programs and repetitive magnetic stimulation for persons with MS
 - Vibration for persons with SCI
4. Future application of more readily accessible dry needling needs more studies
5. Timing of these specific modalities as research is commonly applied to a chronic population may show more promising results.
6. Use of NMES of fatiguing the agonist and strengthening the antagonist of the spastic muscle shown effective for spasticity after stroke to increase strength and ROM and is easily accessible.

Article Link [Here](#).

If you have questions or feedback for the Stroke SIG about this abstract, spasticity, or other topics, connect with us via one of the methods below!

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