Manual Therapy for Cervical Raciculopathy

Review information

Authors

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Citation example: [Empty name]. Manual Therapy for Cervical Raciculopathy. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Contact person

[Empty name]

Dates

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Protocol First Published: Not specified
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Last Citation Issue: Not specified

What's new

Date / Event	Description

History

Date / Event	Description

Abstract

Background

Objectives

Search methods

Selection criteria

Data collection and analysis

Main results

Authors' conclusions

Plain language summary

[Summary title]

[Summary text]

Background

Description of the condition

Description of the intervention

How the intervention might work

Why it is important to do this review

Objectives

Methods

Criteria for considering studies for this review

Types of studies

Types of participants

Types of interventions

Types of outcome measures

Primary outcomes

Secondary outcomes

Search methods for identification of studies

Electronic searches

Searching other resources

Data collection and analysis

Selection of studies

Data extraction and management

Assessment of risk of bias in included studies

Measures of treatment effect

Unit of analysis issues

Dealing with missing data

Assessment of heterogeneity

Assessment of reporting biases

Data synthesis

Subgroup analysis and investigation of heterogeneity

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Manual Physical Therapy • *Smerte*: 5.3 (1.6) • *NDI*: 39.6 (17.2) • *ROM*: 50.5 (2.27) Exercise • *Smerte*: 4.9 (1.4) • *NDI*: 28.7 (13.3) • *ROM*: 59.4 (2.11) Combined manual + exercise • *Smerte*: 4.1 (1.5) • *NDI*: 25.5 (10.9) • *ROM*: 50.7 (1.89) **Included criteria:** The presence of 4 positive examination findings; positive Spurling test, positive distraktiion test, positive upper limb tension test for median nerve bias, and ipsilaterall cervical rotation less than 60 degrees **Excluded criteria:** Any current medical condition that placed their rehabilitation outside of routine practice such as current fracture, history of rheumatoid arthritis or osteoporosis, current bilateral upper extremity symptoms, evidence of central nervous system involvement or history of cervicalor thoracic surgery.
Interventions	**Intervention Characteristics** Manual Physical Therapy • *dosis*: 3 sessions per week for 3 weeks • *type*: Cervical lateral glides (Maitland grade 3-4 oscillatory) performed for approximately 30 to 45 seconds at each segment of the cervical spine.Thoracic postero-anterior oscillatory mobilisation on hypomobile segments 30-45 sec. neural dynamic technique for the median nerve, "sliding" as described by Butler in positions described by Magee Exercise • *dosis*: 3 sessions per week for 3 weeks • *type*: Strengthening of deep cervical flexors, lower and middle trapezius and serratus anterior Combined manual + exercise • *dosis*: 3 sessions per week for 3 weeks • *type*: at descrbed under Manual Physical Therapy and Exercise
Outcomes	*Continuous*: • Pain (0-10) • NDI

Identification	**Sponsorship source:** not declared **Country:** US **Setting:** ambulant fysioterapi-afdeling på universiteteshospital **Comments:** uvist betalings-model på hospitalet **Authors name:** John Ragonese **Institution:** Outpatient Rehabilitation Department at Loyola Medical Center **Email:** not available **Address:** Chicago, IL
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** *Alice Kongsted* ingen øvrige baseline karakteristika oplyst **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** **Dichotomous outcomes:** **Adverse outcomes:** *Alice Kongsted* not mentioned

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Comment: Sequence generation not described. Block randomization refers to the size of groups, not real block randomization.
Allocation concealment (selection bias)	Unclear risk	Comment: Generation of sequence not described
Blinding of participants and personnel (performance bias)	High risk	Comment: Not possible to blind patient and clinician in this type of studies
Blinding of outcome assessment (detection bias)	Low risk	Comment: After 3 weeks evaluated by therapist blinded to treatment allocation
Incomplete outcome data (attrition bias)	High risk	Comment: No report of how missing data were delt with if any, no reports of drop outs, attrition or exclusion
Selective reporting (reporting bias)	Low risk	Comment: Standard outcomes of pain and disability reported suggesting no selective outcome reporting
Other bias	High risk	Comment: The study sample of 3 times 10 is very low and with NRS and NDI standard errors in mind the results may be very random

Footnotes

Characteristics of excluded studies

Allison 2002

Reason for exclusion	Wrong patient population

BenEliyahu 1996

Reason for exclusion	Wrong study design

Brodin 1984

Reason for exclusion	Wrong patient population

Bronfort 2012

Reason for exclusion	No specific results for CR

Cleland 2005

Reason for exclusion	Wrong study design

Cleland 2007

Reason for exclusion	Wrong study design

Coppieters 2003

Reason for exclusion	Wrong patient population

Hoving 2002

Reason for exclusion	Wrong patient population

Howe 1983

Reason for exclusion	No specific results for CR

Kogstad 1978

Reason for exclusion	Wrong comparator

Langevin 2014

Reason for exclusion	Wrong comparator

Lawrence 2012

Reason for exclusion	Wrong study design

Murphy 2006

Reason for exclusion	Wrong study design

Nordemar 1981

Reason for exclusion	Wrong patient population

Persson 1997

Reason for exclusion	Wrong intervention

Persson 1997a

Reason for exclusion	Wrong intervention

Persson 2001

Reason for exclusion	Wrong intervention

Pikula 1999

Reason for exclusion	Wrong patient population

Schliesser 2003

Reason for exclusion	Wrong study design

Telci 2012

Reason for exclusion	Wrong patient population

Walker 2008

Reason for exclusion	No specific results for CR

Young 2009

Reason for exclusion	Wrong intervention

Footnotes

Characteristics of studies awaiting classification

Footnotes

Characteristics of ongoing studies

Footnotes

Summary of findings tables

Additional tables

References to studies

Included studies

Ragonese 2009

Ragonese,J.. A randomized trial comparing manual physical therapy to therapeutic exercises, to a combination of therapies, for the treatment of cervical radiculopathy. Orthopaedic Physical Therapy Practice 2009;21(3):71-76. [DOI:]

Excluded studies

Allison 2002

Allison,G. T.; Nagy,B. M.; Hall,T.. A randomized clinical trial of manual therapy for cervico-brachial pain syndrome -- a pilot study.. Manual therapy 2002;7(2):95-102. [DOI:]

BenEliyahu 1996

BenEliyahu,D. J.. Magnetic resonance imaging and clinical follow-up: study of 27 patients receiving chiropractic care for cervical and lumbar disc herniations. Journal of Manipulative & Physiological Therapeutics 1996;19(9):597-606. [DOI:]

Brodin 1984

Brodin,H.. Cervical pain and mobilization.. International Journal of Rehabilitation Research 1984;7(2):190-191. [DOI:]

Bronfort 2012

Bronfort,G.; Evans,R.; Anderson,A. V.; Svendsen,K. H.; Bracha,Y.; Grimm,R. H.. Spinal manipulation, medication, or home exercise with advice for acute and subacute neck pain: a randomized trial. Annals of Internal Medicine 2012;156(1 Pt 1):1-10. [DOI: http://dx.doi.org/10.7326/0003-4819-156-1-201201030-00002]

Cleland 2005

Cleland,J. A.; Whitman,J. M.; Fritz,J. M.; Palmer,J. A.. Manual physical therapy, cervical traction, and strengthening exercises in patients with cervical radiculopathy: a case series.. Journal of Orthopaedic & Sports Physical Therapy 2005;35(12):802-811. [DOI:]

Cleland 2007

Cleland,J. A.; Fritz,J. M.; Whitman,J. M.; Heath,R.. Predictors of short-term outcome in people with a clinical diagnosis of cervical radiculopathy.. Physical Therapy 2007;87(12):1619-1632. [DOI:]

Coppieters 2003

Coppieters,M. W.; Stappaerts,K. H.; Wouters,L. L.; Janssens,K.. The immediate effects of a cervical lateral glide treatment technique in patients with neurogenic cervicobrachial pain.. Journal of Orthopaedic & Sports Physical Therapy 2003;33(7):369-378. [DOI:]

Hoving 2002

Hoving,J. L.; Koes,B. W.; de Vet,H. C.; van der Windt,D. A.; Assendelft,W. J.; van Mameren,H.; Deville,W. L.; Pool,J. J.; Scholten,R. J.; Bouter,L. M.. Manual therapy, physical therapy, or continued care by a general practitioner for patients with neck pain. A randomized, controlled trial. Annals of Internal Medicine 2002;136(10):713-722. [DOI:]

Howe 1983

Howe,D. H.; Newcombe,R. G.; Wade,M. T.. Manipulation of the cervical spine--a pilot study.. Journal of the Royal College of General Practitioners 1983;33(254):574-579. [DOI:]

Kogstad 1978

Kogstad,O. A.; Karterud,S.; Gudmundsen,J.. [Cervicobrachialgia. A controlled trial with conventional therapy and manipulation]. Tidsskrift for den Norske laegeforening 1978;98(16):845-848. [DOI:]

Langevin 2014

Langevin,P.; Desmeules,F.; Lamothe,M.; Robitaille,S.; Roy,J. S.. Comparison of 2 Manual Therapy and Exercise Protocols for Cervical Radiculopathy: A Randomized Clinical Trial Evaluating Short-term Effects. The Journal of orthopaedic and sports physical therapy 2014;(Journal Article):1-38. [DOI: 10.2519/jospt.2015.5211 [doi]]

Lawrence 2012

Lawrence,Dj. Spinal manipulation, medication or home exercise for acute and subacute neck pain. Focus on Alternative & Complementary Therapies 2012;17(4):233-234. [DOI: 10.1111/j.2042-7166.2012.01172]

Murphy 2006

Murphy,D. R.; Hurwitz,E. L.; Gregory,A.; Clary,R.. A nonsurgical approach to the management of patients with cervical radiculopathy: a prospective observational cohort study.. Journal of Manipulative & Physiological Therapeutics 2006;29(4):279-287. [DOI:]

Nordemar 1981

Nordemar,R.; Thorner,C.. Treatment of acute cervical pain--a comparative group study.. Pain 1981;10(1):93-101. [DOI:]

Persson 1997

Persson, L. C.; Moritz, U.; Brandt, L.; Carlsson, C. A.. Cervical radiculopathy: pain, muscle weakness and sensory loss in patients with cervical radiculopathy treated with surgery, physiotherapy or cervical collar. A prospective, controlled study. European spine journal 1997;6(4):256-66. [DOI:]

Persson 1997a

Persson, L. C.; Carlsson, C. A.; Carlsson, J. Y.. Long-lasting cervical radicular pain managed with surgery, physiotherapy, or a cervical collar. A prospective, randomized study. Spine 1997;22(7):751-8. [DOI:]

Persson 2001

Persson,L. C.; Lilja,A.. Pain, coping, emotional state and physical function in patients with chronic radicular neck pain. A comparison between patients treated with surgery, physiotherapy or neck collar--a blinded, prospective randomized study.. Disability & Rehabilitation 2001;23(8):325-335. [DOI:]

Pikula 1999

Pikula,J. R.. The effect of spinal manipulative therapy (SMT) on pain reduction and range of motion in patients with acute unilateral neck pain: a pilot study. Journal of the Canadian Chiropractic Association 1999;43(2):111-119. [DOI:]

Schliesser 2003

Schliesser,J. S.; Kruse,R.; Fallon,L. F.. Cervical radiculopathy treated with chiropractic flexion distraction manipulation: A retrospective study in a private practice setting.. Journal of Manipulative & Physiological Therapeutics 2003;26(9):E19. [DOI:]

Telci 2012

Telci, E. A.; Karaduman, A.. Effects of three different conservative treatments on pain, disability, quality of life, and mood in patients with cervical spondylosis. Rheumatology International 2012;32(4):1033-1040. [DOI: http://dx.doi.org/10.1007/s00296-010-1751-4]

Walker 2008

Walker,M. J.; Boyles,R. E.; Young,B. A.; Strunce,J. B.; Garber,M. B.; Whitman,J. M.; Deyle,G.; Wainner,R. S.. The effectiveness of manual physical therapy and exercise for mechanical neck pain: a randomized clinical trial.. Spine 2008;33(22):2371-2378. [DOI: http://dx.doi.org/10.1097/BRS.0b013e318183391e]

Young 2009

Young,I. A.; Michener,L. A.; Cleland,J. A.; Aguilera,A. J.; Snyder,A. R.. Manual therapy, exercise, and traction for patients with cervical radiculopathy: a randomized clinical trial. Physical Therapy 2009;89(7):632-642. [DOI: http://dx.doi.org/10.2522/ptj.20080283]

Studies awaiting classification

Ongoing studies

Other references

Additional references

Other published versions of this review

Classification pending references

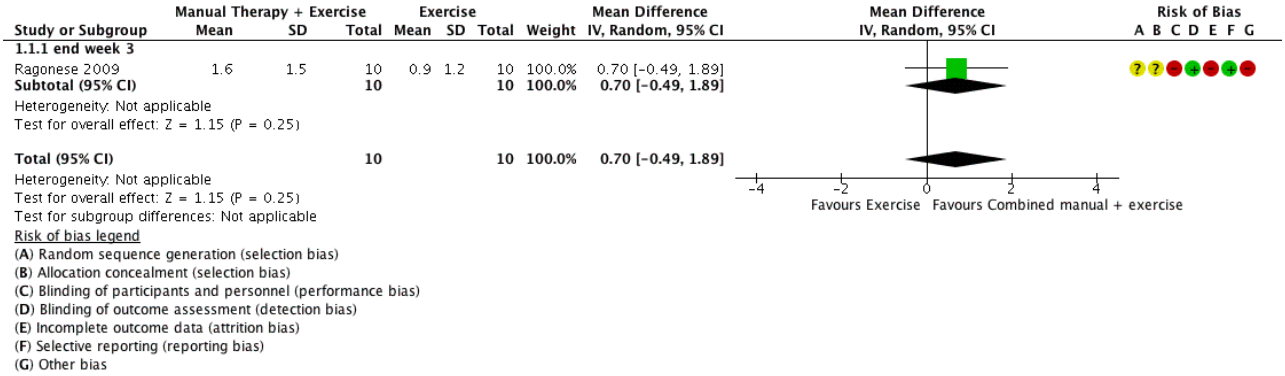
Data and analyses

1 Manual Therapy + exercise versus exercise

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Pain (0-10)	1	20	Mean Difference (IV, Random, 95% CI)	0.70 [-0.49, 1.89]
1.1.1 end week 3	1	20	Mean Difference (IV, Random, 95% CI)	0.70 [-0.49, 1.89]
1.2 NDI	1	20	Mean Difference (IV, Fixed, 95% CI)	2.40 [-3.17, 7.97]
1.2.5 end week 3	1	20	Mean Difference (IV, Fixed, 95% CI)	2.40 [-3.17, 7.97]

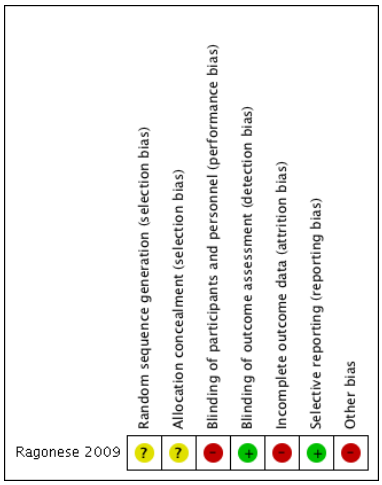
Figures

Figure 1 (Analysis 1.1)



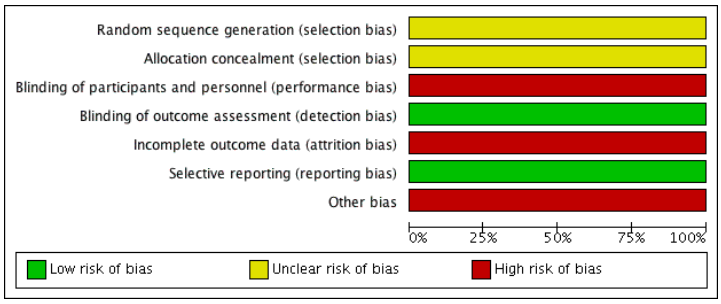
Forest plot of comparison: 1 Manual Therapy + exercise versus exercise, outcome: 1.1 Pain (0-10).

Figure 2



Risk of bias summary: review authors' judgements about each risk of bias item for each included study.

Figure 3



Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included studies.

Sources of support

Internal sources

- No sources of support provided

External sources

- No sources of support provided

Feedback

Appendices