

## NKR 30 PICO 5 Ledmobiliserende teknikker

### Review information

#### Authors

Sundhedsstyrelsen<sup>1</sup>

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Citation example: Sundhedsstyrelsen. NKR 30 PICO 5 Ledmobiliserende teknikker. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

#### Contact person

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#### Dates

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#### What's new

Date / Event	Description
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**History**

Date / Event	Description

**Characteristics of studies**

**Characteristics of included studies**

**Albert 2012**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Identification</b>	
<b>Notes</b>	

**Risk of bias table**

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Sequence Generation	Unclear risk	
Blinding of outcome assessors	Unclear risk	
Selective outcome reporting	Unclear risk	
Blinding of participants and personnel	Unclear risk	
Other sources of bias	Unclear risk	
Incomplete outcome data	Unclear risk	
Allocation concealment	Unclear risk	

**Bronfort 2014**

<p><b>Methods</b></p>	<p><b>Study design:</b> Randomized controlled trial  <b>Study grouping:</b> Parallel group  <b>Open Label:</b> YES  <b>Cluster RCT:</b></p>
<p><b>Participants</b></p>	<p><b>Baseline Characteristics</b>                  Intervention + usual care</p> <ul style="list-style-type: none"> <li>● age: 57.1 (12.0)</li> <li>● gender (% woman): 59</li> </ul> <p>comparison (home exercise/ usual care</p> <ul style="list-style-type: none"> <li>● age: 57.1 (12.0)</li> <li>● gender (% woman): 59</li> </ul> <p>other intervention (MDT)</p> <ul style="list-style-type: none"> <li>● age: 57.1 (12.0)</li> <li>● gender (% woman): 59</li> </ul> <p><b>Included criteria:</b> age 21 years or older;BRLP based on Quebec Task Force on Spinal Disorders classifications 2, 3, 4, or 6 (radiating pain into the proximal or distal part of the lower extremity, with or without neurologic signs); BRLP severity of 3 or greater (scale of 0 to 10); a current episode of 4 weeks or more; and a stableprescription medication plan in the previous month.</p> <p><b>Excluded criteria:</b> Quebec Task Force on Spinal Disordersclassifications of 1, 5, 7, 8, 9, 10, and 11 (pain without radiation into the lower extremities, progressive neurologic deficits, the cauda equina syndrome, spinal fracture, spinal stenosis, surgical lumbar spine fusion, several incidents of lumbar spine surgery, chronic pain syndrome, visceral diseases, compression fractures or metastases, blood clotting disorders, severe osteoporosis, and inflammatory or destructive tissue changes of the spine). Patients couldnot be receiving ongoing treatment of leg pain or LBP; be pregnant or nursing; have current or pending litigation for worker’s compensation, disability, or personal injury; be unable to read or comprehend English; or have evidence of substance abuse.</p>
<p><b>Interventions</b></p>	<p><b>Intervention Characteristics</b>                  Intervention + usual care</p> <ul style="list-style-type: none"> <li>● <i>intervention:</i> For SMT visits, the primary focus of treatment was on manual techniques (including high-velocity, low amplitude thrustprocedures or low-velocity, variable amplitude mobilizationmaneuvers to the lumbar vertebral or</li> </ul>

	<p>sacroiliac joints). Adjunct therapies to facilitate SMT were used as needed and included light soft-tissue techniques (that is, active and passive muscle stretching and ischemic compression of tender points) and hot or cold packs.</p> <ul style="list-style-type: none"> <li>● <i>frequency:</i></li> <li>● <i>number of visits:</i> 14.6 manuel terapi + 3.8 øvelsesinstruktioner</li> <li>● <i>duration of visit:</i> 10-20 min. konsultationer</li> </ul> <p>comparison (home exercise/ usual care)</p> <ul style="list-style-type: none"> <li>● <i>intervention:</i> provide patients with the tools to manage existing pain, prevent pain recurrences, and facilitate engagement in daily activities. Instruction and practice were provided for positioning and stabilization exercises to enhance mobility and increase trunk endurance. These were individualized to patients' lifestyles, clinical characteristics (including positional sensitivities), and fitness levels.</li> <li>● <i>frequency:</i> Holding: 25 x 3 dagligt; Stabilitet: 8-12 x hver anden dag;</li> <li>● <i>number of visits:</i> 3.6 øvelsesinstruktioner</li> <li>● <i>duration of visit:</i> 1 time</li> </ul> <p>other intervention (MDT)</p> <ul style="list-style-type: none"> <li>● <i>intervention:</i></li> <li>● <i>frequency:</i></li> <li>● <i>number of visits:</i></li> <li>● <i>duration of visit:</i></li> </ul>
<p><b>Outcomes</b></p>	<p><i>bensmerte</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Measure names:</b> ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>rygsmerter</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Measure names:</b> ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>funktionsevne</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Measure names:</b> ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>arbejdsevne (andel tilbage på arbejde op til 12 mdr)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Measure names:</b> ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul>

*smertehåndtering*

- **Outcome type:** ContinuousOutcome
- **Measure names:** ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]

*bensmerte*

- **Outcome type:** ContinuousOutcome
- **Measure names:** ["kort tid (op til 12 uger)", "lang tid (3 - 6 måneder)"]
- **Direction:** Lower is better
- **Data value:** Change from baseline

*rygsmerter*

- **Outcome type:** ContinuousOutcome
- **Measure names:** ["kort tid (op til 12 uger)", "lang tid (3 - 6 måneder)"]
- **Direction:** Lower is better
- **Data value:** Change from baseline

*funktionsevne*

- **Outcome type:** ContinuousOutcome
- **Measure names:** ["kort tid (op til 12 uger)", "lang tid (3 - 6 måneder)"]
- **Direction:** Lower is better
- **Data value:** Change from baseline

*arbejdsevne (dage sygemeldt op til 6 måneder)*

- **Outcome type:** ContinuousOutcome
- **Measure names:** ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]

*andel tilbage på arbejde (12 mdr)*

- **Outcome type:** DichotomousOutcome
- **Measure names:** ["Baseline"]

*neurologiske udfald forværring*

- **Outcome type:** AdverseEvent
- **Measure names:** ["korttid (op til 12 uger)"]

*drop out*

- **Outcome type:** AdverseEvent

	<ul style="list-style-type: none"> <li>● <b>Measure names:</b> ["kortid (op til 12 uger)"] <i>opereret (12 mdr)</i></li> <li>● <b>Outcome type:</b> AdverseEvent</li> <li>● <b>Measure names:</b> ["kortid (op til 12 uger)"]</li> </ul>
<p><b>Identification</b></p>	<p><b>Sponsorship source:</b> By the Health Resources and Services Administration, U.S. Department of Health and Human Services (grant R18HP07638).</p> <p><b>Country:</b> United States</p> <p><b>Setting:</b> Forskningsklinikker på kirorpaktiske læreranstalter</p> <p><b>Comments:</b></p> <p><b>Authors name:</b> Gert Bronfort</p> <p><b>Institution:</b> Center for Spirituality &amp; Healing, University of Minnesota</p> <p><b>Email:</b> bronf003@umn.edu</p> <p><b>Address:</b> MMC 505, 425 DelawareStreet Southeast, Minneapolis, MN 55455.</p>
<p><b>Notes</b></p>	<p>Alice Kongsted on 10/08/2015 19:38</p> <p><b>Select</b></p> <p>jeg er i tvivl om vi holdt fast i at der skal være neurologiske udfald, men gik ud fra at vi gjorde det da jeg ekskluderede</p> <p>Birgitte Holm Petersen on 10/08/2015 20:15</p> <p><b>Select</b></p> <p>Vi kan godt nøjes med bensmerter i radikulært mønster, og dem er der en del af</p> <p>Alice Kongsted on 26/08/2015 01:16</p> <p><b>Continuous Outcomes</b></p> <p>Global Improvement også rapporteret</p> <p>Birgitte Holm Petersen on 27/08/2015 15:45</p> <p><b>Continuous Outcomes</b></p> <p>long term outcome er 12 måneder</p> <p>Birgitte Holm Petersen on 27/08/2015 16:09</p> <p><b>Adverse Outcomes</b></p>

der er detaljeret rapportering af adverse events. Her angivet antal som har rapporteret een eller flere.

**Risk of bias table**

Bias	Authors' judgement	Support for judgement
Sequence Generation	Low risk	Quote: "The allocation algorithm was prepared by the study statistician before enrollment,"
Blinding of outcome assessors	Low risk	Judgement Comment: Outcomes er patientrapporterede så kriteriet er ikke relevant
Selective outcome reporting	Low risk	Quote: "complete description of all secondary outcome measures is provided elsewhere (29). The measures reported in this article include LBP, disability measured with the modified Roland-Morris Disability Questionnaire (48-50), physical and mental health status using the Short Form-36 Health Survey (SF-36) (51, 52), patient satisfaction (53), global improvement (53), and frequency of medication use for back and leg pain in the past week (53)." Judgement Comment: standard outcome measures, registreret protocol?
Blinding of participants and personnel	High risk	Judgement Comment: Blinding af patienter og behandlere ikke mulig
Other sources of bias	Low risk	Judgement Comment: patients have had a highly varying period of symptoms
Incomplete outcome data	Low risk	Quote: "Of the 192 enrolled patients, 191 (99%) provided follow-up data at 12 weeks and 179 (93%) at 52 weeks." Judgement Comment: intention to treat analysis and all patients enrolled accounted for
Allocation concealment	Low risk	Quote: "The allocation algorithm was prepared by the study statistician before enrollment, and its administration was concealed from study personnel."

**Luijsterburg 2008**

Methods
Participants
Interventions
Outcomes

<b>Identification</b>	
<b>Notes</b>	

**Risk of bias table**

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Sequence Generation	Unclear risk	
Blinding of outcome assessors	Unclear risk	
Selective outcome reporting	Unclear risk	
Blinding of participants and personnel	Unclear risk	
Other sources of bias	Unclear risk	
Incomplete outcome data	Unclear risk	
Allocation concealment	Unclear risk	

**Paatelma 2008**

<b>Methods</b>	<p><b>Study design:</b> Randomized controlled trial  <b>Study grouping:</b> Parallel group  <b>Open Label:</b> YES  <b>Cluster RCT:</b></p>
<b>Participants</b>	<p><b>Baseline Characteristics</b>                  Intervention + usual care  <ul style="list-style-type: none"> <li>● age: 44(10)</li> <li>● gender (% woman): 42%</li> </ul>                 comparison (home exercise/ usual care)  <ul style="list-style-type: none"> <li>● age: 44(10)</li> <li>● gender (% woman): 42%</li> </ul>                 other intervention (MDT)</p>



	<ul style="list-style-type: none"> <li>● age: 44(10)</li> <li>● gender (% woman): 42%</li> </ul> <p><b>Included criteria:</b> 18–65-year-old employed people with current non-specific LBP with or without radiating pain to one or both lower legs. The back pain episode could be acute to chronic, the first or recurrent.</p> <p><b>Excluded criteria:</b> Pregnancy, low back surgery less than 2 months previously, and “red flags” that indicate serious spinal pathology</p>
<p><b>Interventions</b></p>	<p><b>Intervention Characteristics</b> Intervention + usual care</p> <ul style="list-style-type: none"> <li>● <i>intervention:</i> The OMT group underwent spinal manipulation if indicated (11), specific mobilization, and muscle-stretching techniques (12, 13). In addition, the following mobilization or high velocity, low-force manipulation techniques were performed: (i) translatoric thrust manipulation or mobilization of the thoracic-lumbar junction with the patient supine or lying on their side; (ii) translatoric thrust manipulation or mobilization of L1 to L5 with the patient prone or lying on their side; (iii) the sacroiliac manipulation/mobilization technique used in this study was a ventral or dorsal gliding of the ileum on the sacrum with the patient prone. Furthermore, these patients were taught to perform selfmobilization and stretching exercises at home once a day. Usually 3–5 individually selected home-exercises were prescribed to actively mobilize the low back, with 2–3 sets of 15–20 repetitions for each exercise, and lumbar stabilization exercises with 10 repetitions of 10 sec, and stretching exercises to be performed once a day for 45–60 sec.</li> <li>● <i>frequency:</i> ?</li> <li>● <i>number of visits:</i> max 7</li> <li>● <i>duration of visit:</i> 30–45 min</li> </ul> <p>comparison (home exercise/ usual care)</p> <ul style="list-style-type: none"> <li>● <i>intervention:</i> Subjects in the advice-only group received 45–60 min counselling from a physiotherapist concerning the good prognosis for LBP and concerning pain tolerance, medication, and early return to work. The patients in this group were told to avoid bed rest and advised to continue their routine as actively as possible, including exercise activities, within the limits permitted by their back pain. They were also instructed to contact their physicians if their symptoms worsened. For support, a 2-page educational back booklet was also supplied. Other treatments during follow-up were minimal, with no differences between groups.</li> <li>● <i>frequency:</i> 1 gang</li> <li>● <i>number of visits:</i> 1</li> <li>● <i>duration of visit:</i> 60 min</li> </ul>

	<p>other intervention (MDT)</p> <ul style="list-style-type: none"> <li>● <i>intervention</i>: the participants were clinically assessed and classified into the mechanical syndromes. If a non-mechanical syndrome was present, the subjects were transferred from conservative care for further investigations. If a syndrome was present, then one of the treatment principles of mechanical therapy was selected as the management strategy. This consisted of an educational component, supported with the book Treat Your Own Back , and an active therapy component provided instructions in exercises repeated several times a day according to the principles of the approach (10–15 repetitions every 1–2 h with or without a sustained end-range position on a regular basis</li> <li>● <i>frequency</i>: ?</li> <li>● <i>number of visits</i>: max 7</li> <li>● <i>duration of visit</i>: 30 - 45 min</li> </ul>
<p><b>Outcomes</b></p>	<p><i>bensmerte</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type</b>: ContinuousOutcome</li> <li>● <b>Measure names</b>: ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>rygsmerter</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type</b>: ContinuousOutcome</li> <li>● <b>Measure names</b>: ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>funktionsevne</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type</b>: ContinuousOutcome</li> <li>● <b>Measure names</b>: ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>arbejdsevne (andel tilbage på arbejde op til 12 mdr)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type</b>: ContinuousOutcome</li> <li>● <b>Measure names</b>: ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>smertehåndtering</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type</b>: ContinuousOutcome</li> <li>● <b>Measure names</b>: ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>bensmerte</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type</b>: ContinuousOutcome</li> <li>● <b>Measure names</b>: ["Kort tid (op til 12 uger)", "lang tid (3 - 6 måneder)"]</li> </ul>

	<p><i>nygsmerter</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Measure names:</b> ["kort tid (op til 12 uger)", "lang tid (3 - 6 måneder)"]</li> </ul> <p><i>funktionsevne</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Measure names:</b> ["kort tid (op til 12 uger)", "lang tid (3 - 6 måneder)"]</li> </ul> <p><i>arbejdsevne (dage sygemeldt op til 6 måneder)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Measure names:</b> ["Kort tid (op til 12 uger)", "lang tid (3-6 måneder)"]</li> </ul> <p><i>andel tilbage på arbejde (12 mdr)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> DichotomousOutcome</li> <li>● <b>Measure names:</b> ["Baseline"]</li> </ul> <p><i>neurologiske udfald forværring</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> AdverseEvent</li> <li>● <b>Measure names:</b> ["korttid (op til 12 uger)"]</li> </ul> <p><i>drop out</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> AdverseEvent</li> <li>● <b>Measure names:</b> ["korttid (op til 12 uger)"]</li> </ul> <p><i>opereret (12 mdr)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> AdverseEvent</li> <li>● <b>Measure names:</b> ["korttid (op til 12 uger)"]</li> </ul>
<p><b>Identification</b></p>	<p><b>Sponsorship source:</b> not declared</p> <p><b>Country:</b> Finland</p> <p><b>Setting:</b> Occupational health care centers</p> <p><b>Comments:</b> Adgang til centrene ikke beskrevet</p> <p><b>Authors name:</b> Markku Paatelma</p> <p><b>Institution:</b> Department of Health Sciences, University of Jyväskylä</p> <p><b>Email:</b> markku.paatelma@tcr.fi</p> <p><b>Address:</b> Häikälahdenkuja 9, FI-00850 Helsinki, Finland</p>

<b>Notes</b>	<p><i>Birgitte Holm Petersen</i> on 10/08/2015 20:17  <b>Select</b>                  Designet er fint, men problemet er at det er en blandet patientgruppe, hvoraf kun en del har tegn på radikulopati</p> <p><i>Alice Kongsted</i> on 26/08/2015 19:31  <b>Study Design</b>                  Intervention: OMT                  Comparison: Advice                  Other intervention: MDT</p> <p><i>Alice Kongsted</i> on 26/08/2015 19:44  <b>Continuous Outcomes</b>                  3 mdr outcome er angivet under 'op til 12 uger'                  Lang tids outcome er 6 mdr.</p>
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Risk of bias table

Bias	Authors' judgement	Support for judgement
Sequence Generation	Low risk	Judgement Comment: Randomization of the participants into the treatment groups was by a stack of sealed envelopes, numbered in an order prepared from a random number table.
Blinding of outcome assessors	Low risk	Judgement Comment: Outcome measures, which included a battery of self-reported measures (use of healthcare services due to other problems and other back pain treatments) were assessed at 3-, 6-, and 12-month visits. The measurements were made by one research assistant and coded by another who was blinded to the patient's group assignment.
Selective outcome reporting	Low risk	Judgement Comment: standard outcomes reported as recommend by CONSORT and the Cochrane back group
Blinding of participants and personnel	High risk	Judgement Comment: Those providing and receiving treatment were not blinded to intervention
Other sources of bias	High risk	Judgement Comment: Confrontation bias - subjects in the advice only group only got one session with a physiotherapist while the other groups got 3 -7 sessions of supervised exercise/treatment Mixed patient group can disguise different responses to the treatments. Manglende sample size beregning Vurderes at gruppeforskelle skulle være store for at kunne påvises

Incomplete outcome data	Low risk	Quote: "The drop-out rate during the follow-up year ranged from 14% in the McKenzie method group, to 22% in the OMT group, to 30% in the advice-only group." Judgement Comment: All outcome measures specified in the methods section were reported of in the results and drop out accounted for. Intention to treat analysis 3 mdr drop out: 4.5%/7.7%/22% (MT/MDT/Advice)6 mdr drop out: 11.1%/9.6%/27%
Allocation concealment	Unclear risk	
Judgement Comment: cannot see how this was done		

**Santilli 2006**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Identification</b>	
<b>Notes</b>	

**Risk of bias table**

Bias	Authors' judgement	Support for judgement
Sequence Generation	Unclear risk	
Blinding of outcome assessors	Unclear risk	
Selective outcome reporting	Unclear risk	
Blinding of participants and personnel	Unclear risk	
Other sources of bias	Unclear risk	
Incomplete outcome data	Unclear risk	
Allocation concealment	Unclear risk	

**Ye 2015**

<b>Methods</b>	
<b>Participants</b>	
<b>Interventions</b>	
<b>Outcomes</b>	
<b>Identification</b>	
<b>Notes</b>	

**Risk of bias table**

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Sequence Generation	Unclear risk	
Blinding of outcome assessors	Unclear risk	
Selective outcome reporting	Unclear risk	
Blinding of participants and personnel	Unclear risk	
Other sources of bias	Unclear risk	
Incomplete outcome data	Unclear risk	
Allocation concealment	Unclear risk	

*Footnotes*

**Characteristics of excluded studies**

***Bishop 2010***

Reason for exclusion	Wrong patient population
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***Eisenberg 2007***

Reason for exclusion	Wrong patient population
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***Erdogmus 2007***

Reason for exclusion	Wrong patient population
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***Feng 2013***

Reason for exclusion	Wrong study design
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***Gilbey 2011***

Reason for exclusion	Wrong study design
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***Lee 2012***

Reason for exclusion	Wrong comparator
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***Leemann 2014***

Reason for exclusion	Wrong study design
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***Snelling 2006***

Reason for exclusion	Wrong study design
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**Vieira Pellenz 2014**

Reason for exclusion	Wrong patient population
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*Footnotes***Characteristics of studies awaiting classification***Footnotes***Characteristics of ongoing studies***Footnotes***Summary of findings tables****Additional tables****References to studies****Included studies****Albert 2012**

[Empty]

**Bronfort 2014**

Bronfort G.; Hondras MA.; Schulz CA.; Evans RL.; Long CR.; Grimm R.. Spinal manipulation and home exercise with advice for subacute and chronic back-related leg pain: a trial with adaptive allocation.. Annals of internal medicine 2014;161(6):381-91. [DOI: 10.7326/M14-0006]



**Luijsterburg 2008**

[Empty]

**Paatelma 2008**

Paatelma, M.; Kilpikoski, S.; Simonen, R.; Heinonen, A.; Alen, M.; Videman, T.. Orthopaedic manual therapy, Mckenzie method or advice only for low back pain in working adults: A randomized controlled trial with one year follow-up. Journal of Rehabilitation Medicine 2008;40(10):858-863. [DOI: <http://dx.doi.org/10.2340/16501977-0262>]

**Santilli 2006**

[Empty]

**Ye 2015**

[Empty]

**Excluded studies****Bishop 2010**

Bishop PB; Quon JA; Fisher CG; Dvorak MF. The Chiropractic Hospital-based Interventions Research Outcomes (CHIRO) study: a randomized controlled trial on the effectiveness of clinical practice guidelines in the medical and chiropractic management of patients with acute mechanical low back pain.. Spine Journal: Official Journal of the North American Spine Society 2010;10(12):1055-1064. [DOI: ]

**Eisenberg 2007**

Eisenberg DM.; Post DE.; Davis RB.; Connelly MT.; Legedza AT.; Hrbek AL.; Prosser LA.; Buring JE.; Inui TS.; Cherkin DC.. Addition of choice of complementary therapies to usual care for acute low back pain: a randomized controlled trial.. Spine 2007;32(2):151-8. [DOI: 10.1097/01.brs.0000252697.07214.65]

**Erdogmus 2007**

Erdogmus, C. B.; Resch, K. L.; Sabitzer, R.; Muller, H.; Nuhr, M.; Schoggl, A.; Posch, M.; Osterode, W.; Ungersbock, K.; Ebenbichler, G. R.. Physiotherapy-based rehabilitation following disc herniation operation: Results of a randomized clinical trial. Spine 2007;32(19):2041-2049. [DOI: ]

**Feng 2013**

Feng, Y.; Gao, Y.; Yang, W.; Feng, T.. Reduction in nerve root compression by the nucleus pulposus after Feng's spinal manipulation.. Neural Regeneration Research 2013;8(12):1139-1145. [DOI: ]

**Gilbey 2011**

Gilbey, A.. Evidence-based clinical practice guidelines vs. family physician usual care for the treatment of acute lower back pain: What is the role of chiropractic?.. Focus on Alternative and Complementary Therapies 2011;16(3):243-244. [DOI: ]

**Lee 2012**

Lee, Younghwa; Chang-Ryeol Lee; Cho, Misuk. Effect of Decompression Therapy Combined with Joint Mobilization on Patients with Lumbar Herniated Nucleus Pulposus. Journal of Physical Therapy Science 2012;24(9):829-832. [DOI: ]

**Leemann 2014**

Leemann S; Peterson CK; Schmid C; Anklin B; Humphreys BK. Outcomes of acute and chronic patients with magnetic resonance imaging-confirmed symptomatic lumbar disc herniations receiving high-velocity, low-amplitude, spinal manipulative therapy: a prospective observational cohort study with one-year follow-up.. Journal of Manipulative & Physiological Therapeutics 2014;37(3):155-163. [DOI: ]

**Snelling 2006**

Snelling, N. J.. Spinal manipulation in patients with disc herniation: a critical review of risk and benefit. International Journal of Osteopathic Medicine 2006;9(3):77-84. [DOI: ]

**Vieira Pellenz 2014**

Vieira-Pellenz F; Oliva-Pascual-Vaca A; Rodriguez-Blanco C; Heredia-Rizo AM; Ricard F; Almazan-Campos G. Short-term effect of spinal manipulation on pain perception, spinal mobility, and full height recovery in male subjects with degenerative disk disease: a randomized controlled trial.. Archives of Physical Medicine & Rehabilitation 2014;95(9):1613-1619. [DOI: ]

**Studies awaiting classification****Ongoing studies****Other references****Additional references****Other published versions of this review**

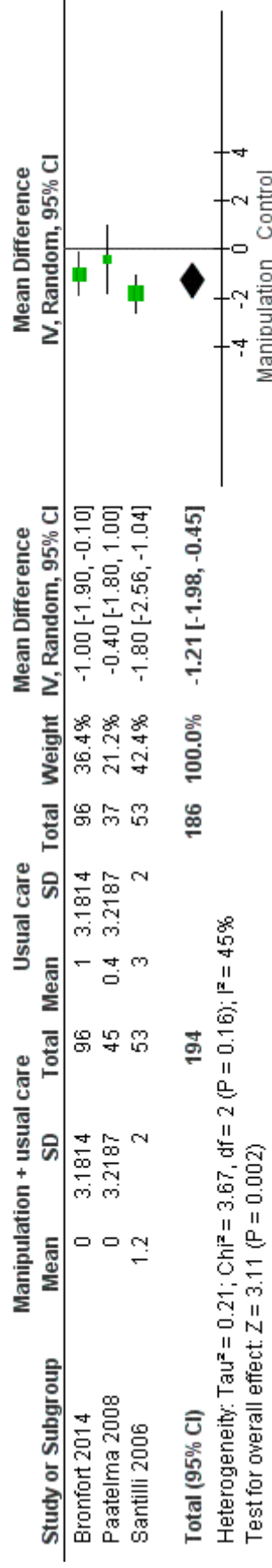
## Data and analyses

### 1 Manipulation + usual care vs usual care

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Bemserte (op til 12 uger)	3	380	Mean Difference (IV, Random, 95% CI)	-1.21 [-1.98, -0.45]
1.2 Rygsmerter (op til 12 uger)	3	380	Mean Difference (IV, Random, 95% CI)	-1.07 [-2.00, -0.14]
1.3 Funktionsevne (op til 12 uger)	2	274	Std. Mean Difference (IV, Random, 95% CI)	-0.35 [-0.66, -0.04]
1.4 Funktionsevne (12 måneder)	3	380	Std. Mean Difference (IV, Random, 95% CI)	-0.31 [-0.51, -0.11]
1.5 arbejdssevne (andel tilbage på arbejde op til 12 mdr)	0	0	Mean Difference (IV, Fixed, 95% CI)	Not estimable
1.7 arbejdssevne (dage sygemeldt op til 6 måneder)	0	0	Mean Difference (IV, Fixed, 95% CI)	Not estimable
1.8 andel tilbage på arbejde (12 mdr)	0		Risk Ratio (IV, Fixed, 95% CI)	No totals
1.9 Lumbal operation	1	82	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.05, 12.70]
1.10 Drop out, kort tid	3	376	Risk Ratio (IV, Random, 95% CI)	0.53 [0.10, 2.66]
1.11 Neurologiske udfald	2	294	Risk Ratio (IV, Random, 95% CI)	0.58 [0.24, 1.42]

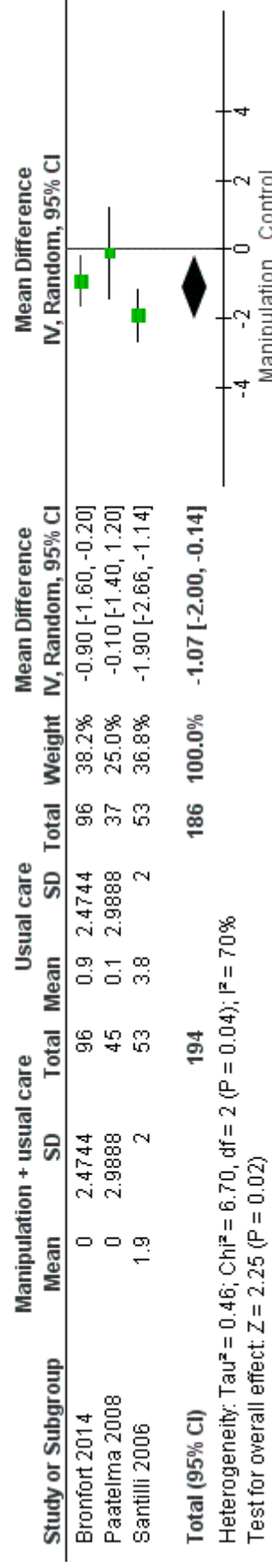
## Figures

**Figure 1 (Analysis 1.1)**



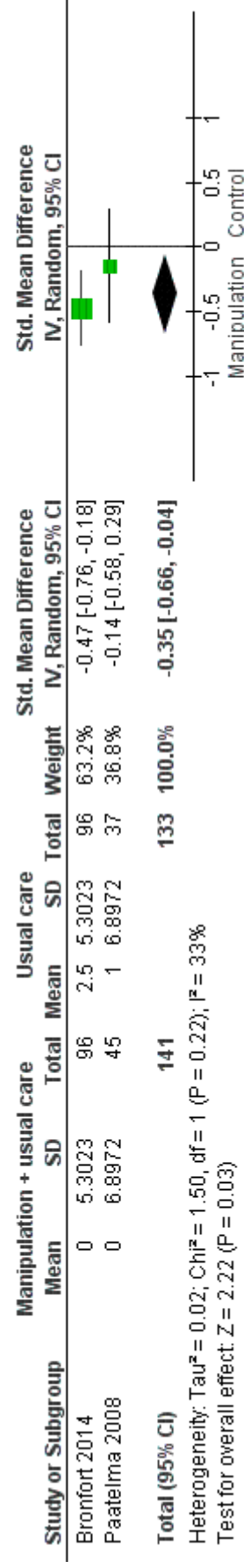
Forest plot of comparison: 1 Manipulation + usual care vs usual care, outcome: 1.1 Bemserte (op til 12 uger).

**Figure 2 (Analysis 1.2)**



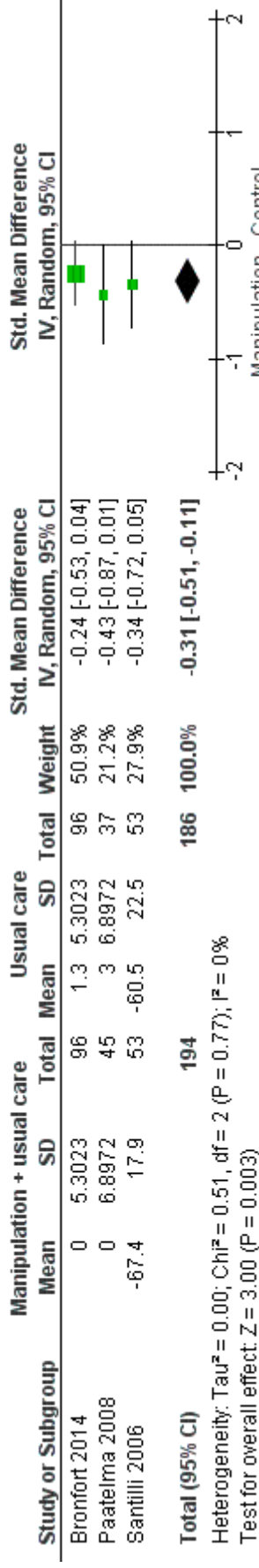
Forest plot of comparison: 1 Manipulation + usual care vs usual care, outcome: 1.2 Rygsmerter (op til 12 uger).

**Figure 3 (Analysis 1.3)**



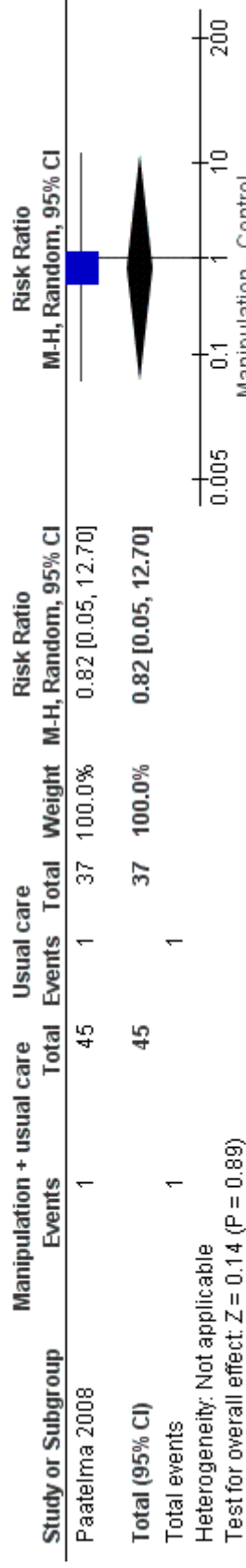
Forest plot of comparison: 1 Manipulation + usual care vs usual care, outcome: 1.3 Funktionsevne (op til 12 uger).

**Figure 4 (Analysis 1.4)**



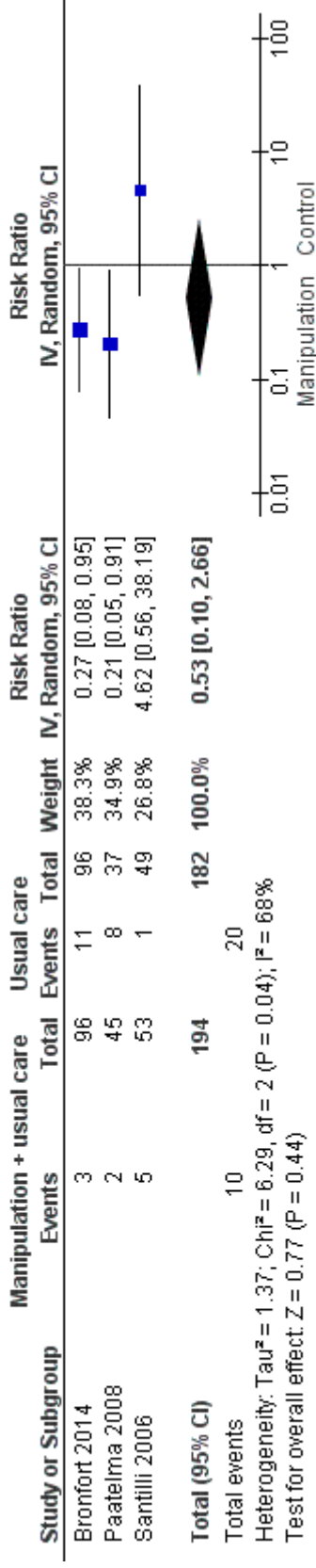
Forest plot of comparison: 1 Manipulation + usual care vs usual care, outcome: 1.4 Funktionsevne (12 måneder).

**Figure 5 (Analysis 1.9)**



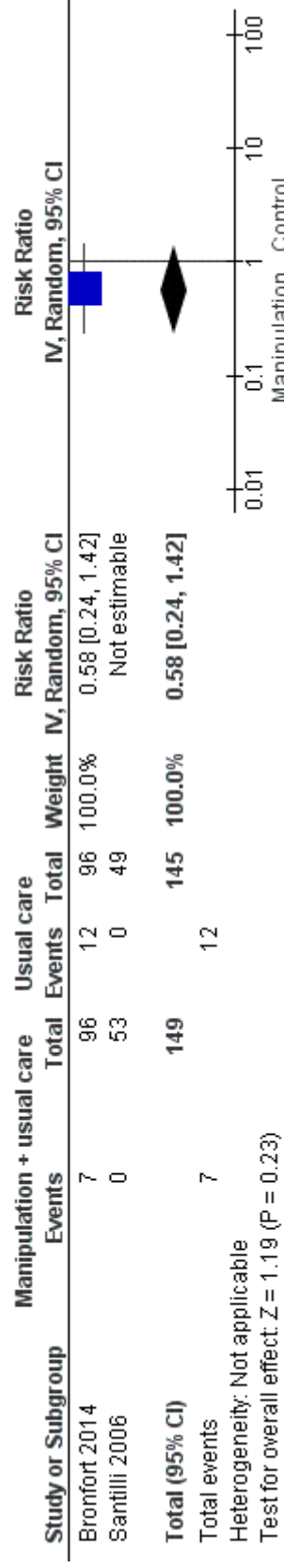
Forest plot of comparison: 1 Manipulation + usual care vs usual care, outcome: 1.9 Lumbal operation.

**Figure 6 (Analysis 1.10)**



Forest plot of comparison: 1 Manipulation + usual care vs usual care, outcome: 1.10 Drop out, kort tid.

**Figure 7 (Analysis 1.11)**



Forest plot of comparison: 1 Manipulation + usual care vs usual care, outcome: 1.11 Neurologiske udfald.