

The long term effect of Naprapathic Manual Therapy for patients with Back and/or Neck pain

Results from a Pragmatic Randomized Controlled Trial

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What is Naprapathy?

- A system for specific examination, diagnostics, manual treatment and rehabilitation of shortened or pathologic soft tissue and connective tissue.
- Naprapathic manual therapy is a combination of joint and soft tissue techniques aiming to decrease pain and disability in the neuromusculoskeletal system.
- Founded 100 years ago in USA.

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Naprapathy in Sweden

- The largest profession within the field of advanced manual medicine.
- Since 1994 part of the Swedish health and medical care system.
- Approximately 950 licensed.
- 1/3 of the adult Swedes have visited a Naprapath.

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Aim of the trial

To compare the effects of Naprapathic manual therapy to evidence-based care provided by a physician for back and/or neck pain.

Patients and Method

Advertising among employees at two public companies (about 40,000).

A pragmatic randomized controlled trial with two arms (n=409)

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Inclusion criterias

Present pain in back and/or neck, since at least two weeks, of the kind that brought about marked dysfunction at work and/or in leisure time.

Exclusion criterias

Symptoms too mild, pregnancy, resent manual treatment (with the exception of massage), language difficulties, surgery in the painful area, specific diagnoses or "red flags".

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Interventions

Naprapathic Manual Treatment

- Maximum 6 visits within 6 weeks

Evidence-based care provided by a physician

- Advice to stay active and how to cope with pain
- Booklet
- A second consultation scheduled after 3 weeks

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Follow-up

After 3, 7, and 12 weeks
6 and 12 months

Primary outcomes

Pain and disability with Chronic Pain
Questionnaire (CPQ) (von Korf 1992)

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Clinically significant improvement

Dichotomized outcomes were defined based on what is believed to correspond to a clinically significant improvement (Farrar 2001, Turner 2004, van Tulder 2007)

- Pain: at least a two-step decrease (compared to baseline) in pain score (CPQ).
- Disability: at least a one-step decrease (compared to baseline) in disability score (CPQ).

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Baseline characteristics

| | |
|-------------------------------------------|------|
| Age (mean) | 47 y |
| Women | 71% |
| Neck/shoulder pain | 58% |
| Duration pain | |
| < 3 months | 26% |
| > 1 year | 56% |
| Previous episodes of pain in back or neck | 87% |

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The first article

ORIGINAL ARTICLE

Naprapathic Manual Therapy or Evidence-based Care for Back and Neck Pain
A Randomized, Controlled Trial

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Key Words: back pain, neck pain, complementary therapies, manual therapy, evidence-based care

Objective: To compare naprapathic manual therapy with evidence-based care for back or neck pain regarding pain, disability, and perceived recovery. *Naprapathy that is common.* (CMAJ Pain 2007;23(4):439)

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Clinically significant improvement

| 12 weeks | Index | Control | RD (95% CI) | RR (95% CI) |
|------------|-------|---------|-------------|---------------|
| Pain | 69% | 42% | 27% (17-37) | 1.6 (1.4-2.0) |
| Disability | 73% | 55% | 18% (7-28) | 1.3 (1.1-1.6) |
| 26 weeks | Index | Control | RD (95% CI) | RR (95% CI) |
| Pain | 65% | 44% | 27% (17-37) | 1.5 (1.2-1.8) |
| Disability | 74% | 63% | 11% (4-22) | 1.2 (1.0-1.4) |
| 52 weeks | Index | Control | RD (95% CI) | RR (95% CI) |
| Pain | 67% | 50% | 17% (7-27) | 1.3 (1.1-1.6) |
| Disability | 75% | 58% | 17% (5-28) | 1.3 (1.1-1.5) |

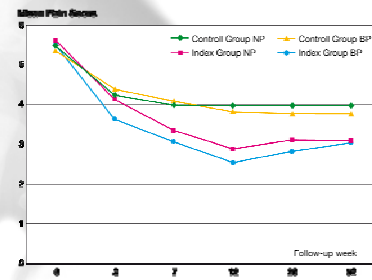
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Pain

Mean of three questions graded from 0 (no pain) to 10 (worst possible pain)



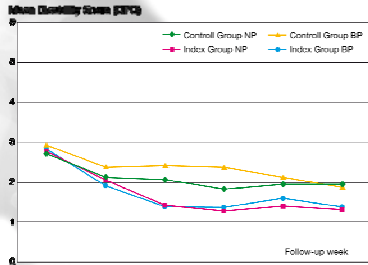
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Disability

Mean of three questions graded from 0 (no at all) to 10 (can not go on)



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Repeated measurements and loss to follow up

Generalized Estimating Equations (GEE):

Statistically significant differences between the groups considered over one year regarding clinically significant improvement in pain ($p=0.002$) and in disability ($p=0.005$) favoring Naprapathic manual therapy.

Sensitivity analyses:

No systematic differences in results between analyses with and without imputed primary outcome values.

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Conclusion

This trial suggests that combined manual therapy, like Naprapathy, is effective in short and in long term, and might be an alternative to consider in outpatient clinics for patients with back or neck pain.

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Thank you!

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Statistical analysis

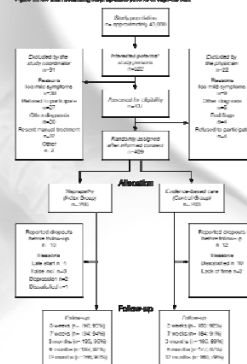
- "Intention to treat"
- The proportion with clinically significant improvements in pain and disability were compared, illustrated as Relative Risks (RR) and Risk Differences (RD)
- Mantel Haenszel's method to test for confounding
- Generalized Estimating Equations (GEE) the effect over one year, taking correlated repeated measurements into consideration. (Zeger 1986)
- Sensitivity analyses multiple imputation with "predictive mean matching method" (Rubin 1987)

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Figure 1. Flowchart illustrating the progress of patients through the trial.



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