

**Evidence-Based Practice Group Answers to Clinical
Questions**

**“Network Spinal Analysis as Treatment for
(Chronic) Non-Specific Low Back Pain”**

A Rapid Systematic Review

By

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About this report

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About the Evidence-Based Practice Group

The Evidence-Based Practice Group was established to address the many medical and policy issues that WorkSafeBC officers deal with on a regular basis. Members apply established techniques of critical appraisal and evidence-based review of topics solicited from both WorkSafeBC staff and other interested parties such as surgeons, medical specialists, and rehabilitation providers.

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Objective

To determine whether there is any evidence to support network spinal analysis treatment for (chronic) Non-Specific Low Back Pain.

Methods

- A comprehensive, systematic literature search was conducted on June 15, 2021.
- We began our literature search by collecting information on network spinal analysis from the website of the network spinal analysis practitioner to whom the patient was referred (<https://www.clarityinhealing.com/>). Based on the information we gathered from this website we then developed our literature search strategy and proceeded with our comprehensive and systematic literature review.
- The literature search was undertaken on commercial medical literature databases, including Cochrane Database of Systematic Reviews® (2005 to June 9, 2021), ACP Journal Club® (1991 to May 2021), UK York University Database of Abstracts of Reviews of Effects® (1st Quarter 2016), Cochrane Clinical Answers® (May 2021), Cochrane Central Register of Controlled Trials® (May 2021), UK Health Technology Assessment® (4th Quarter 2016), UK NHS Economic Evaluation Database® (1st Quarter 2016), BIOSIS Previews® (1969 to 2008), Embase® (1974 to 2021 June 14), Medline Epub Ahead of Print®, Medline In-Process®, Medline In-Data-Review & Other Non-Indexed Citations®, Medline Daily® and Medline® (1946 to June 14, 2021), and the Joanna Brigg Institute EBP Database® (Current to June 09, 2021), that are available through the Ovid® platform.
- Combination of simple keywords were employed in this literature search. These keywords included:
 1. (network **ADJ** spinal **ADJ** analysis)
 2. (somato **ADJ** respiratory **ADJ** integration) **OR** (somato-respiratory **ADJ** integration)

The keyword of “low back pain” was not included in this search, for the purpose of broadly identifying as many published studies on network spinal analysis (NSA) as possible. The search on the topic of “Somato Respiratory Integration” (SRI) was included after our review of the practitioner’s website (<https://www.clarityinhealing.com/>) indicated SRI was included as part of the treatment program.

- No limitations, such as on the language or year of publication, were implemented on any of the searches.
- Manual searches on the references of the articles that were retrieved in full, as well as within the references available in our Evidence-Based Practice Group article collection on low back pain, were also conducted. The Evidence-Based Practice Group article collection on low back pain is available as the result of daily literature surveillance c.q. on low back pain. For the purpose of this review, we identified and retrieved high quality systematic reviews (level of evidence 1. Appendix 1) on the efficacy/effectiveness of chiropractic or spinal manipulative therapy in treating (chronic) non-specific low back pain.

Results

- Literature search results:
 - Seven⁽¹⁻⁷⁾ published studies were identified through search No.1 while no published study was identified from search No.2. Upon examination of the titles and abstracts of these seven⁽¹⁻⁷⁾ studies, six^(1,2,3,5,6,7) studies were thought to be relevant and were retrieved in full for further appraisal.
 - Manual search of the references of the six^(1,2,3,5,6,7) studies that were retrieved in full yielded a further two^(8,9) studies and we retrieved these two^(10,11) recent, high quality systematic reviews (level of evidence 1. Appendix 1) on the management/treatment of non-specific low back pain.
- In 1996, Donald Epstein published his model and protocols on network spinal analysis (NSA)⁽⁵⁾. Epstein chose the term “network”, as his intention was to include a wide variety of models, theories and chiropractic techniques, to capture the idea of a distributed network, and to also include the theory of a somatopsychic network. NSA arose out of a school of thought within chiropractic that embraced the original, vitalistic principles of the field and that recognizes an “innate intelligence” that coordinated all functions of the body through the nervous system⁽³⁾. The original tenets of chiropractic held that mechanical disturbances in the spine and nervous system could affect the optimum functioning of this innate intelligence hence interfering with the overall health and well-being of the patient. The basis of NSA philosophy supposedly distinguishes the NSA scope of practice from another school of thought in chiropractic that developed in the 1970s, which was based on the palliation of musculoskeletal conditions in accordance with a biomedical or “treatment” model. NSA further developed into a low force spinal application (i.e., light touches to specific spinal regions) to enhance the cognitive and precognitive awareness of the patient’s spinal structures,

body tension patterns and the development of unique “somatopsychic” and “respiratory” waves of skeletal motor activity, supposedly to assist in improved self-organization of the patient’s spine and nervous system.

- Of the six^(1,2,3,5,6,7) studies identified through the literature search and two^(7,8) studies from the manual search, none of these studies provided any data to support the efficacy/effectiveness of NSA in treating (chronic) non-specific low back pain.
- A high quality systematic review (level of evidence 1. Appendix 1) assessing the benefits and risks of 15 pharmacologic and non-pharmacologic therapies used in the management of chronic non-specific low back pain in adults⁽¹⁰⁾ concluded that there was low certainty of evidence to support spinal manipulation therapy or chiropractic treatment on these patients. Further, a high quality systematic review based treatment guideline for LBP and sciatica in adults⁽¹¹⁾ recommends that spinal manipulation therapy or chiropractic treatment should not be recommended for (chronic) non-specific low back pain or sciatica as an independent intervention, and manipulation/mobilisation should only be considered as *part* of a treatment programme low back pain patients with or without sciatica. Further the guideline stated that spinal manipulation therapy or chiropractic treatment should not be a mandatory component of a treatment programme, but that these could be offered as one optional modality that may be considered alongside exercise.

Summary/Conclusion

- At present, there is no data to support the efficacy/effectiveness of NSA in treating (chronic) non-specific low back pain.
- At present, high quality systematic reviews found low certainty of evidence to support spinal manipulation therapy or chiropractic treatment, while a high quality treatment guideline does not recommend spinal manipulation therapy or chiropractic treatment as a stand-alone/independent treatment for non-specific low back pain patient.

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Appendix 1

WorkSafeBC - Evidence-Based Practice Group Levels of Evidence (adapted from 1,2,3,4)

1	Evidence from at least 1 properly randomized controlled trial (RCT) or systematic review of RCTs.
2	Evidence from well-designed controlled trials without randomization or systematic reviews of observational studies.
3	Evidence from well-designed cohort or case-control analytic studies, preferably from more than 1 centre or research group.
4	Evidence from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments could also be included here.
5	Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees.

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