



# A Paradigm Shift Towards Complementary and Alternative Medicine in the Management of Low Back Pain

Fadi M Al Zoubi\*

Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hong Kong SAR, China

\*Corresponding author: Fadi M Al Zoubi, Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hong Kong SAR, China

Received: 📅 September 12, 2023

Published: 📅 September 21, 2023

## Abstract

This paper provides a meticulous review of the growing interest and utilization of complementary and alternative medicine (CAM) in the management of low back pain (LBP). It outlines the CAM therapies that are recommended in recent clinical practice guidelines. CAM therapies, including manual therapy, acupuncture, massage, yoga, and others, are discussed in terms of their effectiveness in treating different types of LBP. Moreover, the review discusses the need for additional scientific scrutiny of less-studied CAM therapies, suggesting that high-quality randomized controlled trials and cost-effectiveness analyses are necessary to improve our understanding and outcomes for LBP patients.

## Introduction

Low back pain (LBP) is a ubiquitous condition that frequently leads to significant activity limitation, restriction in participation, absenteeism from work, and hospitalization [1,2]. Its prevalence tends to escalate with advancing age and is more commonly observed among females [3]. A global estimation done in 2020 shows over 619 million individuals being impacted by LBP [4]. The occurrence of LBP is irrespective of economic status, affecting high-, middle-, and low-income nations alike. The condition poses a substantial clinical and economic strain on healthcare systems due to its high prevalence [5]. LBP varies in its duration of persistence, and therefore it is typically categorized into three distinct types: acute, subacute, and chronic [6]. Acute LBP is brief, lasting fewer than six weeks; subacute LBP prolongs for a period between six and twelve weeks; whereas chronic LBP is identified by its long-term persistence beyond twelve weeks [6].

Additionally, LBP can be classified into three types: nonspecific (NSLBP), specific, and radicular [6]. NSLBP is the most common type of LBP, accounting for about 90% of cases.

The term 'nonspecific' is derived from the absence of a discernible pathoanatomical source. While the origins of the pain could refer to an injury in the muscles, ligaments, joints, or discs, the precise tissues instigating the discomfort remain undetermined [6]. Specific LBP, in contrast, corresponds to an identifiable underlying cause or condition [6]. Examples could encompass pain resulting from a vertebral compression fracture, ankylosing spondylitis, or spinal malignancies. Specific LBP, in contrast, corresponds to an identifiable underlying cause or condition. Examples could encompass pain resulting from a vertebral compression fracture, ankylosing spondylitis, or spinal malignancies [6].

## Complementary And Alternative Medicine as an Evidence-Based Therapy

Contemporary clinical practice guidelines have recently undergone a paradigm shift, advocating non-pharmacological and non-surgical management of LBP, inclusive of complementary and alternative medicine (CAM), as first-line treatment strategies [7-11]. CAM is now perceived as a complementary approach, symbiotic

with traditional, conventional therapy [12]. The use of CAM to manage patients with LBP is gaining popularity. A study conducted on the German population found that 54% of patients with LBP received CAM therapy [13]. Likewise, in America, over 41% of individuals suffering from disabling LBP reported resorting to CAM therapy, with an appreciable 58% attesting to its effectiveness [14]. Furthermore, approximately 44% of American women diagnosed with LBP sought treatment from both conventional and CAM practitioners [15]. This percentage was higher among Australian women, with 63% consulting conventional and CAM practitioners to manage their LBP [16]. A survey conducted in Canada revealed that 39% of chronic LBP patients had received CAM [17]. In Hong Kong, 72% of Chinese patients with LBP sought CAM therapy [18].

CAM therapies encompass a wide range of non-mainstream practices, such as acupuncture, manual therapy, chiropractic manipulation, massage therapy, osteopathy, herbal medicine, aromatherapy, homeopathy, meditation, hypnotherapy, yoga, Tai Chi, Qi Gong, and other approaches [12]. However, not all of these approaches have been explored in previous studies [19]. A systematic review conducted in 2020 evaluated the quality of clinical practice guidelines for patients with LBP and identified 22 guidelines offering recommendations for certain types of CAM therapy [19]. The subsequent guidelines that were published after this review have increasingly incorporated recommendations on CAM therapy [9, 20-27]. This review critically discusses the recommended management strategies for LBP patients utilizing CAM therapy, as expounded in the extant body of literature and evaluated in contemporary clinical practice guidelines.

### CAM for NBLP

Manual therapy, including mobilization or manipulation, was recommended for acute and subacute NSLBP patients [21, 28-30]. Certain guidelines also recommended its use for chronic cases [21,28,31]. Conversely, certain guidelines deemed the existing evidence either inconclusive or insufficient to advocate manual therapy for NSLBP patients [24, 31, 32]. The scenario is similar for massage therapy in managing NSLBP; certain guidelines recommend it for both acute and chronic cases [28], while others only prescribe it for chronic [21] or acute and subacute incidents separately [29]. Conversely, other guidelines found the evidence to be inconclusive to recommend massage therapy to NSLBP patients [24, 32]. In regard to the application of yoga, it was recommended by the American Physical Therapy Association (APTA) [28], the North American Spine Society (NASS) [24], and the American College of Physicians (ACP) [29] for chronic NSLBP. However, the Department of Veterans Affairs and the Department of Defense (VA&DoD) [31] concluded that the available evidence is insufficient to support a recommendation for its use. One guideline, the ACP guideline [29], recommended Tai Chi as a treatment option for chronic NSLBP. Qi Gong remains a subject of controversy in relation to both acute and chronic NSLBP [31]. Pilates was also recommended as a potential treatment for chronic NSLBP [28].

Acupuncture was recommended for acute and chronic

NSLBP in three guidelines [27,29,33], while its effectiveness remains uncertain according to two guidelines [24,32]. The APTA recommended dry needling for acute cases [28], but the NASS guideline did not provide a conclusive recommendation [24]. The China Association of Acupuncture-Moxibustion's clinical practice guideline [33] suggested electroacupuncture, auricular acupuncture, moxibustion, and cupping therapy for both short-term and long-term NSLBP. The VA&DoD guideline [31] found the evidence insufficient for auricular acupuncture and cupping therapy.

### CAM for Radicular LBP

Manual therapy was recommended as a treatment option for patients with acute radicular LBP [9,22]. The effectiveness of massage therapy has been considered controversial for radicular LBP patients [34]. Acupuncture has been recommended for patients with subacute radicular LBP [22], although other guidelines suggest against its use regardless of the presence of radiculopathy [8,9].

### Cam For Lumbar Disc Herniation

The effectiveness of manual therapy for patients with lumbar disc herniation remains a subject of controversy [35]. The Korean medicine clinical practice guideline [25] recommends acupuncture, moxibustion, and Tuina manual therapy for lumbar intervertebral herniated disc patients.

### Conclusion

In conclusion, there is a significant paradigm shift toward CAM therapies in the management of LBP. This has resulted in a surge in clinical practice guidelines evaluating the efficacy of these CAM therapies. Despite this, only a small number of CAM therapies have undergone rigorous testing and scientific scrutiny. Therefore, there are research gaps in our understanding of the efficacy of the entire spectrum of CAM therapies. Thus, there is an imperative need to examine CAM therapies that have not been adequately investigated. To examine these untapped therapies, high-quality randomized controlled trials are needed. This should ideally be coupled with cost-effectiveness analyses in order to improve our comprehension of the economic impact of CAM therapies. Such efforts can provide greater awareness of CAM treatment options for LBP, facilitate therapy selection based on evidence, and ultimately improve outcomes for those suffering from this debilitating condition.

### References

- Hartvigsen J, Mark J Hancock, Alice Kongsted, Quinette Louw, Manuela L Ferreira, et al. (2018) What low back pain is and why we need to pay attention. *Lancet* 391(10137): 2356-2367.
- Mattila VM, Petri Sillanpää, Tuomo Visuri, Harri Pihlajamäki (2009) Incidence and trends of low back pain hospitalisation during military service--an analysis of 387,070 Finnish young males. *BMC Musculoskeletal Disord* 10: 10.
- GBD 2019 Diseases and Injuries Collaborators (2020) Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet* 396(10258): 1204-1222.

4. GBD 2021 Low Back Pain Collaborators (2023) Global, regional, and national burden of low back pain, 1990-2020, its attributable risk factors, and projections to 2050: a systematic analysis of the Global Burden of Disease Study 2021. *Lancet Rheumatol* 5(6): e316-e329.
5. Fatoye F, Tadesse Gebrye, Cormac G Ryan, Ushotaneffe Useh, Chidozie Mbada (2023) Global and regional estimates of clinical and economic burden of low back pain in high-income countries: a systematic review and meta-analysis. *Frontiers in Public Health* p. 11.
6. Maher C, M Underwood, R Buchbinder (2017) Non-specific low back pain. *Lancet* 389(10070): 736-747.
7. Foster NE, Johannes R Anema, Dan Cherkin, Roger Chou, Steven P Cohen, et al., (2018) Prevention and treatment of low back pain: evidence, challenges, and promising directions. *Lancet* 391(10137): 2368-2383.
8. National Guideline Centre (2016) National Institute for Health and Care Excellence: Guidelines, in Low Back Pain and Sciatica in Over 16s: Assessment and Management. National Institute for Health and Care Excellence (NICE), London, UK.
9. Stochkendahl MJ, Jens Aaboe, Margrethe Andersen, Mikkel Ø Andersen, Gilles Fournier, et al., (2018) National Clinical Guidelines for non-surgical treatment of patients with recent onset low back pain or lumbar radiculopathy. *Eur Spine J* 27(1): 60-75.
10. Wambeke P (2017) Low Back Pain And Radicular Pain: Assessment And Management.
11. Peter R Blanpied, Anita R Gross, James M Elliott, Laurie Lee Devaney, Derek Clewley, et al. (2017) Neck Pain: Revision 2017. *J Orthop Sports Phys Ther* 47(7): A1-A83.
12. (2019) National Center for Complementary and Integrative Health (NCCIH) Complementary, Alternative, or Integrative Health: What's In a Name?
13. Wolsko PM, David M Eisenberg, Roger B Davis, Ronald Kessler, Russell S Phillips (2003) Patterns and perceptions of care for treatment of back and neck pain: results of a national survey. *Spine (Phila Pa 1976)* 28(3): 292-297.
14. Ghildayal N, Pamela Jo Johnson, Roni L Evans, Mary Jo Kreitzer (2016) Complementary and Alternative Medicine Use in the US Adult Low Back Pain Population. *Glob Adv Health Med* 5(1): 69-78.
15. Broom AF, Emma R Kirby, David W Sibbritt, Jon Adams, Kathryn M Refshauge (2012) Use of complementary and alternative medicine by mid-age women with back pain: a national cross-sectional survey. *BMC Complement Altern Med* 12: 98.
16. Broom AF, Emma R Kirby, David W Sibbritt, Jon Adams, Kathryn M Refshauge (2012) Back pain amongst mid-age Australian women: a longitudinal analysis of provider use and self-prescribed treatments. *Complement Ther Med* 20(5): 275-282.
17. Foltz V, Viviane Adam, John R Penrod, Ann E Clarke, Bruno Fautrel, et al. (2005) Use of complementary and alternative therapies by patients with self-reported chronic back pain: a nationwide survey in Canada. *Joint Bone Spine* 72(6): 571-577.
18. Tsang VHM, Phoebe Hiu Wai Lo, Fong Tao Lam, Lulu Suet Wing Chung, Tin Yan Tang, et al. (2017) Perception and use of complementary and alternative medicine for low back pain. *J Orthop Surg (Hong Kong)* 25(3): 2309499017739480.
19. Ng JY, U Mohiuddin (2020) Quality of complementary and alternative medicine recommendations in low back pain guidelines: a systematic review. *Eur Spine J* 29(8): 1833-1844.
20. Bier JD, Wendy G M Scholten-Peeters , J Bart Staal, Jan Pool, Maurits W van Tulder, et al., (2018) Clinical Practice Guideline for Physical Therapy Assessment and Treatment in Patients With Nonspecific Neck Pain. *Phys Ther* 98(3): 162-171.
21. Bussi eres AE, Gregory Stewart, Fadi Al-Zoubi, Philip Decina, Martin Descarreaux, et al. (2018) Spinal Manipulative Therapy and Other Conservative Treatments for Low Back Pain: A Guideline From the Canadian Chiropractic Guideline Initiative. *J Manipulative Physiol Ther* 41(4): 265-293.
22. Thorson D, et al. (2018) Adult Acute and Subacute Low Back Pain. Institute for Clinical Systems Improvement (ICSI): Bloomington, MN, USA.
23. C ot e P, Silvano Mior, Arthur Ameis, Linda J Carroll, Margareta Nordin, et al., (2019) Non-pharmacological management of persistent headaches associated with neck pain: A clinical practice guideline from the Ontario protocol for traffic injury management (OPTiMa) collaboration. *Eur J Pain* 23(6): 1051-1070.
24. Enix D, Ryan A Tazell, Terry Trammell, Yakov Vorobeychik, Amy M Yahiro, et al. (2020) Evidence-Based Clinical Guidelines for Multidisciplinary Spine Care: Diagnosis & Treatment of Low Back Pain. *Spine J* 20(7): 998-1024.
25. Goo B, Min-Gi Jo, Eun-Jung Kim, Hyun-Jong Lee, Jae-Soo Kim, et al., (2022) Korean Medicine Clinical Practice Guidelines for Lumbar Herniated Intervertebral Disc in Adults: Based on Grading of Recommendations Assessment, Development and Evaluation (GRADE). *Healthcare (Basel)* 10(2) : 246.
26. Luites JWH, P P F M Kuijter, CTJ Hulshof, R Kok, M W Langendam, et al. (2022) The Dutch Multidisciplinary Occupational Health Guideline to Enhance Work Participation Among Low Back Pain and Lumbosacral Radicular Syndrome Patients. *J Occup Rehabil* 32(3): 337-352.
27. Chen HY, Jing-Lan Mu, Tat-Chi Ziea, Fung-Leung Ng Bacon, Li-Xing Lao, et al. (2022) Guideline Acupuncture for low back pain: a clinical practice guideline from the Hong Kong taskforce of standardized acupuncture practice. *J Tradit Chin Med* 42(1): 140-147.
28. George SZ, Julie M Fritz, Sheri P Silfies, Michael J Schneider, Jason M Beneciuk, et al. (2021) Interventions for the Management of Acute and Chronic Low Back Pain: Revision 2021. *J Orthop Sports Phys Ther* 51(11): Cpg1-cpg60.
29. Qaseem A, Nick Fitterman, Russell P Harris, Linda L Humphrey, Sandeep Vijan, et al. (2017) Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. *Ann Intern Med* 166(7): 514-530.
30. Task Force on the Low Back Pain Clinical Practice Guidelines (2016) American Osteopathic Association Guidelines for Osteopathic Manipulative Treatment (OMT) for Patients With Low Back Pain. *J Am Osteopath Assoc* 116(8): 536-49.
31. SS Pangarkar DGK, F Sandbrink, A Bevevino, K Tillisch, L Konitzer et al. (2022) VA/DoD clinical practice guideline for diagnosis and treatment of low back pain (version 3.0).
32. Chenot JF, Bernhard Greitemann, Bernd Kladny, Frank Petzke, Michael Pflingsten, et al., (2017) Non-Specific Low Back Pain. *Dtsch Arztebl Int* 114(51-52): 883-890.
33. Zhao H, Yuan ZHU, Si-nuo LI, Yu-xiu SUN , Ming-juan HAN, et al., (2016) Clinical practice guidelines of using acupuncture for low back pain. *World Journal of Acupuncture - Moxibustion* 26: 1-13.
34. Brosseau L, George A Wells, St ephane Poitras, Peter Tugwell, Lynn Casimiro, et al. (2012) Ottawa Panel evidence-based clinical practice guidelines on therapeutic massage for low back pain. *Journal of bodywork and movement therapies* 16(4): 424-455.
35. Kreiner DS, Steven W Hwang , John E Easa , Daniel K Resnick, Jamie L Baisden, et al. (2014) An evidence-based clinical guideline for the diagnosis and treatment of lumbar disc herniation with radiculopathy. *Spine J* 14(1): 180-191.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here: [Submit Article](#)

DOI: [10.32474/OAJCAM.2023.05.000205](https://doi.org/10.32474/OAJCAM.2023.05.000205)



### Open Access Journal of Complementary & Alternative Medicine Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles