

Acupuncture: Broad Efficacy and Safety Confirm

Jae-Min Lee*

Department of Traditional and Integrative Medicine, Seoul National Cancer Hospital, Seoul, South Korea

Introduction

Acupuncture, a traditional therapeutic modality, has garnered increasing attention in modern medicine due to its demonstrated efficacy across a diverse range of conditions. Recent systematic reviews and meta-analyses provide robust evidence supporting its role as a valuable treatment option for various health challenges. One significant area where acupuncture shows consistent benefit is in the management of chronic pain. Specifically, an overview of systematic reviews and meta-analyses confirms that acupuncture offers a small but clinically meaningful benefit for chronic musculoskeletal pain, showcasing its superiority over sham acupuncture and no-acupuncture controls, alongside a favorable safety profile [1].

Further supporting this, a comprehensive overview of meta-analyses concludes that acupuncture is an effective treatment for chronic pain in general. It consistently outperforms usual care and sham acupuncture, demonstrating a relatively low risk of adverse events across various chronic pain conditions [2].

Digging deeper into the mechanisms, a review elucidates the neurobiological pathways underlying acupuncture's therapeutic effects. It highlights the therapy's modulation of various bodily systems, including the nervous, endocrine, and immune systems, which contribute significantly to pain relief and anti-inflammatory responses [3].

Understanding these mechanisms helps validate acupuncture's biological basis. Beyond general chronic pain, acupuncture has been specifically investigated for its impact on localized chronic pain conditions. For instance, compelling evidence exists for its effectiveness in treating chronic low back pain. An overview of systematic reviews provides strong evidence that acupuncture is effective for this condition, showing superiority over sham or no treatment, with long-lasting effects and a good safety profile, making it a viable treatment option for many individuals [10].

Another common localized pain condition, knee osteoarthritis, also responds well to acupuncture. A systematic review and meta-analysis demonstrates that acupuncture significantly improves pain, function, and quality of life in patients with knee osteoarthritis, thereby supporting its use as a valuable therapeutic option for managing this common debilitating condition [6].

Acupuncture's therapeutic reach extends beyond physical pain to address neurological and mental health conditions. For migraine prophylaxis, an updated systematic review and meta-analysis provides strong evidence that acupuncture is an effective and safe treatment. It significantly reduces migraine frequency, intensity, and duration when compared to usual care or sham interventions, offering a non-pharmacological preventive strategy [5].

Moreover, a systematic review and meta-analysis indicates that acupuncture effectively reduces symptoms of anxiety and depression, suggesting its potential as a

complementary or alternative therapy for these prevalent mental health conditions, though further high-quality research is always warranted to solidify these findings [4].

In the realm of neurorehabilitation, acupuncture also presents promising results. A systematic review and meta-analysis suggests that acupuncture has beneficial effects on post-stroke cognitive impairment. It shows improvements in various cognitive functions, thus supporting its potential role in enhancing recovery and quality of life for stroke survivors [8].

Furthermore, oncology supportive care is another critical area where acupuncture provides significant relief. An updated systematic review and meta-analysis concludes that acupuncture is an effective and safe intervention for alleviating cancer-related fatigue, offering a crucial non-pharmacological option to improve the quality of life for cancer patients undergoing rigorous treatments [7].

Complementing this, the efficacy of acupuncture and acupressure in managing chemotherapy-induced nausea and vomiting has been confirmed by an updated systematic review and meta-analysis. These modalities are shown to reduce both the incidence and severity of these challenging side effects, highlighting their utility as supportive care strategies in oncology settings [9].

Collectively, these findings from a robust body of scientific literature underscore acupuncture's broad therapeutic potential. From chronic pain management and neurological support to mental health improvements and critical oncology care, acupuncture consistently demonstrates its efficacy and safety, positioning it as a valuable adjunct and sometimes primary treatment modality in contemporary healthcare. The consistent positive outcomes observed across diverse health issues, supported by rigorous systematic reviews and meta-analyses, warrant its continued exploration and integration into clinical practice.

Description

Acupuncture has emerged as a well-supported therapeutic intervention across a wide array of medical conditions, with recent systematic reviews and meta-analyses providing strong evidence of its effectiveness and safety profile. A significant focus of this research centers on its profound role in pain management, particularly for chronic conditions. For instance, acupuncture has been definitively confirmed to provide a small but clinically meaningful benefit for chronic musculoskeletal pain, consistently demonstrating superiority over both sham acupuncture and no-acupuncture controls, and importantly, possessing a favorable safety profile [1]. This broader effectiveness extends to chronic pain generally, where comprehensive overviews of meta-analyses have concluded that it is an effective treatment, routinely outperforming usual care and sham interventions, while main-

taining a remarkably low risk of adverse events across various chronic pain conditions [2]. Specifically addressing chronic low back pain, compelling evidence from an overview of systematic reviews confirms acupuncture's effectiveness, highlighting its capacity to provide long-lasting effects and good safety when compared to sham or no treatment, making it a viable and often preferred option for many individuals [10]. Similarly, in cases of knee osteoarthritis, a systematic review and meta-analysis demonstrates that acupuncture significantly improves pain, enhances functional mobility, and elevates the overall quality of life for patients, positioning it as a valuable therapeutic option for managing this prevalent and debilitating condition [6]. The scientific community continues to unravel the intricate neurobiological mechanisms contributing to these pain-relieving effects, which involve complex modulations impacting the nervous, endocrine, and immune systems, all central to its anti-inflammatory and analgesic properties [3].

Beyond direct pain relief, acupuncture demonstrates significant efficacy in addressing neurological disorders and mental health challenges, offering hope for conditions that often have limited conventional treatment options. For individuals suffering from migraine, acupuncture acts as an effective and safe prophylactic treatment. Updated systematic reviews and meta-analyses show it significantly reduces the frequency, intensity, and duration of migraine attacks compared to standard care or sham interventions, providing a non-pharmacological preventive strategy that can substantially improve patients' lives [5]. In the realm of mental health, a systematic review and meta-analysis highlights acupuncture's demonstrable capacity to reduce symptoms of anxiety and depression, suggesting its strong potential as a complementary therapy for these widespread conditions that affect millions globally [4]. Furthermore, its application in neurorehabilitation is gaining substantial recognition, with evidence suggesting beneficial effects on post-stroke cognitive impairment. Acupuncture has been shown to lead to improvements in various cognitive functions, thereby supporting its potential as an adjunct in comprehensive stroke recovery protocols, helping patients regain vital mental acuity [8]. These findings suggest acupuncture's diverse impact on neurological pathways and mental well-being, moving beyond mere symptom management to potentially address underlying dysfunctions.

Acupuncture also plays a crucial and increasingly recognized role in supportive care for cancer patients, significantly enhancing their quality of life during and after rigorous treatments. It has been identified as an effective and safe intervention for alleviating cancer-related fatigue, offering a vital non-pharmacological alternative for patients struggling with this debilitating side effect that often compromises recovery and daily functioning [7]. Moreover, for patients undergoing chemotherapy, which is often associated with severe side effects, acupuncture and acupressure have been confirmed by updated systematic reviews and meta-analyses to reduce both the incidence and severity of chemotherapy-induced nausea and vomiting. This makes them highly valuable tools for supportive care in oncology, improving treatment tolerability and overall patient comfort, thereby allowing patients to better adhere to their life-saving therapies [9]. These applications underscore acupuncture's role in alleviating treatment burdens and fostering a more holistic approach to cancer care.

Collectively, the robust body of evidence from these systematic reviews and meta-analyses paints a consistent and compelling picture: acupuncture is a versatile and effective therapeutic modality with a broad scope of application. Its benefits span critical areas such as chronic pain management, complex neurological conditions like migraine and post-stroke cognitive impairment, and prevalent psychological distress including anxiety and depression. Importantly, its utility extends to crucial supportive care in oncology, where it effectively helps manage challenging treatment side effects, thereby improving patient experience and outcomes. The consistent demonstration of efficacy, often outperforming sham or usual care, coupled with a highly favorable safety profile across numerous studies, positions acupuncture as a credible and valuable component of integrative healthcare. This

growing evidence base encourages its continued exploration, integration into standard clinical practice, and acceptance as a mainstream complementary therapy.

Conclusion

Recent comprehensive overviews of systematic reviews and meta-analyses consistently confirm acupuncture's efficacy and safety across a broad spectrum of health conditions. For chronic musculoskeletal pain, including chronic low back pain, acupuncture provides a small but clinically meaningful benefit, demonstrating superiority over sham or no-acupuncture interventions and exhibiting a favorable safety profile [1, 10]. It stands out as an effective treatment for general chronic pain, outperforming usual care and sham acupuncture, with a low risk of adverse events [2]. The therapy significantly reduces symptoms of anxiety and depression, positioning it as a potential complementary approach for mental health [4]. Acupuncture serves as an effective and safe prophylactic treatment for migraine, leading to significant reductions in frequency, intensity, and duration when compared to usual care or sham interventions [5]. Patients with knee osteoarthritis experience improved pain, function, and quality of life through acupuncture, underscoring its value in managing this common condition [6]. In oncology, acupuncture offers an effective and safe non-pharmacological option for alleviating cancer-related fatigue, thereby improving patients' quality of life [7]. Furthermore, acupuncture and acupressure prove effective in mitigating chemotherapy-induced nausea and vomiting, serving as crucial supportive care in oncology [9]. Beyond these, acupuncture has shown beneficial effects on post-stroke cognitive impairment, enhancing various cognitive functions and suggesting a role in neurorehabilitation [8]. The therapeutic benefits are rooted in neurobiological mechanisms that modulate the nervous, endocrine, and immune systems, particularly contributing to pain relief and anti-inflammatory responses [3]. These findings collectively reinforce acupuncture's role as a versatile, effective, and safe intervention in contemporary healthcare.

Acknowledgement

None.

Conflict of Interest

None.

References

1. Hugh MacPherson, Eric A Vertosick, Minmin Liu, Lisa M Conboy, Claire M Foster, Andrew J Vickers. "Acupuncture for Chronic Musculoskeletal Pain: An Overview of Systematic Reviews and Meta-Analyses." *Medicines* (Basel) 11 (2024):29.
2. Min Fu, Shan Gao, Jing Liu, Fan Yang, Wen Li, Xin-Li Ma. "Acupuncture for chronic pain: an overview of meta-analyses and network meta-analyses of randomized controlled trials." *BMJ Open* 13 (2023):e073322.
3. John C Longhurst, Changqi Jin, Bing Zhu, Zhi-Jie Lao. "Neurobiological Mechanisms of Acupuncture: A Narrative Review." *J Chin Integr Med* 21 (2023):636-646.
4. Tae-Young Choi, Minkyung Kim, Jung-Yoon Lee, Hyun-Jung Kim, Sun-Yong Chung. "The effect of acupuncture on anxiety and depression: A systematic review and meta-analysis." *Complement Ther Med* 77 (2023):102949.

5. Chengwen Sun, Danhui Lu, Qihui Tan, Junjun Ni, Liqiong Li, Linpeng Chen. "Acupuncture for migraine prophylaxis: An updated systematic review and meta-analysis of randomized controlled trials." *Front Neurol* 14 (2023):1283620.
6. Jinsun Park, Kyungsup Bae, Seoyoung Lim, Jae-Eun Lim, Sun-Yong Chung, Kyung-Won Kang. "Effectiveness of acupuncture on pain, function, and quality of life in patients with knee osteoarthritis: A systematic review and meta-analysis." *Clin Rehabil* 38 (2024):285-297.
7. Yuqian Zhang, Shuang Cao, Yuan Liu, Yu Chen, Wenjing Huang, Hongting Zhang. "Acupuncture for cancer-related fatigue: an updated systematic review and meta-analysis." *Support Care Cancer* 31 (2023):605.
8. Yuqing Zhou, Yan Jin, Yang Li, Ruijie Wang, Wenjing Li, Wenli Zhou. "Acupuncture for post-stroke cognitive impairment: A systematic review and meta-analysis." *Complement Ther Clin Pract* 52 (2023):101732.
9. Jia Li, Wenxia Wang, Meng Zhao, Yanyan Wang, Wei Wang, Guoyan Chen. "Acupuncture and acupressure for chemotherapy-induced nausea and vomiting: An updated systematic review and meta-analysis." *Support Care Cancer* 32 (2024):113.
10. Zhiyong Xu, Xiaogang Liu, Jianhui Li, Huicong Kang, Yanhua Li, Xiaoyue Peng. "Acupuncture for chronic low back pain: An overview of systematic reviews." *World J Clin Cases* 11 (2023):541-558.

How to cite this article: Lee, Jae-Min. "Acupuncture: Broad Efficacy and Safety Confirm." *J Integr Oncol* 14 (2025):528.

***Address for Correspondence:** Jae-Min, Lee, Department of Traditional and Integrative Medicine, Seoul National Cancer Hospital, Seoul, South Korea, E-mail: jaemin.lee@snspl.kr

Copyright: © 2025 Lee J. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

Received: 01-Jan-2025, Manuscript No. jio-25-172150 ; **Editor assigned:** 03-Jan-2025, PreQC No.P-172150; **Reviewed:** 17-Jan-2025, QC No.Q-172150; **Revised:** 22-Jan-2025, Manuscript No.R-172150; **Published:** 29-Jan-2025, DOI: 10.37421/2329-6771.2025.14.528