

# Herbal Medicine in Respiratory Health: Science and Impact

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## Introduction

Recent advancements in natural medicine have brought increased attention to the therapeutic potential of Traditional Chinese Medicine (TCM) in addressing a spectrum of acute respiratory infections. A comprehensive review meticulously explores various herbal formulations commonly employed within TCM, elucidating their efficacy in managing these conditions. Furthermore, the study meticulously highlights the potential underlying mechanisms through which these traditional remedies exert their beneficial effects, alongside their practical clinical applications, providing a robust foundation for further research and clinical integration [1].

Building upon the understanding of traditional approaches, another significant article reviews the pivotal role of traditional herbal medicines in the prevention and treatment of pneumonia specifically related to COVID-19. This work delves into particular formulations, examining their proposed antiviral and anti-inflammatory properties, which are crucial in combating the multifaceted pathology of COVID-19. Such research offers valuable insights into integrating complementary therapies during global health crises and underscores the continuous relevance of ancient medical wisdom in modern challenges [2].

A systematic review and meta-analysis provide robust evidence regarding the efficacy and safety of herbal therapies for chronic obstructive pulmonary disease (COPD). This rigorous evaluation identified beneficial effects on lung function and improved quality of life in a subset of patients. The findings from such analyses are critical for informing clinical guidelines and patient choices, demonstrating that specific herbal interventions can offer tangible benefits for individuals struggling with long-term respiratory conditions when supported by systematic evidence [3].

Beyond chronic conditions, natural compounds are increasingly recognized as promising therapeutic agents for allergic asthma. A dedicated review explores their multifaceted properties, including anti-inflammatory, immunomodulatory, and bronchodilatory effects. This highlights the potential for developing new drug candidates derived from natural sources, offering alternative or adjunctive treatments that may reduce reliance on conventional pharmaceuticals, particularly for patients seeking holistic management strategies for their allergic asthma [4].

Further broadening the scope of herbal applications in asthma management, a comprehensive review meticulously examines various traditional herbal medicines utilized globally for managing bronchial asthma. This study delves into their ethnomedicinal uses, phytochemistry, and observed pharmacological activities. By documenting the diverse global practices and the scientific basis behind them, this review provides a rich resource for understanding the worldwide impact and potential of herbal remedies in alleviating asthma symptoms and improving patient well-being [5].

The exploration of natural agents extends to specific viral infections, as evidenced by an article examining the potential of medicinal plants and their derived compounds in treating respiratory syncytial virus (RSV) infection. This research focuses on identifying natural agents with confirmed antiviral properties, which could lead to novel therapeutic strategies for RSV, a common and often severe respiratory pathogen. Such investigations are vital in the ongoing search for effective and safe antiviral treatments from botanical sources [6].

Traditional Chinese Medicine (TCM) plays an increasingly significant role in the comprehensive management of chronic respiratory diseases, as illuminated by a review of recent evidence. This work emphasizes TCM's integrated therapeutic approaches, which encompass both prevention and treatment. It showcases how TCM can complement conventional medicine, offering a holistic perspective to improve long-term outcomes for patients with persistent respiratory ailments, thereby enriching the therapeutic landscape available to clinicians and patients [7].

In the context of acute respiratory conditions, a systematic review and meta-analysis rigorously assess the efficacy and safety of herbal medicine as a treatment for acute bronchitis. This study offers valuable insights into the potential benefits of herbal interventions compared to conventional therapies. By synthesizing existing evidence, it contributes to a clearer understanding of when and how herbal medicine can be effectively and safely incorporated into the management protocols for acute bronchitis, particularly for those seeking non-pharmaceutical options [8].

Addressing a specific demographic, a narrative review investigates the application of traditional and complementary medicine for respiratory conditions in children. This review discusses common herbal remedies and practices tailored for pediatric use, recognizing the unique considerations for treating younger patients. It sheds light on the growing interest in natural health solutions for children's respiratory issues, while also underscoring the importance of safety and evidence-based practice in this vulnerable population [9].

Finally, the current status of medicinal plants in treating chronic obstructive pulmonary disease (COPD) is explored in a systematic review. This study identifies promising botanicals and their active compounds that demonstrate potential to improve patient outcomes. By meticulously cataloging the latest research, it helps prioritize future investigations into these plant-derived compounds, aiming to develop more effective and sustainable treatments for COPD, a debilitating global health concern [10].

## Description

A comprehensive review delves into various herbal formulations from Traditional Chinese Medicine (TCM) used for managing acute respiratory infections. This study highlights their potential mechanisms of action and explores their clinical applications, providing a foundational understanding of how these traditional remedies operate. By detailing both the physiological effects and practical usage, the review contributes significantly to the integration of TCM principles into contemporary respiratory care, suggesting avenues for further research into natural therapeutic options for common and severe infections [1].

Focusing on contemporary global health challenges, an article specifically examines the critical role of traditional herbal medicines in the prevention and treatment of COVID-19 related pneumonia. This research scrutinizes particular formulations, investigating their documented antiviral and anti-inflammatory effects. The insights derived are invaluable for public health strategies, demonstrating how established traditional practices can be adapted and scientifically validated to address emerging infectious diseases, offering a complementary approach to conventional medical interventions [2].

Further contributing to evidence-based natural medicine, a systematic review and meta-analysis provide a thorough evaluation of herbal therapies for chronic obstructive pulmonary disease (COPD). The analysis reveals beneficial effects on lung function and an enhanced quality of life for certain patient groups. Such rigorous scientific assessment is crucial for establishing the credibility and utility of herbal treatments, guiding clinicians and patients in making informed decisions about alternative or adjunctive therapies for complex chronic conditions like COPD [3].

In the realm of allergic conditions, a review identifies natural compounds as particularly promising therapeutic agents for allergic asthma. It meticulously explores their diverse pharmacological properties, including their anti-inflammatory, immunomodulatory, and bronchodilatory capabilities. This work underscores the potential of biodiscovery to yield novel treatments for asthma that may offer fewer side effects or greater efficacy for certain patient profiles, moving towards personalized and naturally derived therapeutic strategies [4].

Expanding upon the global application of traditional remedies, a comprehensive review surveys various traditional herbal medicines employed worldwide for the management of bronchial asthma. The review details their ethnomedicinal uses, elucidates their phytochemistry, and describes their pharmacological activities. This global perspective is vital for appreciating the cultural diversity of medicine and for identifying widely recognized or under-explored plant resources that could lead to new asthma treatments or better management protocols [5].

The treatment of specific viral infections also benefits from natural product research, as highlighted by an article exploring medicinal plants and their derived compounds for respiratory syncytial virus (RSV) infection. This research endeavors to identify natural agents possessing significant antiviral properties against RSV, a common cause of severe respiratory illness, particularly in children. The identification of such compounds is a critical step towards developing new antiviral drugs with potentially broader applicability and reduced resistance [6].

A recent review consolidates evidence regarding the increasing role of Traditional Chinese Medicine (TCM) in both the prevention and treatment of various chronic respiratory diseases. The article emphasizes TCM's integrated therapeutic approaches, which often combine herbal remedies with other modalities like acupuncture. This holistic perspective is valuable for long-term patient care, offering a framework for managing chronic conditions that extends beyond symptomatic relief to address underlying imbalances [7].

For acute respiratory conditions, a systematic review and meta-analysis provides an assessment of the efficacy and safety of herbal medicine for acute bronchitis. This study offers valuable comparative insights into the benefits of herbal inter-

ventions versus conventional treatments. The findings are instrumental in guiding clinical practice, particularly for patients who may prefer natural options or for whom conventional treatments are contraindicated or less effective, offering an evidence-based pathway for herbal use [8].

Specifically addressing the pediatric population, a narrative review investigates the application of traditional and complementary medicine for respiratory conditions in children. It discusses common herbal remedies and practices, taking into account the unique physiological and developmental considerations of young patients. This review is essential for fostering safe and effective natural health practices for children, highlighting the need for careful consideration and professional guidance [9].

Finally, a systematic review comprehensively explores the current status of medicinal plants in treating chronic obstructive pulmonary disease (COPD). This research identifies promising botanicals and their active compounds that show potential for improving patient outcomes. The review serves as a critical resource for future drug discovery and development, pointing toward natural product candidates that could offer novel therapeutic avenues for this debilitating pulmonary condition [10].

## Conclusion

This collection of research articles underscores the significant and growing role of traditional herbal medicine in managing a wide spectrum of respiratory conditions. Reviews cover the application of Traditional Chinese Medicine (TCM) for acute respiratory infections, COVID-19 related pneumonia, and chronic respiratory diseases, highlighting their potential mechanisms and integrated therapeutic approaches. Systematic reviews and meta-analyses provide evidence for the efficacy and safety of herbal therapies in conditions such as chronic obstructive pulmonary disease (COPD) and acute bronchitis, demonstrating beneficial effects on lung function and quality of life. Natural compounds are also explored as promising agents for allergic asthma and as potential antiviral treatments for respiratory syncytial virus (RSV). Furthermore, the literature addresses the use of traditional and complementary medicine for respiratory conditions in children and investigates the current status of medicinal plants in treating COPD. Collectively, these studies emphasize the global relevance, diverse applications, and scientific validation of herbal interventions in respiratory health, from acute infections to chronic debilitating diseases.

## Acknowledgement

None.

## Conflict of Interest

None.

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**How to cite this article:** Sharma, Ayesha. "Herbal Medicine in Respiratory Health: Science and Impact." *Alt Integr Med* 14 (2025):600.

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**Received:** 03-Nov-2025, Manuscript No. aim-25-178057; **Editor assigned:** 05-Nov-2025, PreQC No. P-178057; **Reviewed:** 19-Nov-2025, QC No. Q-178057; **Revised:** 24-Nov-2025, Manuscript No. R-178057; **Published:** 29-Nov-2025, DOI: 10.37421/2427-5162.2025.14.600