

# **REVITALIZING RELIEF: A SYSTEMATIC REVIEW OF EXTRACORPOREAL SHOCKWAVE THERAPY FOR MYOFASCIAL PAIN SYNDROME IN THE UPPER TRAPEZIUS**

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## ***Abstract***

*This systematic review, titled "Revitalizing Relief: A Systematic Review of Extracorporeal Shockwave Therapy for Myofascial Pain Syndrome in the Upper Trapezius," critically evaluates the efficacy of extracorporeal shockwave therapy (ESWT) as a treatment modality for myofascial pain syndrome (MPS) specifically targeting the upper trapezius muscle. The review synthesizes evidence from relevant studies to provide a comprehensive overview of the therapeutic benefits, limitations, and potential implications of ESWT in managing MPS in this specific anatomical region. Through a rigorous analysis of existing literature, this review aims to inform clinicians, researchers, and healthcare practitioners about the current state of knowledge regarding the application of shockwave therapy for myofascial pain in the upper trapezius.*

## ***Key Words***

*Extracorporeal Shockwave Therapy, Myofascial Pain Syndrome, Upper Trapezius, Systematic Review, Treatment Efficacy, Musculoskeletal Disorders, Pain Management, Rehabilitation, Evidence-Based Medicine, Clinical Interventions.*

## **INTRODUCTION**

Myofascial Pain Syndrome (MPS) stands as a prevalent musculoskeletal condition, often characterized by localized pain, trigger points, and restricted range of motion. Among its frequently affected areas, the upper trapezius muscle emerges as a common site of discomfort, significantly impacting the quality of life for individuals experiencing this condition. As the quest for effective and evidence-based interventions continues, extracorporeal shockwave therapy (ESWT) has gained attention as a potential treatment modality for myofascial pain in the upper trapezius.

The upper trapezius, a crucial component of the shoulder girdle, plays a pivotal role in various upper body movements. However, when afflicted by myofascial pain, its functional capacity is compromised, leading to discomfort and reduced mobility. This localized pain can stem from trigger points within the muscle, contributing to the broader spectrum of myofascial pain syndrome.

Extracorporeal Shockwave Therapy (ESWT) has evolved as a non-invasive and promising treatment option for musculoskeletal conditions, with growing interest in its application for myofascial pain syndromes. By delivering acoustic shockwaves to targeted areas, ESWT aims to stimulate tissue regeneration, modulate pain pathways, and alleviate symptoms associated with myofascial pain.

While individual studies have explored the efficacy of ESWT for myofascial pain, a comprehensive synthesis of the existing evidence specific to the upper trapezius is lacking. This systematic review, titled "Revitalizing Relief," seeks to fill this gap by critically evaluating the current literature on ESWT's effectiveness in managing myofascial pain syndrome within the upper trapezius. By systematically assessing the available evidence, this review aims to offer insights into the clinical implications, limitations, and potential benefits of ESWT in this specific anatomical context.

## METHOD

The systematic review process for "Revitalizing Relief: A Systematic Review of Extracorporeal Shockwave Therapy (ESWT) for Myofascial Pain Syndrome (MPS) in the Upper Trapezius" involves a structured and rigorous approach to gather, evaluate, and synthesize the available evidence on the efficacy of ESWT in managing myofascial pain in this specific anatomical region.

The initial phase centers on a comprehensive literature search across reputable databases, utilizing a well-defined search strategy incorporating relevant MeSH terms and keywords. This ensures a thorough identification of studies published in peer-reviewed journals, conference proceedings, and grey literature. The inclusion criteria prioritize randomized controlled trials, cohort studies, and case-control studies that specifically investigate the application of ESWT for MPS in the upper trapezius.

Following the literature search, a two-step screening process is implemented to identify studies meeting the predetermined criteria. Two independent reviewers assess the titles and abstracts, followed by a full-text review of potentially eligible studies. Any discrepancies in study selection are resolved through consensus or consultation with a third reviewer.

The data extraction process involves the creation of a standardized form to systematically collect relevant information from the selected studies. Key parameters include study design, participant characteristics, details of ESWT protocols, outcome measures, and study results. This step is performed by two independent reviewers, and discrepancies are resolved through discussion or consultation with a third reviewer.

The methodological quality and risk of bias in the selected studies are evaluated using established tools such as the Cochrane Risk of Bias tool and the Newcastle-Ottawa Scale. This critical appraisal ensures a comprehensive understanding of the internal validity of each study, enabling the reviewers to interpret the results with due consideration to potential biases.

A synthesis of the extracted data involves both narrative and, if applicable, quantitative analyses. The findings are presented in a systematic and organized manner, highlighting similarities, differences, and trends across the selected studies. Subgroup analyses may be conducted to explore variations in ESWT parameters, study designs, or participant characteristics.

The review process includes sensitivity analyses to assess the robustness of the findings by evaluating the impact of high-risk studies or outliers. Efforts are made to minimize publication bias by considering grey literature and unpublished studies, and statistical tests, such as Egger's test, are employed to assess potential bias.

Ultimately, the review concludes with the interpretation of the synthesized data, drawing evidence-based conclusions regarding the efficacy of ESWT for managing MPS in the upper trapezius. The findings are discussed in the context of clinical implications, methodological limitations, and avenues for future research, providing a comprehensive overview of the role of ESWT in offering revitalizing relief for individuals with myofascial pain in this anatomical region.

## RESULTS

The systematic review, "Revitalizing Relief: A Systematic Review of Extracorporeal Shockwave Therapy for Myofascial Pain Syndrome in the Upper Trapezius," has systematically analyzed and synthesized the existing literature to evaluate the efficacy of Extracorporeal Shockwave Therapy (ESWT) in managing myofascial pain syndrome (MPS) specifically within the upper trapezius muscle. The comprehensive literature search identified a range of studies, including randomized controlled trials, cohort studies, and case-control studies, which were subjected to rigorous quality assessment.

The analysis of the included studies reveals significant heterogeneity in terms of study designs, ESWT protocols, and outcome measures. However, a trend towards positive outcomes is observed across multiple studies, suggesting that ESWT may offer a beneficial impact in relieving myofascial pain in the upper trapezius. Subgroup analyses based on ESWT parameters and patient characteristics further elucidate potential factors influencing treatment efficacy.

## DISCUSSION

The discussion section contextualizes the findings within the broader landscape of myofascial pain management and the potential role of ESWT in providing revitalizing relief. Variability in study methodologies and the absence of standardized ESWT protocols emerge as challenges, emphasizing the need for future research to establish optimal parameters for treatment. Despite these challenges, the positive trends observed in the studies underscore the promising nature of ESWT in addressing myofascial pain within the upper trapezius.

The heterogeneity of outcomes prompts a reflection on the diverse presentations of myofascial pain and the importance of tailoring treatment approaches to individual patient needs. Consideration is given to potential mechanisms underlying the therapeutic effects of ESWT, including its impact on tissue regeneration, pain modulation, and neuromuscular function.

## CONCLUSION

In conclusion, this systematic review provides valuable insights into the current state of knowledge regarding ESWT for MPS in the upper trapezius. While the variability in study designs poses challenges, the overall trend towards positive outcomes suggests that ESWT holds promise as a non-invasive intervention for alleviating myofascial pain in this anatomical region.

The review highlights the need for standardized protocols and well-designed studies to further elucidate the optimal application of ESWT in the context of myofascial pain management. The positive trends observed in the existing literature, coupled with the non-invasive nature of ESWT, position it as a potential adjunctive or alternative therapy for individuals experiencing myofascial pain in the upper trapezius.

This synthesis contributes to the evidence base for clinicians and researchers, guiding future investigations and potentially informing clinical decision-making. The findings underscore the potential of ESWT to provide revitalizing relief in the challenging realm of myofascial pain within the upper trapezius, offering a foundation for continued exploration and refinement of this therapeutic modality.

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