



# Structured Yoga Protocols in Low Back Pain and Fibromyalgia: A Paradigm Shift in Pain Therapy

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## Abbreviations

VAS – Visual Analog Scale

ODI – Oswestry Disability Index

PGIC – Patient Global Impression of Change

FIQ – Fibromyalgia Impact Questionnaire

HADS – Hospital Anxiety and Depression Scale

## Introduction

Physical therapies, and in the last years Yoga, have increasingly emerged as a valuable therapeutic option in the management of chronic pain, offering benefits that extend beyond physical rehabilitation to encompass psychological well-being and quality of life [1]. Numerous studies have highlighted Yoga capacity to reduce pain intensity, improve mobility, and alleviate stress and anxiety [2,3]. Despite this evidence, Yoga has historically been classified as a complementary or alternative therapy, rarely embedded into standardized clinical pathways. This peripheral role has limited its potential impact in addressing the multidimensional aspects of pain medicine, where reproducible and measurable interventions are essential.

At the Pain Clinic of Fondazione Policlinico Universitario A. Gemelli IRCCS, we have sought to change this paradigm by formally incorporating yoga as a specific therapeutic intervention within our structured treatment protocols for specific conditions of chronic pain. Rather than being proposed as an optional complement, yoga now represents a defined component of the multidisciplinary management plans applied in our outpatient clinic. Two protocols exemplify this integration: one for chronic low back pain and another for fibromyalgia. The low back pain protocol has been developed for patients with pain persisting beyond three months. It combines conventional therapeutic measures, including pharmacological management, therapeutic infiltrations, electroacupuncture and radiofrequency procedures, together

with a yoga-based treatment delivered simultaneously as part of the protocol. Patients are specifically referred to specialized yoga centers, where targeted programs emphasize progressive spinal mobilization, stretching of paraspinal and pelvic muscles, postural retraining, and gentle strengthening of stabilizing musculature. Breathing exercises and mindfulness practices are incorporated to enhance awareness of body mechanics and foster relaxation. As per our outpatient clinic practice, assessments are conducted at baseline, 3 months, and 6 months using the Numerical Rating Scale (NRS) for pain intensity, the Oswestry Disability Index (ODI) for functional disability, and the Patient Global Impression of Change (PGIC). The fibromyalgia protocol was developed for patients experiencing widespread musculoskeletal pain, fatigue, and psychological comorbidities. It combines conventional therapeutic strategies, such as electroacupuncture, which has been routinely applied in our hospital for years, with a yoga-based component delivered in parallel as part of an integrated program. While conventional measures aim to reduce nociceptive signaling and improve overall functional balance, yoga specifically focuses on relaxation, sleep quality, and coping strategies, reinforcing the biopsychosocial dimension of care. The psychotherapeutic, specially cognitive-behavioral, and nutritional supports are other important pillars of the combined therapy of fibromyalgia. This multidimensional approach ensures that yoga is not an optional add-on but a recognized therapeutic element working alongside established treatments for optimizing quality of life of the patients. Outcome measures include the Numerical Rating Scale (NRS) for pain intensity, the Fibromyalgia Impact Questionnaire (FIQ) to evaluate functional status and quality of life, and the Hospital Anxiety and Depression Scale (HADS) to assess psychological well-being. Patients are reassessed at baseline, 3 months, and 6 months. Preliminary clinical experience has shown encouraging results in terms of pain reduction, with many patients reporting a reduction or discontinuation of pharmacological therapies. The shift of yoga from a complementary to a structural treatment within our clinical protocols reflects a meaningful paradigm change. By recognizing yoga as a specific intervention with defined objectives, measurable outcomes, and structured follow-up, we have moved beyond the notion of yoga as an “extra” therapy. Instead, it is now embedded into multidisciplinary care pathways, ensuring clinical oversight, reproducibility, and patient adherence. This integration aligns with contemporary models of patient-centered pain medicine and highlights yoga ability to act across biological, psychological, and social dimensions of chronic pain.

Looking ahead, the creation of these two initial protocols represents the foundation of a broader project within our outpatient clinic. We plan to extend the integration of yoga to other categories of chronic pain, such as neuropathic syndromes, where preliminary evidence already suggests potential benefit. Our future efforts will also focus on refining protocols by incorporating digital tools, such as wearable devices to monitor posture and telemedicine platforms to support adherence and follow-up 4. Another priority will be structured training of healthcare professionals in therapeutic yoga principles, ensuring interdisciplinary competence and seamless continuity of care. Furthermore, the establishment of a patient registry will provide valuable longitudinal data and form the basis for prospective studies, consolidating yoga as a validated, evidence-based intervention. Of course, tight collaboration with specialized Centers in Yoga treatment is an essential element for the success of the therapies.

## Conclusion

The structured treatment protocols developed at the Pain Clinic of Fondazione Policlinico Universitario A. Gemelli IRCCS for chronic low back pain and fibromyalgia demonstrate how yoga can evolve from a complementary practice into a standardized therapeutic component. By embedding yoga into formal outpatient pathways, we have expanded therapeutic options, reduced reliance on pharmacological treatments, and promoted a holistic, sustainable approach to chronic pain management. Our experience underscores the importance of innovation in pain therapy and highlights the potential for yoga, when guided by clinical rigor, to become a cornerstone of patient-centered care in the future.

## Conflict of Interest

The authors declare no conflict of interest.

## References

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