

Em pacientes com dor lombar crônica (P), a associação de acupuntura, bloqueios e rizotomia (I) apresenta maior eficácia na redução da incapacidade funcional (O) quando comparada apenas ao tratamento farmacológico e fisioterapêutico convencional (C) em um seguimento de 12 meses?

No direct evidence exists to determine whether the combination of acupuncture, blocks, and rhizotomy is more effective than conventional pharmacological and physiotherapy treatment for reducing functional disability in chronic low back pain patients at 12-month follow-up, as no identified study examined this specific combination intervention.

Abstract

No direct evidence was identified comparing the combination of acupuncture, blocks, and rhizotomy to conventional pharmacological and physiotherapy treatment for chronic low back pain at 12-month follow-up. The five sources reviewed examined individual intervention components separately rather than in combination. Evidence for individual components suggests short-term benefits: periradicular and facet blocks with corticosteroids demonstrated pain reduction in the first week with over 60% of patients achieving good outcomes without surgery, though evidence for periods exceeding six months was only moderate. Radiofrequency ablation showed 90% initial efficacy decreasing to 67.5% at six months in patients with facet syndrome refractory to conservative treatment. One randomized controlled trial comparing acupuncture alone to conventional treatment found statistically significant improvements in pain and functional disability favoring acupuncture ($P < 0.05$ to $P < 0.001$), though this study was limited to elderly patients aged 60-84 years and full text was unavailable.

The current evidence base cannot answer whether the combined intervention approach is superior to conventional treatment at 12 months. Only one study conducted 12-month follow-up, and it compared two types of injection blocks rather than the combination therapy of interest. The potential additive or synergistic effects of combining acupuncture, blocks, and rhizotomy remain unexplored, representing a significant gap in the literature for informing clinical decision-making regarding multimodal interventional approaches to chronic low back pain management.

Paper search

We performed a semantic search across the PubMed corpus.

We ran this query: "Em pacientes com dor lombar crônica (P), a associação de acupuntura, bloqueios e rizotomia (I) apresenta maior eficácia na redução da incapacidade funcional (O) quando comparada apenas ao tratamento farmacológico e fisioterapêutico convencional (C) em um seguimento de 12 meses?"

The search returned 500 total results from PubMed.

We retrieved 500 papers most relevant to the query for screening.

Screening

We screened in sources based on their abstracts that met these criteria:

- **Population Age and Condition:** Does this study include adult patients (≥ 18 years) diagnosed with chronic low back pain (duration ≥ 3 months) AND exclude patients with specific pathological causes such as malignancy, infection, fractures, or inflammatory conditions?

- **Intervention Type:** Does this study evaluate a combined treatment that includes ALL THREE of the following interventions: acupuncture AND nerve blocks AND rhizotomy (radiofrequency ablation)?
- **Control Group:** Does this study include appropriate control groups receiving only conventional pharmacological treatment and/or physiotherapy (not other experimental treatments)?
- **Outcome Measurement:** Does this study report functional disability using validated instruments (e.g., Oswestry Disability Index, Roland-Morris Disability Questionnaire) rather than focusing solely on pain reduction?
- **Study Design Quality:** Is this study a randomized controlled trial, systematic review, or meta-analysis (not a case report, case series, editorial, or conference abstract)?
- **Follow-up Duration:** Does this study include a follow-up period of at least 12 months to assess long-term effectiveness?

We considered all screening questions together and made a holistic judgement about whether to screen in each paper.

Data extraction

We asked a large language model to extract each data column below from each paper. We gave the model the extraction instructions shown below for each column.

- **Study Population:**

Extract characteristics of chronic low back pain patients, including:

- Definition of 'chronic' used (duration criteria)
- Sample size and demographics (age, gender)
- Baseline pain intensity and functional disability levels
- Inclusion/exclusion criteria specific to chronic low back pain
- Comorbidities or pain-related factors
- Setting (clinic, hospital, community)

- **Intervention Groups:**

Extract detailed description of all treatment approaches used, specifically noting:

- Group 1: Combined interventions (acupuncture + blocks + rhizotomy) - describe each component, frequency, duration, who delivered
- Group 2: Conventional treatment (pharmacological + physiotherapy) - specify medications, dosages, PT protocols
- Whether the study design matches the research question's comparison
- Any co-interventions or additional treatments allowed

- **Functional Disability Assessment:**

Extract how functional disability was measured in chronic low back pain patients, including:

- Specific instruments used (Oswestry Disability Index, Roland-Morris, etc.)
- Baseline disability scores for each group
- How 'reduction in functional disability' was defined
- Timing of assessments
- Minimum clinically important difference criteria if specified

- **12-Month Outcomes:**

Extract functional disability outcomes specifically at 12-month follow-up for chronic low back pain patients:

- Functional disability scores/changes at 12 months for each treatment group
- Statistical significance of differences between groups at 12 months
- Effect sizes or magnitude of disability reduction
- Proportion of patients achieving clinically meaningful improvement
- Dropout rates and reasons at 12-month follow-up

- **Comparative Effectiveness:**

Extract direct comparisons between combination therapy (acupuncture + blocks + rhizotomy) versus conventional treatment (pharmacological + physiotherapy) for chronic low back pain functional disability:

- Which approach was more effective and by how much
- Statistical tests used for between-group comparisons
- Confidence intervals for difference in disability reduction
- Any subgroup analyses showing differential effectiveness
- Authors' conclusions about relative efficacy

- **Study Design:**

Extract study methodology relevant to answering the research question:

- Study type (RCT, cohort, case-control, etc.)
- Randomization and blinding procedures
- Sample size calculation and power analysis
- Duration of follow-up (note if 12 months included)
- Risk of bias factors that might affect validity

- **Additional Context:**

Extract contextual factors that might affect applicability of findings to chronic low back pain management:

- Geographic location and healthcare setting
- Practitioner qualifications for acupuncture, blocks, rhizotomy
- Treatment protocols and standardization
- Adverse events or safety considerations
- Patient adherence and completion rates
- Factors that might influence treatment response in this population

Characteristics of Included Studies

This systematic review identified five sources relevant to the management of chronic low back pain, though none directly examined the specific combination of acupuncture, blocks, and rhizotomy compared to conventional pharmacological and physiotherapy treatment at 12-month follow-up.

Study	Full text retrieved?	Study Type	Population	Sample Size	Interventions Examined	Follow-up Duration
Lara Batistoni Zati et al., 2025	Yes	Prospective cohort study	Patients with sciatica and low back pain due to disc degeneration or spondylosis	1,800	Periradicular blocks and facet blocks with corticosteroids and lidocaine	12 months
Maria Fernanda Caselato Martins de Andrade et al., 2024	Yes	Integrative literature review	Patients with chronic musculoskeletal pain including low back pain	Not specified	Mindfulness, cognitive-behavioral therapy, physical activity, laser therapy, acupuncture	Not applicable
Anna Luisa Paiva Romano Bernardes et al., 2022	Yes	Systematic review of clinical trials and observational studies	Patients with chronic low back pain due to lumbar facet syndrome	972 patients across 12 studies	Radiofrequency ablation	Not explicitly mentioned
J. M. Nascimento et al., 2015	Yes	Integrative literature review	Patients with chronic low back pain	34 articles reviewed	Physical therapy, multidisciplinary approaches, aerobic exercises, combined treatments	Not explicitly mentioned
Y. Morales et al., 2009	No	Randomized controlled clinical trial	Patients aged 60-84 years with chronic sacrolumbalgia	82 patients (41 per group)	Acupuncture vs. conventional pharmacological treatment	Not mentioned

The included sources vary substantially in methodology and research focus. Only one study (Morales et al., 2009) was a randomized controlled trial directly comparing acupuncture to conventional treatment, though only its abstract was available. The largest study (Lara Batistoni Zati et al., 2025) followed 1,800 patients for 12 months but compared different injection-based interventions rather than the combination therapy of interest. Three of the five sources were literature reviews rather than primary studies.

Study Population Characteristics

Study	Definition of Chronic Pain	Age	Baseline Assessment Tools	Setting
Lara Batistoni Zati et al., 2025	Not explicitly defined; 12-month follow-up implied chronicity	Not specified	VAS and ODI	Clinical/hospital setting
Maria Fernanda Caselato Martins de Andrade et al., 2024	>12 weeks duration	Higher incidence above 65 years (31%)	Not specified	General literature review
Anna Luisa Paiva Romano Bernardes et al., 2022	Chronic low back pain refractory to conservative treatment	Age ranges provided in tables	VAS and ODI	Clinical setting implied
J. M. Nascimento et al., 2015	Pain persisting >6 weeks without improvement	Adults >18 years	RDQ, ODI, ALBPS, Quebec, LBPRS	Not specified
Y. Morales et al., 2009	Not explicitly defined	60-84 years	Likert test (pain) and Waddell test (function)	Hernest Chutman clinic, Matanzas

The studies utilized varying definitions of chronicity and assessment instruments. The Oswestry Disability Index (ODI) was the most commonly used tool for functional disability assessment, appearing in multiple studies. The Roland Morris Disability Questionnaire was used in 16 of 34 articles in one review, while the Waddell test was used in the only RCT comparing acupuncture to conventional treatment.

Effects on Functional Disability

Injection-Based Interventions

The largest prospective study (n=1,800) examined periradicular and facet blocks with corticosteroids and lidocaine. Clinical analysis demonstrated pain reduction improvement in the first week according to ODI and VAS scores. Transforaminal radicular blocks were effective for acute sciatica but did not provide sustained long-term benefits, while facet blocks showed better results between three and six months. More than 60% of patients achieved good outcomes without requiring surgery. The authors concluded that both block types are effective short-term treatments, but evidence is only moderate for periods exceeding six months.

Radiofrequency Ablation (Rhizotomy)

The systematic review on radiofrequency ablation included 12 studies with 972 patients and found that the traditional RF ablation technique was beneficial in relieving chronic low back pain refractory to conservative treatment. Patients obtained 90% efficacy with traditional RF, which decreased to 67.5% at 6 months post-treatment. The technique showed improvements in both lumbar pain and referred leg pain. A notable finding was that targeting the articular capsule itself rather than the traditional target (medial dorsal branch) appeared more effective and provided a longer period of pain relief.

Acupuncture

The only randomized controlled trial directly comparing acupuncture to conventional treatment found statistically significant differences favoring acupuncture. The study reported significant differences ($P < 0.05$, $P < 0.01$, or $P < 0.001$) when comparing pain, functional disability, and final patient evaluation between groups. However, specific effect sizes, confidence intervals, and magnitude of disability reduction were not reported in the available abstract.

The integrative review noted that acupuncture has shown beneficial effects for chronic pain conditions, with some studies demonstrating improvements in function for fibromyalgia and relief from lumbar and cervical pain. One randomized trial cited in the review showed that patients receiving real acupuncture reported less pain compared to sham acupuncture. However, the review cautioned that the quality of studies on acupuncture is low and more research is needed to clarify its efficacy.

12-Month Outcomes

Study	12-Month Follow-up Data	Key Findings
Lara Batistoni Zati et al., 2025	Yes, 12-month follow-up conducted	>60% good outcomes without surgery; moderate evidence for long-term efficacy
Maria Fernanda Caselato Martins de Andrade et al., 2024	Not provided	General review without specific 12-month data
Anna Luisa Paiva Romano Bernardes et al., 2022	Relief up to 12 months or more mentioned	Specific 12-month functional disability data not detailed
J. M. Nascimento et al., 2015	Not provided	Focus on general effectiveness; no 12-month specific data
Y. Morales et al., 2009	Not mentioned	Assessments before and after treatment only

Only one study explicitly conducted 12-month follow-up, and it did not examine the combination of interventions specified in the research question. The systematic review on RF ablation mentioned that relief could extend to 12 months or more, but specific functional disability outcomes at this timepoint were not detailed.

Synthesis

Addressing the Research Question Gap

None of the five included sources directly examined the combination of acupuncture, blocks, and rhizotomy compared to conventional pharmacological and physiotherapy treatment. The studies examined individual components of interventional pain management separately:

- Lara Batistoni Zati et al. compared two types of injection blocks but did not include acupuncture or rhizotomy
- Anna Luisa Paiva Romano Bernardes et al. focused solely on radiofrequency ablation without examining combination approaches
- Morales et al. compared acupuncture to conventional treatment but did not include blocks or rhizotomy

Component-Level Evidence

When considering the evidence for individual components:

Blocks: Short-term efficacy is well-supported, with improvements in the first week and sustained benefits up to three to six months for facet blocks. However, transforaminal blocks did not demonstrate sustained long-term benefits.

Radiofrequency ablation: The systematic review suggests beneficial effects for patients with facet-mediated chronic low back pain refractory to conservative treatment. Patient selection based on positive diagnostic blocks is important, despite a 20-40% false positive rate.

Acupuncture: The single RCT showed statistically significant improvements in pain and functional disability compared to conventional treatment, though the study population was elderly (60-84 years) and abstract-only data limits interpretation.

Methodological Considerations

The evidence base has significant limitations:

- Only one study was a randomized controlled trial comparing interventions, and full text was unavailable
- The largest study with 12-month follow-up lacked randomization and blinding
- Three of five sources were literature reviews rather than primary studies
- Geographic context was limited, with only one study specifying location (Matanzas, Cuba)

Clinical Context

The multidisciplinary review emphasized that chronic low back pain is rarely treated successfully with pharmacological interventions alone due to the complex relationship among causal factors. Alternative therapeutic methods categorized in the literature include physical therapy, multidisciplinary approaches, combination treatments, aerobic exercises, and other treatments. The review on non-pharmacological approaches noted that while there are benefits from alternative treatments, the positive results suggest the possibility of complementing or substituting pharmacological treatment.

Comorbidities and pain-related factors that may influence treatment response include sleep disorders, obesity, chronic fatigue, and decreased quality of life. Age may also be a relevant factor, as the acupuncture RCT specifically focused on patients aged 60-84 years, limiting generalizability to younger populations.

Conclusions

The existing literature does not provide direct evidence regarding the comparative effectiveness of combined acupuncture, blocks, and rhizotomy versus conventional treatment at 12-month follow-up. Individual intervention components show promise: blocks demonstrate short-term efficacy with over 60% of patients achieving good outcomes; radiofrequency ablation benefits patients with facet-mediated pain; and acupuncture showed significant improvements over conventional treatment in one RCT. However, the additive or synergistic effects of combining these interventions remain unexplored. Future research should specifically examine this combination approach with appropriate randomization, blinding, standardized outcome measures, and 12-month follow-up to address this clinical question.

References

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