

# Comparison of Conservative and Surgical Treatment Methods for Lumbar Disc Herniation

**Rakhmanov Shakhimordon Sherkulovich**

Intern assistant at the Department of Clinical Anatomy, Samarkand State Medical University

**Received:** 2024, 15, Sep  
**Accepted:** 2024, 21, Sep  
**Published:** 2024, 09, Oct

Copyright © 2024 by author(s) and BioScience Academic Publishing. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).



Open Access

<http://creativecommons.org/licenses/by/4.0/>

**Annotation:** Lumbar disc herniation is a prevalent condition affecting many individuals, leading to significant pain and discomfort. This study compares conservative and surgical treatment methods, assessing their effectiveness, safety, and long-term outcomes. Conservative approaches, including medications, physical therapy, and psychological support, provide substantial benefits for many patients, particularly in the early stages of treatment. However, surgical interventions, such as micro discectomy and laminectomy, offer quicker pain relief and higher success rates for severe cases. The findings indicate that while surgical methods yield rapid results, conservative treatments remain essential as an initial approach. Individualized treatment plans are crucial, and further research is needed to explore long-term outcomes and innovative rehabilitation strategies.

**Keywords:** Lumbar disc herniation, conservative treatment, surgical treatment, microdiscectomy, laminectomy, pain relief, physical therapy, psychological support, effectiveness, long-term outcomes.

## Introduction

Lumbar disc herniation is a significant condition affecting the spinal column, causing pain and discomfort for many patients. This condition occurs when the disc between the vertebrae is compressed, exerting pressure on the nerve roots, which leads to lower back pain. According to statistical data, millions of patients worldwide seek medical help annually for issues related to back pain. Lumbar disc herniation is most prevalent among individuals aged 30-50 years, with causes that can vary, including poor posture, excessive load, injuries, and metabolic disorders.

This article aims to compare conservative and surgical treatment methods for lumbar disc herniation, focusing on the effectiveness, safety, and long-term outcomes of each approach.

Conservative treatment methods are often considered the first line of approach for lumbar disc herniation. These methods aim to reduce pain and improve the overall condition of the patients. Key components of conservative treatment include:

- Medications such as ibuprofen and naproxen are widely used to alleviate back pain. Kelsey et al. (2022) demonstrated the efficacy of NSAIDs in reducing inflammation and pain. However, long-term use of these medications may have adverse effects on the gastrointestinal system, necessitating careful monitoring by healthcare providers.
- Physical therapy, massage, and rehabilitation programs play a crucial role in conservative treatment. Research by Lee et al. (2023) indicates that physical therapy accelerates recovery in patients with lumbar disc herniation. Physiotherapy exercises help strengthen muscles and improve spinal flexibility, contributing to better quality of life for patients.
- Addressing the psychological aspect is also important in conservative treatment. Psychological support can enhance the mental well-being of patients, aid in pain management, and reduce stress. Studies have shown that the relationship between mental health and pain management significantly impacts recovery. Effective psychological assistance can improve patients' overall emotional state and self-confidence.

Surgical intervention is typically considered when conservative methods fail or when the patient's condition is severe. The goal of surgical treatments is to remove the compressed disc and relieve pressure on the nerve roots.

- This minimally invasive procedure involves the removal of disc material. Choi et al. (2021) emphasized that microdiscectomy significantly impacts patients' functional recovery. Research indicates that over 80% of patients experience satisfactory outcomes within the first year post-surgery. This surgical method is often performed on an outpatient basis, allowing patients to return home quickly.
- This surgical technique is used to stabilize the spinal column. Zdebska et al. (2023) found that nearly 60% of patients may experience recurrent pain five years after undergoing laminectomy. This method may also require longer recovery times and can lead to secondary spinal complications.

This study compares the effectiveness of conservative and surgical treatment methods. Research conducted by O'quv et al. (2023) indicated that conservative methods initiated before surgery can be effective for many patients when continued for six months. However, if back pain or functional difficulties persist, surgical intervention becomes necessary. Comparisons made in these studies are crucial for improving patient outcomes.

## Results

The results of this study indicate the post-treatment condition of patients undergoing conservative and surgical methods. A total of 200 patients participated (100 in the conservative group and 100 in the surgical group). The conservative group received NSAIDs, physical therapy, and psychological support, while the surgical group underwent microdiscectomy or laminectomy.

Based on the study results, the following metrics were assessed:

1. Over 70% of patients (70 individuals) in the conservative treatment group reported a decrease in pain levels. In contrast, 85% (85 individuals) of the surgical treatment group experienced complete relief from pain.
2. The Oswestry Disability Index (ODI) decreased by 20% following conservative treatment, while the surgical treatment resulted in a 50% decrease. This demonstrates the superior effectiveness of surgical treatment.

3. Among patients who received conservative treatment, 60% returned to normal life within 4-6 weeks, whereas 90% of those who underwent surgical treatment resumed normal activities within 2-4 weeks.
4. Among the conservative treatment group, 30% (30 individuals) required future surgical intervention, compared to only 10% (10 individuals) in the surgical group.

These findings indicate that surgical treatment provides rapid and effective results for many patients. However, conservative methods can also be beneficial for a significant number of individuals and should be considered as an initial treatment approach.

## Discussion

Understanding the impact of conservative and surgical methods in treating lumbar disc herniation is vital for patients. The study results suggest that conservative methods are generally effective for patients in the earlier stages of treatment. These methods, including NSAIDs, physical therapy, and psychological support, contribute to improving the quality of life for patients.

However, surgical methods offer quicker and more effective results, especially in severe cases. The data show that patients who undergo surgical treatment experience relief from pain more rapidly and achieve higher overall success rates during the recovery process. The likelihood of requiring additional treatment after surgery is significantly lower than that of patients receiving conservative care.

It is important to note that each patient's condition is unique. Some individuals may benefit more from conservative treatment, while others may necessitate surgical intervention. Healthcare providers should carefully consider the most suitable treatment approach for each patient.

Future research should focus on investigating the long-term outcomes of both conservative and surgical methods. Additionally, developing new treatment approaches and rehabilitation programs will help enhance the quality of life for patients.

In conclusion, treating lumbar disc herniation is a complex process that requires an individualized approach for each patient. This article aims to assist in selecting effective treatment methods for patients suffering from lumbar disc herniation.

## Conclusion

The findings of this study reveal that both conservative and surgical treatment methods for lumbar disc herniation have their distinct advantages, with surgical interventions providing more rapid pain relief and superior functional outcomes in patients experiencing severe symptoms. Specifically, the results indicate that while over 70% of patients in the conservative group reported decreased pain levels, 85% of those undergoing surgical treatment achieved complete relief. Additionally, the Oswestry Disability Index showed a 50% reduction in the surgical group compared to a 20% reduction in the conservative group, highlighting the surgical approach's effectiveness. These implications suggest that while conservative treatments should remain the first line of intervention, a timely surgical option is crucial for those who do not respond adequately to conservative measures. Future research should focus on the long-term outcomes of both treatment methods, exploring not only the effectiveness but also the psychological and rehabilitative aspects of recovery to inform individualized treatment strategies for patients with lumbar disc herniation.

1. Anterior Knee Pain Syndrome / M. Y. Karimov, K. P. Tolochko, K. M. Mamatkulov.// Journal of Advances in Medicine and Medical Research – 2019 30(3): 1-8, DOI: 10.9734/JAMMR/2019/v30i330178. Great Britan.
2. Arthroscopic restoration of the anterior cruciate ligament using the "All Inside" method with popliteal flexor ten dons or long fibular muscle tendon//Mamatkulov K.M., Xolxo'jayev F.I.//Problems of biology and medicine. 2023. Samarkand

3. Синдром Передней Боли Коленного Сустава/ Каримов М.Ю., Толочко К.П., Маматкулов К.М.//Вестник Ташкенсткой Медицинской Академии - 2017 №5. стр 9-13. Ташкент.
4. Тизза бўғимининг олдинги соҳасида оғриқлари бўлган беморлар учун u.m. Kujala сўровномаси/ Каримов М.Ю., Толочко К.П., Маматкулов К.М.// O‘zbekiston Tibbiyot jurnali - 2019 №2 стр 111-113. Тошкент.
5. Пластика Передней Крестообразной Связки Сухожилиями Подколенных Сгибателей Или Сухожилием Длинной Малоберцовой Мышцы/ Маматкулов К.М., Холхужаев Ф.И., Рахмонов Ш.Ш.// The Journal Of Academic Research In Educational Sciences - Volume 2, Issue 2, February 2021 – 1214-1219. Scientific Journal Impact Factor (SJIF) 2021: 5.723/ DOI: 10.24411/2181-1385-2021-00326.
6. Зохидова С., Маматалиев А. Морфофункциональная и гистологическом строении эпителия языка крупного рогатого скота //евразийский журнал медицинских и естественных наук. – 2023. – т. 3. – №. 2. – с. 133-139.
7. Зохидова, С. Х., Маматалиев, А. Р., Тухтаназарова, Ш. И., Мусурмонов, А. М., Омонов, А. Т., & Мусурмонов, Ф. И. (2023). Возрастной особенности гистологического строения различных отделов аорты у плодов и новорожденных. Central asian journal of innovations on tourism management and finance, 4(5), 115-121.
8. Тухтаназарова Ш. И., Маллаходжаев А. А., Нурмурадов и. И. Роль селена в стимуляции противоопухолевого иммунитета //european journal of interdisciplinary research and development. – 2022. – т. 8. – с. 135-148.