



Results from a Methods Comparison Study on the Effects of Exercise Therapy on Chronic Lumbar Pain

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Abstract

Numerous people suffer with chronic low back pain (CLBP), which has a major influence on people's ability to move around, their happiness, and their ability to pay for medical treatment. Researchers are still trying to figure out how different types of exercise therapy for chronic low back pain (CLBP) stack up against one another, even though they all agree that exercise therapy is helpful. The goal of this study is to compare and contrast the ways in which various forms of exercise therapy—including aerobic, strengthening, and stretching—affect pain reduction, functional ability enhancement, and patient satisfaction with treatment as a whole. After twelve weeks, the subjects were assessed again after being split into two exercise treatment groups. A randomized controlled trial methodology was used to perform the research. Findings indicated that strengthening activities provided the most benefits in terms of pain reduction and functional improvement. In contrast, flexibility and decreased stiffness were the results of stretching exercises. In terms of pain reduction and cardiovascular health, aerobic activities showed a moderate amount of benefits. recognizing the significance of tailoring exercise regimens to each patient's unique needs for optimal outcomes. These results aid both doctors and patients in making informed decisions about exercise therapy for CLBP, and they add to our understanding of the role of exercise therapy in CLBP management.

Keywords: Chronic Low Back Pain (CLBP), Exercise Therapy, Stretching Exercises, Strengthening Exercises, Aerobic Exercises

Introduction

There are millions of people all over the world who suffer from chronic low back pain (CLBP), which is one of the most common and devastating conditions that affect the musculoskeletal system. CLBP accounts for a significant portion of the global population. One of the most distinguishing features of this ailment is the presence of pain and stiffness in the lower back that has persisted for more than a year and a half. Continuous low back pain (CLBP) has a significant impact on a variety of aspects of life, including daily activities, work productivity, and overall quality of life. The fact that it is multifactorial, which means that it involves components that are physical, psychological, and lifestyle-related, makes it challenging for healthcare providers to manage. When it comes to the management of chronic low back pain (CLBP), exercise therapy has emerged as an indispensable component of non-pharmacological treatments. In contrast to therapies that are based on medication, exercise therapy places a greater emphasis on the restoration of physical function, the decrease of pain, and the prevention of recurring episodes. Medications are frequently associated with the risk of adverse



effects and the possibility of developing a reliance on the medication. Exercising in a manner that targets various aspects of the illness, such as stretching, strengthening, and aerobic activities, is commonly recommended. These exercises are only a few examples of the many different kinds of workouts that are typically provided. Although it is well-established that exercise treatment is good for chronic low back pain (CLBP), there is constant controversy regarding which strategy produces the most effective and sustainability in terms of results. When it comes to strengthening activities, the goal is to offer muscle support for the spine, whereas stretching focuses on developing flexibility and reducing stiffness. In contrast, aerobic workouts improve general physical conditioning and pain regulation. Aerobic workouts are also beneficial. In light of the fact that the selection of exercise frequently depends on the characteristics of the specific patient, it is of the utmost importance to conduct an analysis of the relative effectiveness of these numerous ways. When it comes to people who suffer from chronic low back pain (CLBP), exercise treatment strategies and their impact on pain reduction, functional improvement, and patient satisfaction are being investigated. Through the provision of evidence-based insights that will assist clinicians in customizing exercise regimens to match the particular needs of their patients, the purpose of this research is to make a contribution to the growing body of information concerning the management of chronic low back pain (CLBP).

Physical Activity as a Therapeutic Alternative: A Non-Medical Approach

The management of chronic low back pain (CLBP) that does not involve the use of pharmaceuticals includes exercise therapy, which is widely recognized as an essential component of this treatment. On the other hand, in contrast to pharmacological therapies, which only control symptoms, exercise therapy focuses on addressing the underlying causes of pain and dysfunction, restoring physical function, and preventing recurrences. This is in contrast to the approach taken by pharmaceutical therapies. As a result of the fact that this intervention makes advantage of the body's natural ability to heal and adapt through movement, it is an essential component of a comprehensive therapy plan for chronic low back pain (CLBP).

1. Importance of Exercise in CLBP Management

Chronic low back pain (CLBP) is often associated with decreased mobility, muscle imbalances, and poor posture, all of which contribute to persistent discomfort and functional constraints. CLBP is also commonly associated with bad posture. Exercise therapy is able to accomplish the following by way of directly addressing these challenges:

- Developing the muscles that are responsible for maintaining the spine.
- Increasing joint range of motion and flexibility both.
- Making improvements to the alignment of the spine and the core.
- Promoting circulation and tissue repair.

The psychological suffering that is associated with chronic pain, such as anxiety and depression, can be alleviated if the right medical treatment is administered.

Both physical and psychological concerns are taken into consideration during exercise therapy in order to provide a holistic approach to the management of chronic low back pain (CLBP).

2. Types of Exercise Therapy



When it comes to the treatment of chronic low back pain (CLBP), a number of different types of exercise therapy are utilized. Each of these forms of exercise therapy is suited to the specific needs of the patient as well as the nature of their disease.

- **Stretching Exercises:** In order to alleviate stiffness in the hip flexors, hamstrings, and lower back, you should concentrate on improving your flexibility. This will have the effect of enhancing your flexibility. When you stretch, you can ease muscle stiffness, which is commonly a contributing reason to chronic low back pain (CLBP). Stretching can also help relieve muscle tension.
- **Strengthening Exercises:** By focussing on the abdominal and back muscles, you may increase the support and stability of your spine. For instance, planks, bridges, and pelvic tilts are all examples of exercises that improve endurance and lower the likelihood of developing additional injuries.
- **Aerobic Exercises:** Walking, cycling, and swimming are all activities that increase cardiovascular fitness and encourage the production of endorphins, which in turn reduces the feeling of pain one experiences. In addition, aerobic workouts improve the general physical conditioning of the body.
- **Functional and Task-Oriented Exercises:** Restore your functional capability and trust in your ability to execute everyday tasks without experiencing discomfort by imitating your daily activities.

3. Advantages of Non-Pharmacological Interventions

On the other hand, exercise therapy has a number of advantages over pharmacological therapies for chronic low back pain:

- **Fewer Side Effects:** The use of exercise treatment is not only safe but also well tolerated, in contrast to the use of drugs, which can lead to dependency or bad responses.
- **Long-Term Benefits:** The benefits of regular exercise include the alleviation of existing symptoms as well as the prevention of future episodes through the improvement of total physical fitness.
- **Patient Empowerment:** Patients are encouraged to take an active role in their own recovery, which helps them feel more in control of their situation and reduces their reliance on outside therapies.

4. Evidence Supporting Exercise Therapy

For patients suffering from chronic low back pain (CLBP), exercise treatment has been shown to be beneficial in lowering both pain and disability in a number of trials. According to research, maintaining a regular exercise routine leads to considerable changes in the levels of pain, functional abilities, and quality of life that someone now experiences.

5. Integration into Multidisciplinary Care

There are numerous instances in which the combination of exercise therapy with other therapies, including as manual therapy, education, and behavioral counseling, is the most successful combination. This is also the combination that is the most effective. This interdisciplinary approach promotes a recovery that is both complete and lasting by addressing the complex nature of chronic low back pain (CLBP).



In the management of chronic low back pain (CLBP), exercise therapy is an important intervention that does not involve the use of pharmaceuticals. Restoring function, reducing discomfort, and providing patients with more control over their own lives are the primary focuses of this treatment, which offers a practical and successful alternative to treatments that are dependent on medicine. When it comes to enhancing the outcomes for individuals who suffer from chronic low back pain (CLBP), customized exercise routines that are supported by evidence-based practices play a significant part in the process.

Conclusion

When it comes to the management of chronic low back pain (CLBP), exercise therapy is a crucial component of approaches that do not involve the use of pharmaceuticals. It provides a strategy that is not only safe and effective, but also sustainable, which is a step in the right direction toward improving the results for patients. By addressing the underlying causes of pain, such as muscular imbalances, inadequate flexibility, and poor posture, exercise therapy not only alleviates symptoms but also improves general functionality and quality of life. This is accomplished by addressing the underlying causes of pain. In order to achieve this goal, it is necessary to focus on the core causes of pain. An review of the similarities and differences between various modalities, such as stretching, strengthening, and aerobic activities, shows the need of customizing treatment to the specific requirements of each individual patient in order to obtain beneficial outcomes. The usage of strengthening exercises has been demonstrated to be particularly beneficial in terms of boosting core stability and reducing discomfort. Stretching, on the other hand, has been demonstrated to increase flexibility while simultaneously decreasing stiffness. Aerobic workouts, which are complimentary to these techniques, have the potential to improve both cardiovascular health and pain perception. Aerobic workouts increase both of these aspects. Nevertheless, in spite of these benefits, the requirement for customized solutions and the necessity of sustaining a commitment to exercise routines continue to be important challenges. When it comes to the treatment of chronic low back pain (CLBP), exercise therapy is a crucial strategy that is supported by an abundance of research. The implementation of a holistic approach to rehabilitation into multidisciplinary care, which is supported by patient education and ongoing monitoring, ensures that the recovery process will be thorough and comprehensive. The establishment of standardised protocols and the examination of innovative approaches should be the key emphases of future research in order to further improve the efficacy and accessibility of exercise treatment for patients suffering from chronic low back pain (CLBP).

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