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by Orthopedic & Sports P.T. Assoc. OSPTA
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Low Back Treatment

TREATMENT GOALS:

The goals of treatment for the physical therapy patient with lower back pain can be summarized as follows:

1. To optimize the healing environment.
2. To restore the anatomical relationships between injured & uninjured tissue.
3. To maintain normal function of the uninjured tissue.
4. To prevent placing excessive strain on the injured tissue.



TREATMENT OBJECTIVES:

There are five overall objectives for the treatment of lower back pain.

1. Pain Modulation:

There are several modalities and various analgesics that are effective for this objective. They are generally indicated for the acutely injured patient.

2. Patient Education

This objective becomes important when the acutely injured patient demonstrates a decrease in symptoms. The patient must be taught proper body mechanics and lifting techniques to assist in the active healing process and prevent reinjury.

3. Manual Techniques:

The third objective is intended to promote normal movement of the spine by application of passive techniques. The result of manual therapy is to affect fluid dynamics, increase afferent input into the nervous system, and begin to modify connective tissue.

4. Neuromuscular Efficiency:

This objective promotes therapeutic exercise in order to minimize mechanical stress.

5. Establish Limits:

The patient will develop an understanding of his/her physical limits.



Treatment

The treatment of the lower back There are many treatment techniques that ph

PHASE ONE:

In phase one, pain is treated. Pain must be acknowledged but it cannot be the focus of the treatment process. During phase one, a balance must be achieved between treating pain and preparing the patient for full recovery. In order to effectively manage a patient's pain, the clinician will begin to educate the patient about the importance of recognizing pain patterns. The patient will need to understand the importance of changes in intensity, frequency, and duration of pain. Patients usually become focused on the intensity of the pain. Successful treatment will result when changes are made in any of the components of the pain pattern.

The physical therapist has many therapeutic choices to deal effectively with a patient's pain. Many physical agents, such as thermomodalities and electromodalities, can be used in combination with medications. The modalities will cause analgesia, inhibit the acute inflammatory process, and help decrease the muscle spasm that occurs when injured.

Even though it is important to use these forms of treatment during phase one, **the physical therapist recognizes the limits of modalities.** The use of modalities will allow the therapist to begin an active treatment program more quickly.

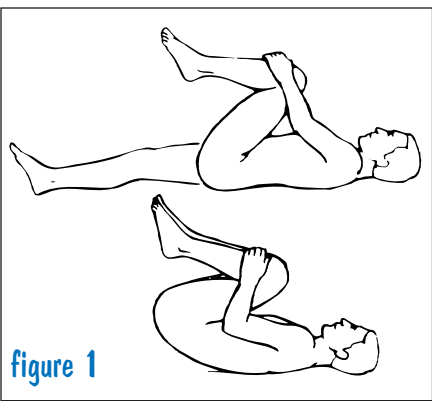


figure 1

PHASE TWO:

During phase two, the physical therapist begins to apply manual forces into and around the injured area. This early use of nondestructive movement has been found to be advantageous to

the functional healing process. The introduction of manual therapy has three objectives. First, the injured tissue is stimulated in order to enhance orientation of collagen in a functional pattern. Second, by activating the afferent nervous system, pain is further modulated and proprioceptive input to the central nervous system is enhanced. Finally, manual forces and passive movement help to stimulate fluid dynamics.

There are several ways that the physical therapist can introduce passive and active assistive forces to the injured tissues. Even though manual techniques have different names, they all have a common goal. Nondestructive manual therapy will promote fluid

dynamics and increase afferent input into the CNS. These techniques can include: joint mobilization, soft tissue mobilization, massage, manipulation, traction, muscle energy, myofascial techniques, passive

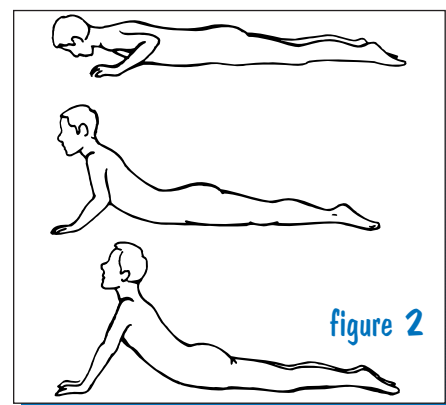


figure 2

stretching, and contract-relax techniques. Even though the second phase is important, it cannot be the final phase of low back treatment. To restore function, the goal of phase one and two is to prepare the patient for the training phases (phase three and four) of the rehabilitation process.

PHASE THREE:

Although exercise is initiated in the second phase of treatment, it becomes the cornerstone of the third treatment phase. In the past, periods of protracted rest were commonly prescribed following a low back injury. Today, numerous studies have demonstrated that activi-

not Phases

can be divided into four phases.
Physical therapists use in each treatment phase.

ty is not harmful. In fact, people with a high fitness level have fewer episodes of low back pain, and recover quicker following low back injuries.

Additionally, prolonged rest/inactivity commonly leads to depression and distress, while regular physical activity tends to promote a sense of well-being.

The initial evaluation and subsequent reassessments are crucial to determine what type of exercises are appropriate for each patient. At OSPTA, we do not subscribe to any one exercise philosophy. We examine each individual case in an attempt to choose an exercise program best suited to the patient's needs. Recent ongoing studies have shown that subgroupings of patients who present with common "clusters" of signs and symptoms respond best to certain exercise programs. For instance, patients with lumbar degeneration who complain of increased pain with prolonged standing and walking usually respond best to exercises focusing on lumbar flexion to "open" the vertebral foramina (see figure 1).

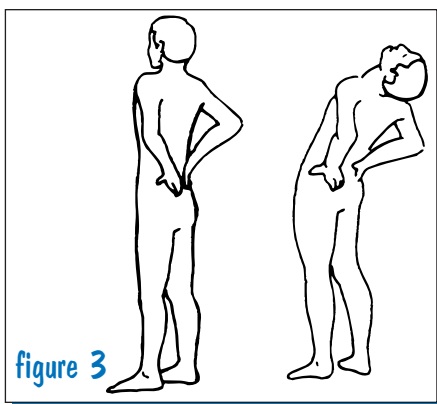


figure 3

phase of treatment, the patient is weaned from modality use and external supports. Exercises are gradually progressed from non-weight bearing isolated movements

Conversely, patients with disc bulges/herniations who experience increased pain with driving typically respond better with exercises promoting lumbar extension (see figure 2 and 3). During the third

to weight bearing exercises requiring complex multiple joint movements. Additionally, exercises are included which train the trunk muscles for their primary functional role of providing a stable base of support (see figure 4), training the trunk muscles for their role as dynamic stabilizers optimizes the ability of the lumbar region to accept and attenuate the forces acting on this region.

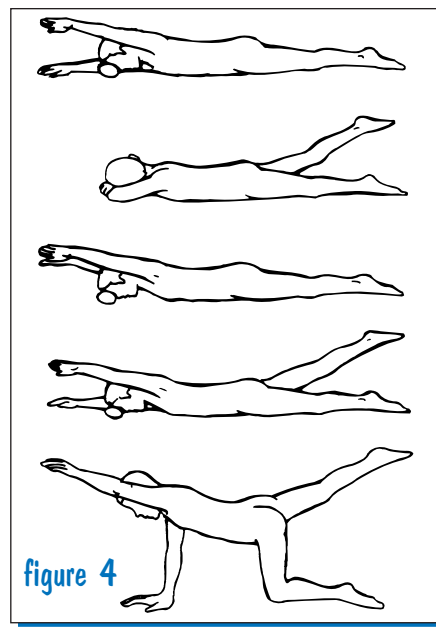


figure 4

PHASE FOUR:

The primary goals during the fourth phase of treatment are to establish any limitations the patient may have as a result of their injury, make the patient aware of the limitations and encourage them to respect these limitations. Reinforcement of the importance of regular exercise and the independent use of modalities is essential. Patients are encouraged to continue using proper body mechanics even after the effects of the injury are no longer felt, minimizing the risk of a recurrence. This is achieved through patient education and providing a detailed home exercise program.

SUMMARY:

We hope that this newsletter has provided an overview of our progression of treatment for lumbar conditions. It is based on the physiology of tissue healing and the ultimate goal of restoring function. Orthopedic and Sports Physical Therapy Associates looks forward to working with you in getting your lumbar patients "back" on track.

