

# Options for Spine Treatments

## Spinal Rehabilitation and Stabilization

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The purpose of spinal rehabilitation is to reduce pain and improve function. This is accomplished through the implementation of effective therapeutic exercise. Spine rehabilitation is indicated for individuals who have become physically deconditioned as the result of injury, inactivity, a degenerative process, pain inhibition or fear-avoidance behavior. Even though many obvious test abnormalities may not be present, the problems associated with chronic musculoskeletal pain can be devastating to the individual and their family.

The importance of spinal rehabilitation is based upon a few basic facts. Abnormal or inefficient muscle function around a joint can lead to chronic musculoskeletal pain. This may be caused by loss of muscle integrity, muscle incoordination, muscle weakness, muscle atrophy, muscle spasms and decreased muscle endurance. The majority of muscle and related soft tissue problems do not require surgery. An unguarded or unprotected joint leads to cumulative trauma to the tissues of the joint that results in increased musculoskeletal pain. The goals of a spinal rehabilitation program are to improve muscle control, to improve muscular endurance, to improve coordination and to promote stability and function of the spine.

Before starting a supervised exercise program, one should have an assessment of musculoskeletal function including strength, flexibility, endurance, coordination, and balance. Whenever possible the evaluation should document quantifiable loss of function (functional deficit). The attending rehabilitation specialist will design an exercise program to address the "functional weak links". The tailored program should address individualized intensity, frequency and duration of exercises required in order to improve function. Motivation is key to successful participation in a spinal rehabilitation. Active encouragement is sometimes necessary because of a lack of perceived improvement. In some cases improved function will precede a significant reduction of pain.

Spinal exercises should be performed within a functional training range (FTR). The FTR refers to the range or magnitude of movement that is painless. To achieve this goal, specialized equipment is not always necessary. Many of these exercises can be performed with body weight and low-tech equipment such as elastic bands.

The attending rehabilitation specialist should be experienced in directing a spine rehabilitation program in order to improve muscular endurance, flexibility, muscular coordination, balance, postural control, strength and flexibility through therapeutic exercise. The resulting goal of the therapeutic approach is to improve the dynamic capacity of supporting muscles of the spine and thereby stabilize the spinal region.

