

# SPINE REHABILITATION



NORTH AMERICAN  
SPINE SOCIETY  
PUBLIC EDUCATION  
SERIES

# SPINE REHABILITATION

FROM ACUTE THROUGH CHRONIC CARE

## *What is primary, secondary and tertiary care?*

Rehabilitation of patients with low back pain can generally be divided into separate phases.

**Acute or primary care** is the first care that the patient receives after developing low back pain. It is basically the care that is provided during the first six to eight weeks following the onset of pain and mainly focuses on alleviating symptoms, resolving the cause of pain and maintaining function. Primary rehabilitation usually consists of nonoperative treatments and rarely surgery.

The second phase is called **subacute or secondary rehabilitation**. This is the medical care that occurs after the primary treatment ends and before the patient returns to functional activity. For those still have pain following primary care, secondary rehabilitation usually begins at eight weeks after the start of the pain and can last for approximately four to six months after injury. Secondary rehabilitation is usually given on an outpatient basis in a rehabilitation specialty center.

**Chronic or tertiary care**, also called tertiary rehabilitation, refers to the treatment that may continue after secondary rehabilitation ends. It is geared toward patients who are suffering from a chronic disability and is more intense than primary or secondary rehabilitation,

requiring greater involvement from a coordinated team of health care providers and may occur in an inpatient or outpatient setting. By the time a patient enters this phase of treatment, the emphasis is on maximizing function even if chronic pain persists.

An analogy to the differences between primary, secondary and tertiary care is the pitching staff on a baseball team. The starting pitcher may pitch the entire game, like a physician providing low back pain treatment from onset until resolution. In some cases a relief pitcher is called in when the starter has become ineffective, similar to moving toward secondary rehabilitation. Finally, in some longer and tougher games a closing pitcher is called on to save the game, much like the way that tertiary rehabilitation is the last chance to secure a future free of disability.

## WHEN DO YOU NEED SECONDARY AND TERTIARY REHABILITATION?

Most patients who receive medical treatment for acute low back pain improve satisfactorily. Approximately 20% to 30% of patients who undergo primary spine care for low back pain will need secondary rehabilitation. Five to eight percent of these back pain patients may require tertiary care.

It is normal to restrict some degree of physical activity following the onset of lower back pain. However, some people may stop performing most of the physical and social activities that they did prior to their injury for excessive periods of time in an effort to avoid pain. This period of inactivity and social separation can result in a condition known as “deconditioning syndrome.” This syndrome has both physical and psychological origins and can lead to muscle fatigue and weakness, atrophy, a loss of the normal range of joint motion, depression and possibly permanent disability.

The goal of secondary rehabilitation is to avoid this deconditioning syndrome by recognizing the warning signs and providing treatment to the patient through physical and perhaps psychological therapies to reduce anxiety and depression.

Tertiary rehabilitation may be required for patients who fail to respond to care for four to six months and have severe physical deconditioning. Some of these include patients

with multiple surgical sites, intolerable pain, drug dependencies and/or psychological disorders that may limit their ability to respond to previous rehabilitation attempts. The goal of tertiary rehabilitation is to avoid a total and permanent disability.

*What are the warning signs for deconditioning syndrome?*

When, during primary care, a patient is demonstrating a continuing decrease in strength, flexibility and range of motion during the primary or acute phase of rehabilitation, he or she may be at risk. Physicians also assess the patient's social and work activities. A dramatic reduction in social interaction, a lack of interest in recovery or the inability to return to work (even on light duty) following the primary rehabilitation stage may also be a warning sign.

## HOW IS REHABILITATION PROVIDED?

The extent and intensity of secondary and tertiary rehabilitation depend on the individual's capabilities. Unlike primary rehabilitation, which focuses on the treatment of the cause and symptoms of the pain, secondary rehabilitation focuses on resuming the patient's physical and social abilities. In most cases secondary rehabilitation begins with an assessment of the patient's abilities and then may involve exercise, physical reconditioning, aerobics, education psychological counseling and stress and disabilities management.

An important aspect of any rehabilitation program is that the program emphasizes functional exercises and activities. Specifically, those exercises and activities should mimic the types of movements, ranges of motion, and the intensity of the activities that the patient has to perform as part of his or her daily life. For instance, someone with low back pain whose job involves a lot of lifting of boxes should have exercises that address standing and bending. Simply doing exercise weight training may improve the patient's strength but does not fully address the specific activities he needs to be able to accomplish. If the exercise or activity does not look and feel like the activity that needs to be done, it probably is not functional.

Tertiary rehabilitation requires more intense medical direction and involves many different specialists in addition to the spine care doctor. In tertiary care a person may undergo an extensive physical and psychological evaluation, treatment for depression, substance abuse and counseling, as well as vocational training. The duration of this type of program may be one to three months with follow-up evaluations to monitor treatment successes.

A vertical graphic on the right side of the page, consisting of a series of stylized, overlapping shapes that resemble a spine or a series of vertebrae. The shapes are rendered in a light purple color with dark purple outlines, set against a darker purple background.

FOR MORE INFORMATION,  
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