

# Exercise For Low Back Pain



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It is well known that at some time the majority of people will experience low back pain usually as the result of a sports injury, car accident or after lifting something incorrectly. Sometimes the cause of low back pain is not as clear and may be due to long term repetitive stresses, faulty postures or as complications of other diseases.

A common thought is that exercises to strengthen the stomach muscles can prevent the onset of low back pain or prevent recurrent episodes. During the past decade many appliances are advertised that can assist individuals in strengthening their stomach muscles. Usually, it is recommended to do not only so-called "straight" abdominals, but to also include "oblique abdominals." Exercise programs may address both

the upper abdominals as well as the lower abdominals. Yet, in spite of daily sit-ups and stomach crunches, many people continue to experience bouts of low back pain. A new trend in back care is the concept of muscular stabilization to protect the structures of the spine from further trauma and pain.

One of the problems with many strengthening programs is that they address only the large and more superficial stomach muscles, without paying attention to the deep stomach muscles. The superficial muscles include the rectus abdominis and the external obliques. The deep stomach muscles include the internal oblique and the transverse abdominis muscle that runs from side to side and inserts into another deep structure called the thoracolumbar fascia. In the back, the fascia connects to the multifidi muscles, which are deep muscles that control the position and movement of individual vertebrae. Studies have shown that only ten percent of people with a history of back pain could contract the transverse abdominis muscles compared to 82 percent of people without a history of low back pain. In people with back pain, the ability to selectively contract the deeper muscles is

linked to reduction of pain, better control over the pain, and a feeling of security.

Unfortunately, it is not the easy to learn how to contract the deeper muscles especially after having had recurrent low back pain. Part of the challenge is to learn how to "draw in the stomach" without using the large superficial muscles. If the superficial muscles contract before the deep muscles, the deep muscles are still not protecting the spine. Contracting the multifidi muscles is equally difficult and usually requires some instruction and training.

Physical therapists may use an air-filled pressure feedback monitor to teach patients how to isolate the deeper muscle groups. The pressure feedback device can tell the physical therapist whether a patient is able to contract the deep muscles or substitutes by using the superficial muscles. Through a progressive exercise regimen most people are able to contract the deeper muscles and then proceed with the familiar stomach crunches. Research from Australia revealed that only by learning how to contract the deep stomach and low back muscles prior to doing stomach crunches, future episodes of low back pain can be prevented.