

Achy backs and core exercise

By Michael Clark

Low back pain is one of the most common conditions in the world. It seems that everyone has had an achy back at some time or another. Back pain can occur suddenly and without specific cause, and disappear just as mysteriously as it arrived. Back pain can also have a definite cause, such as lifting too much, or performing movements incorrectly on a repetitive basis. Either way, back pain is painful, inhibitory at the least, and debilitating at the most. Multiple treatments exist, including heat and cold therapy, over the counter pain relievers and anti-inflammatory medications, and even surgery in some cases. However, at the top of everyone's list is exercise. Specifically, many now promote core exercise as a way to treat and prevent back pain.

According to the American College of Sports Medicine, seven out of 10 people in industrialized countries experience some type of back pain in their lifetime. The yearly occurrence of low back pain is, on average, about one in four people. Interestingly, back pain most often happens to individuals of age 30 to 50, and affects men and women equally. Research into occurrence also shows that lower-income, physically productive societies exhibit lower rates of back pain than westernized societies, such as the United States. Similar research shows that men who sit over half their workday have a 300 percent increased risk of disk herniation. These observations clearly state, contrary to intuition, that daily physical activity decreases the occurrence of back pain.

Research indicates that the body's core muscles may hold the key to preventing and potentially alleviating back pain. However, finding a succinct definition of the core may prove to be difficult. All will agree that the core consists of, at the very least, the abdominals. Others will go as far to say the core consists of twenty-nine muscles, all of which attach to the hips and work to stabilize the trunk. Among all these muscles however, research indicates that one in particular stands out as having great potential to helping those with back pain.

The transverse abdominis (TVA), or the core's core, is a longitudinal muscle (muscular fibers running parallel to the ground) located under other abdominals, such as the rectus abdominus, commonly referred to as the six-pack. The TVA has attachments in the low back and encircles the body's center of gravity, forming a corset, or brace, for the abdominal contents. If the transverse abdominis is properly used, then it should contract during practically any movement, providing a stable platform for other muscles, like the muscles in the shoulders and hips, to produce movement. Research into the function of the TVA shows that those with back pain do not utilize this muscle properly, while those without back pain do.

So what makes the TVA work? Chances are you've used it when you blow out the candles on a birthday cake, laugh, or try to squeeze into a pair of old pants. The most common cue to activate the muscle is "tuck

your belly button in towards your spine," which is known as the drawing in maneuver. If contracted, the TVA can actually be felt by placing the index and middle finger of each hand on the sides of the belly, just inside the upper hipbones. To strengthen the muscle, contract and breath normally, holding for ten seconds, release and



repeat five to ten times daily. Doing this movement will help to strengthen the TVA, but this still may not be enough to alleviate back pain.

The key to a strong core is to use this deep abdominal muscle while other muscles perform a task, such as lifting or walking. David Parker, an orthopedic physical therapist and

director of Galloway Ridge Physical Therapy states, "there appears to be connections between the TVA and the low back musculature; and effective use of the transverse abdominis can protect the back, reduce low back pain during activity, and effectively enhance physical activity performance."

Therefore, the TVA must be integrated into daily life. Now, this does not mean tucking the belly button into the spine so often that little else can be accomplished; but simply practice using the muscle during physical task on a daily basis. Incorporate the TVA when sitting and standing, when pushing or pulling, or even practice the ten-second-hold technique during daily walks. Integrating the TVA into other movements will create muscular habits, definitely leading to a stronger core, and hopefully, a healthier back.

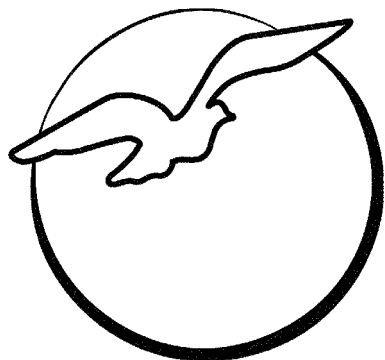
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