

Tennis Anyone? ... Strong Back Required!

By: Nate Dixon, D.P.T.

The game of tennis is a very physically challenging sport that demands strong, quick movements to succeed. Like most sports, the key to this performance is in having a strong, responsive abdominal wall combined with back extensor strength. These two sets of muscles work in tandem to hold the spine upright, allowing the arms and legs to work efficiently. In effect, this “core” strength is the key to being quick to the ball and gives you the ability to finish with a powerful swing.

Powerful “core” muscles can be trained both on and off the court. On the court, your muscles are trained by simply raising your conscious awareness of your abs – draw your abdominal muscles in every time you make an explosive movement. Train yourself to breathe while you’re performing this to ultimately enhance your cardiovascular endurance. Soon, with self-training, this will become an unconscious effort and greatly improve your love for the game, not to mention win more often!

Training your “core” off the court is accomplished by training both the abdominals and back extensors. Abdominals can be trained simply by doing a 3-step “crunch”: while lying on your back, first, draw your belly in; second, roll your hips back “pelvic thrust”; and third, lift your head and shoulders up 3 – 4 inches (arms can be across your chest or behind your head). Abdominal oblique muscles can be trained by twisting slightly to the sides. Back extensor muscles can be trained by simply laying face down with a pillow under your belly, and then lift your arms and legs in your choice of alternating patterns.

It turns out to be a win-win situation when you effectively strengthen your trunk muscles because you also get the added benefit of back pain prevention. At some point in life, most people experience back pain that could have been avoided. Ask any patient I have ever worked with here on Hilton Head Island or Bluffton about how they could have avoided their back injury and I would hope they’d say: upright posture and correct body mechanics! This leads into an article I wrote about 2 years ago that I believe is worth your time to read ...

Get Up, Stand Up

By: Nate Dixon, D.P.T.

I guess Bob Marley knew what he was talking about when he came out with his reggae song back in 1973! Fortunately, for all of us with back pain (and for those of us who want to prevent back pain), someone tried to see if his theory of getting up, and standing up was really worthwhile to prevent back pain. That “someone” is a group of researchers out of Harvard University who found that back pain was significantly reduced by simply avoiding early morning back bending forward.

The research was published in the Spine journal, which is a highly regarded resource for back and neck pain research, in 1998 (only 25 years after Bob’s brilliant theory to reduce back pain was hatched – or should I say hashished!). They used an outstanding study

design and methodology to obtain their results – meaning that it is potentially a very worthwhile way of life that we could adopt to decrease back pain. And, as a physical therapist, I highly recommend it to many of my patients. Healthcare professionals can locate this study in Spine, Volume 23, Number 23, pp 2601 – 2607.

As we sleep at night, our backs are in a non-weight bearing position, which allows for our discs (the shock-absorbers between each vertebra) to swell up with fluid. This phenomenon is why we are actually 0.5 – 1 cm. taller in the morning than we are at night. Unfortunately, this uptake in fluid by the discs also makes them more susceptible to injury. It is estimated that the bending stresses on the discs are three times greater in the early morning than they are later in the day.

At night, before you go to bed, you should begin your preparation for the next morning's anti-flexion campaign by placing shower supplies, toiletries, shoes, clothes, and foods high up so that you can stay standing erect. If you wear tie-on shoes, instead of slip-ons, then use a foot-rest and bring your foot up, as opposed to you bending down to your foot on the floor. When you absolutely have to bend over in the morning – make sure you have excellent posture and keep your back straight. If you sit in a car, use a lumbar support and do lumbar side-bending and extension exercises every 15 minutes. And here is the hardest “sell” of all – if possible, wake up early and go for a walk first thing in the morning. This repetitive pounding through the spinal column is healthy as it helps to decrease the swelling of the discs in a safe and natural manner.

Looking back to Bob's title selection, he probably would have been 'right on the button' if he called it “Get Up, Stand Up, Walk, and Whatever You Do – Avoid Sitting and Bending Forward Before 11 a.m. Everyday;” however, I really don't think that the Wailers (from Bob Marley and the Wailers) would have agreed with him on that one!

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