

Renewing America's Focus on Posture

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Across almost all health care disciplines, as well as in most families, the old-fashioned focus on good posture is a missing ingredient in treatment as well as good health care maintenance.

What happened? Was it wrong for us to receive stern admonishments from our mother and family physician to "sit up straight" and "stand up straight" as we were growing up?

Things are getting better. A growing number of health care practitioners are beginning to focus on the entire person, including how their patient's posture affects their health.

Poor posture can be the condition that is actually causing the pain to develop and return again and again.

Poor posture can limit your ability to breathe correctly, as if your chest is caved inward because you lean forward all the time, your volume is reduced and you breathe only with the top of your lungs.

If you play wind instruments or sing, poor posture limits your endurance as well as your ability to reach high notes.

Dentists are realizing that poor posture leads to Temporal Mandibular Joint dysfunction deformities in the jaw, commonly called TMJ or "clicking jaw."

Poor gait and posture can cause bunions and shin splints and a whole host of other musculoskeletal dysfunctions.

In fact, poor posture is the common link to what causes foot, back, knee and neck pain for the largest number of people. And the origin of poor posture may not be a conscious reluctance to stand or sit up straight—it could instead be a condition called hyperpronation, caused by an elevated first metatarsal, which is your big toe bone.

Your feet are actually sensors. Each of your toes and the metatarsal they extend from have a job to do. Your first metatarsal provides important signals that your brain needs to control your posture muscles which, depending on conditions surrounding your body, need to increase or release tension so you can

keep your balance. This process is called proprioception.

If this sounds too far out, it's really not. Proprioception is a very simple yet miraculous subconscious process your body performs all the time.

For example, if you are standing on a moving bus, your feet sense the changes in motion and activate signals in your brain, which causes muscles in your feet, your calves, your knees and lower back to increase or decrease tension as the bus accelerates, slows down, turns and stops. You don't have to think about it, it just happens—that's proprioception.

It's been estimated that over 80 percent of the population has a first metatarsal that is tilted up slightly.

An elevated first metatarsal sends signals to the brain a tad too late, causing the signals between the feet and the brain and the posture muscles to become muddled. The end result is a head forward posture and groups of posture muscles that get the signal to tense up and remain tense all day. That constant muscle tension is the source of pain for over 80 percent of the people who suffer from foot, knee, back and neck pain.

The classic "head forward—leaning forward" poor posture position is the beginning of most back, neck and knee pain. For a majority of people, it is caused by the hyperpronation that results from the elevated first metatarsal.

A recent article in the medical journal *Spine* stated that as much as 70 percent of those who underwent back surgery still suffered from back pain for up to 17 years after the surgery.

For example, in a recent article in *Consumer Health Interactive*, Dr. Richard Deyo, a professor at the University of Washington and a co-recipient of the Nellie Westerman Prize for research in medical ethics said, but "90 percent of back pain can be resolved without surgery if both doctors and patients are willing to try other treatments that basically help the back to heal itself."

Proprioceptive stimulation by making the feet send accurate signals to the brain, then the brain tells posture muscles throughout the body to relax. Neck, back and knee pain gradually subsides.

Proprioceptive stimulation is achieved by treating hyperpronation with a special high-tech insert that quickly fits into patient's shoes. Unlike traditional hard custom orthotics, these inserts are soft, comfortable and cover the entire foot, compensating for an elevated first metatarsal. The inserts help patient's bodies to be in a more balanced position so that other treatments, whether they are chiropractic, or other medical strategies, have better results. The inserts are also less expensive than custom orthotics.