



Are We Stretching the Truth About Stretching?

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As I look around at the individuals in the gyms, I'm amazed as to how many people go through the motions in terms of their stretching routines. It has become an accepted standard to stretch prior to working out. What's more, if a muscle is tight, it should be stretched at all costs. Emerging research, however, challenges these concepts.

Before I go any further, I want to say at the outset, that I believe in stretching, but not in the traditional manner—mainly *static* and *passive* stretching. Let me explain. Static stretching is the type of stretching where the exerciser would hold a muscle in a position of stretch for a given amount of time, usually 30 seconds. This is believed to improve range of motion and prevent injury, especially if done prior to activity. Passive stretching is when either another individual supports the limb being stretched or the exerciser uses some external apparatus to help move the limb into the stretched position.

Current research published in the prestigious journal—*Medicine & Science in Sports & Exercise* published by the American College of Sports Medicine, concludes in their 2004 article with these words:

“There is not sufficient evidence to endorse or discontinue routine stretching before or after exercise to prevent injury among competitive or recreational athletes. Further research, especially well conducted trials, is urgently needed to determine the proper role of stretching in sports.”

If the above article excerpt isn't convincing enough, a recent article (2004) in the *Journal of Strength and Conditioning Research*, published by the respected National Strength and Conditioning Association (NSCA) concluded:

*“It was concluded that static stretching as part of a warm-up may **decrease** (emphasis mine), short sprint performance, whereas active dynamic stretching seems to increase 20 meter sprint performance.”*

At this point it is appropriate to define *dynamic stretching*. Dynamic stretching is different than static in that it involves movement during the stretch and active muscular effort to bring about the stretch. Static or passive stretches usually involve holding the end range of the stretch in one position for a period of time, whereas dynamic does not. The take home message is that dynamic stretches involves movement during the stretch and static stretches involves being “static”, which implies no movement. An example of a dynamic stretch would be walking lunges where the objective would be to stretch the hip flexors (front of hip) while working at the same time, the glutes (buttocks). This combination takes advantage of a physiologic phenomenon called, *reciprocal inhibition*. To simplify this complicated concept, when you contract a muscle on one side, the muscle on the opposite side will relax. In the case of the walking lunge, the buttocks contract, whereby shutting off the hip flexors (front of the hip).

Why Do Muscles Tighten Up?

Remember this nugget— the body's main concern is protection. This being the case, if the body doesn't feel safe or stable, in a certain range of motion, it may

tighten up to protect itself—the body doesn't want increased range of motion if it doesn't feel safe or stable in that range. So lack of flexibility could be a result of having poor stability in the range we lack.

Greg Roskopf, former strength coach from Fresno State in California and founder of M.A.T. (Muscle Activation Techniques), a system of training that looks at muscle tightness as a form of protection in the body. Weak or inhibited muscles can create the need for other muscles to tighten up in order to help stabilize the joints. Greg uses the analogy of walking on ice. When you walk on ice you don't feel stable so you shorten your stride, whereby decreasing your range of motion, because you don't feel safe or stable. When you perform a stretch that requires stability, the body 'melts' the ice so to speak, this in turn allows an increase in mobility because the body feels stable. My bone of contention regarding the mindset of stretching I witness on a day to day basis is that people ignore the above principles. I still have to remind myself on a daily basis that increasing range of motion without a concomitant increase in stability in that new range is not going to be effective. Why would the body increase range of motion if it doesn't feel stable in that new range?

Additionally, we need to have strength in the opposite muscle to be able to HOLD that new range. What good is stretching a muscle passively if you can't support the range actively with the muscle on the opposite side?

I also find it peculiar that most people that stretch, stretch in one direction—either forward and back, side to side, and not integrate these motions in one stretch. After all, real life demands, especially sports, require flexibility in multiple directions or planes. The age-old Yoga principles had it right for centuries. Yoga integrates core stability, mobility and strength in most of the poses.

One final word, many muscles develop 'knots' or adhesions (or scar tissue) from overuse or previous injuries. A different form of flexibility training is needed for this type of problem that focuses on the fascial system (connective tissue) in the body which is prone to these adhesions (or knots). Simple stretching is not always the answer for restoring normal range of motion in this context. This is where

deep tissue, or what massage therapists refer to *cross friction* massage, which ‘breaks-up’ or releases these knots. An alternative to massage therapy is to use, what we call in this field, a foam roller, which attempts to break the adhesions. This is called SMR or Self-Myofascial-Release.

The **Core Essentials**SM program adheres to the above principles—in that the majority of the stretches have a stability component attached to each stretch, as well as a suggestion of some foam rolling exercises that target areas that are prone to adhesions.