

BACK TO THE BASICS: REAL FITNESS RESULTS – June 8, 2016

Stretching 101

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Intuitively, we all know stretching helps our bodies, but there's so much information out there about how to stretch, how not to stretch, whether to stretch at all, and everything in between. We're all left scratching our heads, and when in doubt, tend to err on the side of less (to none). Here's the skinny on stretching, the benefits, and important aspects to consider.

First, stretching IS a good thing to do, and regularly. Like brushing your teeth. Your body is comprised of bones, tendons, ligaments, joints, and muscles (among other things). Bones and tendons do not stretch, but ligaments (connective tissues), and muscles (soft tissue) certainly do. Our muscles like to tighten up and stiffen up, in response to impactful exercise, or from prolonged periods of exertion, and stretching helps restore muscle flexibility, which leads to less soreness and better movement quality.

Although a high level of flexibility is not necessarily needed for our day-to-day function, a good level of basic flexibility goes a long way to improving strength, reducing fatigue, easing the effort of doing daily tasks (bending over, picking things up, twisting, reaching, climbing, etc.). Stretching increases elasticity, and more elasticity means more power generation. E.g. A bow and arrow, whose bow can be pulled back further, can undoubtedly be shot a much further distance. In line with this concept, longitudinal studies exist, demonstrating that the single most important determinant of an athlete's longevity in their sport is flexibility.

Now, if stretching is so good for us, why don't the majority of people do it? There are a couple reasons, in general:

- 1 – I “don't have time”
- 2 – “It doesn't feel good” (discomfort, painful)
- 3 – “It doesn't help”
- 4 – “It puts tension on my joints” (e.g. knees)

Since time is like money (it isn't found, but made), excuse #1 usually exists because X person has not truly benefitted from stretching enough to be motivated to do it, and make time for it. This is remedied by proper understanding of how to stretch followed by some daily practice, where the results speak for themselves. The second reason makes a lot of sense, because usually the tighter someone is, the worse the stretching feels at the beginning. Starting slow is important here, and using minimum force is key. We'll get into this after. The 3rd reason of it “simply not

helping” usually just comes down to improper technique, patience, or a combination. And, the undue tension that stretching can put on joints, generally comes from improper technique, again, or the requirement of modifications to the stretch, depending on previous history (injury and so on).

Here are some important take-home points on how to stretch, when to stretch, and why:

1 – **Never stretch cold muscles.** This is akin to jumping into your new car in -30 degree weather and just taking off, no warm-up. It can cause muscle strains, and reduce performance in weight lifting. Save the deep, static stretching for after workouts, or at least when your body temperature is increased.

2 – For muscle length to be increased, **the muscle must be completely relaxed.** This gets overlooked all the time, even in yoga. For example, bending over to stretch the hamstrings does very little for actual hamstring lengthening, since they have to be somewhat contracted to stabilize the pelvis and lower back. In fact, this “stretch” mostly just pulls on back ligaments and can damage them. Lying on your back with your leg up in the air is the correct way, since the hamstrings can then be in a relaxed state. This concept applies to hurdler stretches too, where muscles and joints are contorted for a feeling of stretching. These often do more damage to ligaments than benefit to actual muscles.

3 – **Do dynamic stretching exercises prior to exercise (see “Agile 8” on YouTube), and static stretches after training.** Save deep stretches for the end of your workout. It’ll reduce subsequent soreness, and it won’t reduce your strength. Deep stretching prior to lifting weights might “feel” good at the time, but it reduces the amount of force that can then be produced, which makes you weaker.

4 – **Focus on the main culprit areas.** For most people, back stretching is not necessary. It’s stretches for the chest, shoulders, biceps, piriformis (glutes), hip flexors, quads, and calves. This is especially important for people with desk jobs, who basically sit in hip flexion all day, and need extra stretching to undo the tightness in their hip flexors.

5 – **Rotation.** When stretching, it’s important to stretch through a full range of motion, and with no excessive forces. Forcing stretches is completely useless, and can produce injury. Gravity stretches are usually the best, and rotation simply means turning the joints at the end of the stretch position to maximize that stretch. An example of this would be a wall chest stretch, with arm against wall, then turning body and head away.

6 – **Breathing.** All too often, people tense up when stretching and sort of strain through their stretches, to get through it. The actual benefit is completely lost, unless you give your body enough time to open, for muscles to let go and relax, to subside, and to release. This is only achieved through diaphragm breathing, which

gives your brain permission to let off the brakes, and let your muscles go. These muscles are controlled by nerves, which are, in turn, controlled by your brain, and their job is to stay tense to protect you, unless you deep breathe and “let go”. You must breathe, relax, and work through stretches deeply, and slowly. Minimum force, and time are the two ingredients to use.

7 – Strength/Power. If a muscle has less elasticity, very simply it’s a weaker muscle. It cannot be pulled on to the same extent as one with more flexibility. When sprinting, tight, short muscles produces a smaller faster stride, which is less efficient. This places more torque on joints, makes the exercise more taxing, and inevitably leads to more strains and injuries. For some reason, especially with males who are less flexible by nature, we often just skip stretching in favour of lifting more weights. However, the guys who are the strongest and have actual functional bodies are usually quite flexible too (see gymnasts, sprinters, and soccer players).

Back to that bow and arrow example, the same principle applies to bench presses, chin-ups, and 100 metre sprints. Maybe now, you’ll be more motivated to stretch, if it means lifting bigger weights... After all, who cares how strong or defined you are if you are stiff as a board and can’t move or run properly?

8 – Mobility. People are good at getting strong and lifting weights, but they often let their flexibility and mobility (movement quality) fall way behind. For example, there are plenty of 200-300 pound bench pressers, but these same guys struggle to perform a deep body squat, or a proper push-up. When strength exceeds flexibility, and muscle mass starts to stiffen all our joints up, it can wreak havoc on our posture; on our ability to move freely, and it can even cause inflammation and chronic pain. The answer is almost always stretching. Improve someone’s flexibility, and the quality of his or her joint movement is better, range of motion improves, more muscle is build, strength goes up, pain goes down, and stiffness is reduced.

So, there you have it. Stretching is good for you, if done properly, and at the right times. Don’t let anyone who tells you “stretching is bad” convince you. They don’t know the science, and haven’t been doing it right – otherwise they’d be benefitting too. Don’t let your strength, muscle, laziness, or time schedule, impede your need to stretch. Unlike a car that can be abused and replaced, you only get one body. Time to start taking better care of it!

For a proper read-up on stretch techniques, research Dr. Michael Colgan’s work.

Now, go stretch!