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Column Editor

summary

Flexibility training is more than simply static stretching.

Flexibility is one of those physical components that is either trained to death or not addressed at all. Most athletes and coaches include what they consider to be flexibility exercises in their training because they have always heard it is the right thing to do. Whether it is performed pre- or postworkout, static stretching is the most common form of flexibility training. One Medline search will provide a plethora of conflicting studies on stretching and flexibility. Field observations may be equally diverse in their findings. This column will question some traditional flexibility practices and share some of our field observation.

Flexibility is generally defined as “the range of motion about a joint” (1). There is no doubt that healthy movement and proper range of motion (ROM) are necessary for normal function. However, the question now has to be asked: what is healthy and proper? If you look at any rehabilitation text, you will see anatomical ROM assigned to all joints of the body. These ranges are labeled “normal” ROM and serve as refer-

Flexibility: More Is Not Necessarily Better

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ences. These ranges have guided traditional strength and flexibility programs in order to provide “optimum” ROM and function. However, applying this traditional approach allows a few very important concepts to be overlooked.

In order to give our discussion some direction, we have to ask some specific questions. First, does passive ROM relate to its active ROM? That is, just because I can get 140 degrees of static (passive) range out of a joint, will the body provide that same range at high speeds and loads? To ask the question another way, is it healthy for me to statically develop a ROM that I cannot control at functional speeds and loads? Is there a difference between anatomical ROM and functional ROM? Finally, the most important question: which flexibility do I really need the most in functional daily activities and sports: static or dynamic, anatomical or functional? Because any position on flexibility can be supported by some research, we would like to keep the discussion based

on observations, coaching experience, and common sense. I believe a simplified discussion will allow one to see flexibility from a more holistic perspective.

Working with many athletes, especially martial artists, we have been able to make some interesting observations. On the basis of our observations, static ROM is not related to active ROM; that is, the body will give you more ROM when it does not need to control speed, tension, and stabilization in that ROM. For example, all our fighters can exhibit more ROM through a controlled passive stretch than they can through a live kick, even when instructed to kick as high as possible. Why



is this so, and what does it mean? We interpret this as, “if you cannot stabilize and control ROM, the body will not allow you to use it.” Therefore, our clients warm up dynamically and incorporate full ROM training into their strength programs. We believe this integration develops all the functional ROM we need for health and elite performance. For example, when our

fighters warm up, they start with light technique work and eventually pick up speed and ROM over 5–10 minutes. If extreme static ROM is needed (i.e., as with our wrestlers), we then make it part of our warm-up, holding the extreme position for 5–10 seconds.

To illustrate how we integrate flexibility into our warm-up and strength training, we would like to share 2 of our favorite exercises: the reaching lunge (RL) and the T-Stabilization (T-Stab) push-up. Both exercises include a unique blend of strength and flexibility. Each can also be modified to match any application. The bottom position of the RL resembles a static hamstring stretch (Figure 1a and 1b). It can be performed in all 3 planes of motion to address the multi-planar nature of functional ROM. The stance, speed, and range of movement can be tailored to meet the specific capabilities and training goals of any individual. The RL can also emphasize any muscle group within the kinetic chain. For example, reducing knee and spinal flexion can increase the ROM demands of the hamstring. Gray (2) was the first to coin this concept of “isolated integration.” Using dumbbells with the RL can provide an excellent combination of ROM and strength. The RL progression is a staple movement in our training model and, along with other exercise, is credited with our near-perfect record against hamstring injuries.

The T-Stab push-up is also one of our staple exercises that incorporate functional strength and flexibility training (Figure 2a and 2b). It looks like a chest stretch as well, except with more versatility. As with the RL, it can also be modified specific to the capabilities and goal of any individual. For example, the upper-body support can be elevated (e.g., using a fixed barbell at about waist height) and the rotation can be reduced to attenuate the intensity of the movement. Conversely, a lower-support position (i.e., the floor), the use of a weighted vest, and increased rotation can provide a more advanced training stimulus.

It should be made clear we do not believe that static stretching is not effective or does



Figure 1a and 1b. The anterior reaching lunge can be loaded with dumbbells and medicine balls. This exercise provides excellent hamstring strength and flexibility.

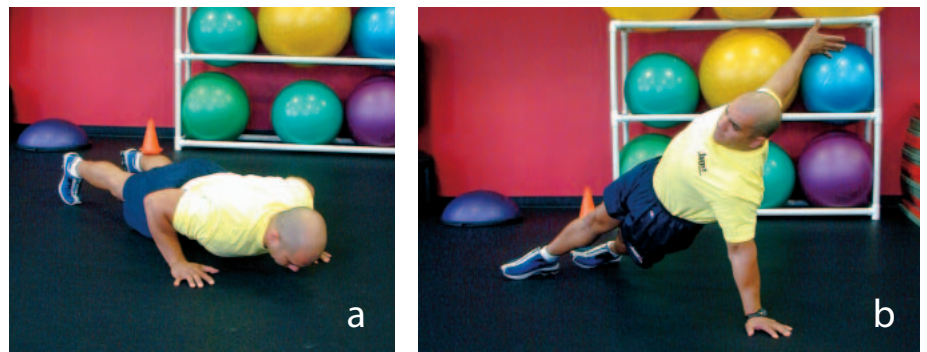


Figure 2a and 2b. The T-Stabilization push-up can be loaded using a weighted vest or holding on to a dumbbell with the free hand. The rotation can be exaggerated to focus on extreme shoulder range of motion.

not have a place in fitness and performance training. However, we have not been able to identify to what degree it is effective, if it is the most effective road to functional flexibility and performance, and where in the training scheme is its exact place. We certainly acknowledge it as a tool in the rehabilitation setting. We can also accept it as a “feel good” modality and have no objections to it as an everyday use for that purpose. We often roll on medicine balls and biofoam rollers for a few minutes before workouts for that reason; it loosens us up and makes us feel good. However, we do find it alarming when coaches and organizations insist on static stretching as the “best” or “necessary” method of preparation, improving functional ROM and reducing injuries.

In summary, our field observations support our belief that static muscle compliance and

active muscle compliance are not related (i.e., muscle compliance is a big component of ROM). Our observations also indicate that active muscle compliance is more important to our fitness performance goals. Over the past decade, we have combined dynamic flexibility into our strength movements and have basically removed all static flexibility from our day-to-day training. This is not necessarily to be taken as the best way to train; it simply illustrates that there may be many ways to do things correctly ♦

References

1. Baechle, T.R., and R.W. Earle, eds. *Essentials of Strength Training and Conditioning*. Champaign, IL: Human Kinetics, 2000. p. 322.
2. Gray, G.W. *Chain Reaction Festival*. Adrian, MI: Wynn Marketing, 1996. p. 15.