

## **FLEXIBILITY TRAINING**

*Stretching is one of the most controversial subjects in exercise and sport, but this author feels regular stretching is a must, and when done properly can actually rehabilitate injuries.*

By Matt Fitzgerald

Believe it or not, stretching is one of the most controversial subjects in exercise and sport. For many years, experts, would-be experts, athletes, and coaches have disagreed about many aspects of stretching.

I wish I could tell you that all of these issues have been resolved, but they haven't. Nevertheless, based on extensive research and personal experience, I'll say with complete confidence that every runner should stretch regularly. I can also assure you that appropriate stretching practices will never cause an injury and may prevent and rehabilitate many. Specifically, I will present four distinct types of flexibility training--static, active-isolated (AI), contract-relax (CR), and yoga--and leave it to you to decide which method or combination of methods you will use.

**Four Ways to Stretch****Static.** Of the four types of stretching I mentioned at the start of this chapter--static, AI, CR, and yoga--the first is the simplest and most popular. The standard toe touch is an example of a static stretch.

**Static** stretches are usually facilitated, meaning that the targeted muscles don't stretch themselves. They're stretched by the work of other muscles. Take that basic toe touch, for example. The hamstrings don't stretch themselves, and the opposing muscles, the quadriceps on the front of the thigh, don't really do anything either. Rather, the stretch happens because your pelvis tilts forward. Most of the time, you'll hold static stretches for 10 to 30 seconds. Two repetitions seem to work better than 1, unless you hold the first stretch long enough for the muscle to relax and then go into a deeper stretch from that point.

**Active-isolated.** Active-isolated stretching is a form of flexibility training that was created specifically to overcome the drawbacks of static stretching. In an AI stretch, you put your body in a position that allows you to stretch a single muscle group. Then you contract the muscles opposite the ones you want to stretch while pulling the targeted muscles into a deeper stretch than would ordinarily be possible. For example, you'd contract your quadriceps while stretching your hamstrings. Each stretch lasts 2 seconds and is usually performed in sets of 10 repetitions.

Most AI stretches require a rope to help you pull the muscles into deeper stretches. The major limitation of the method is that some of the stretches are rather awkward and simply don't feel like they're doing much.

**Contract-relax.** Contract-relax stretches are similar to AI. Both entail isolation of a single, targeted muscle group via briefly held stretches. In CR stretching, however, you precede each stretch with an isometric contraction of the targeted muscle. So if you're stretching your hamstrings, you first contract them, then relax and stretch them. This helps trigger the inverted stretch reflex. CR has scored high marks as a flexibility-training tool in studies. But like certain AI stretches, a few CR stretches would seem to be more effective if assisted by a partner.

**Yoga.** Yoga involves static-active stretching, making it a hybrid of the other forms of stretching I've just described. As in static stretching (whose proper technical name is static-passive stretching), you assume and hold positions in which certain muscles are lengthened. Like CR, yoga also involves isometric contractions, but with a crucial difference: In CR, you contract and relax the same muscle in a coordinated sequence; in yoga, you hold one set of muscles in isometric contractions while relaxing and stretching the muscles opposite them.

Yoga is seen by many as a complete form of exercise. It increases passive and dynamic flexibility as well as balance and coordination, which seems obvious. Some new research shows it also has strong, and nearly instant, powers to alleviate anxiety and stress.

It's also thought to improve strength, depending on the type of yoga practiced. For example, power yoga, in which you move quickly from one pose to the next, probably improves strength, particularly if you aren't performing any other type of strength training. Because it involves sustained isometric muscle contractions, yoga is a lot more taxing than other forms of flexibility training.