Stretching 101

By Rich Morris

Let's face it. As distance runners we don't pay much attention to the basics of stretching. I know that is a generalization, but it is true for most of us. Sure, we probably do some light stretching before a workout or race to loosen up our muscles but we really don't give proper stretching the attention that it deserves.
A proper stretching program will help in several ways. It reduces the risk of injury; decreases muscle soreness and improves performance. There are six basic stretching techniques: static, passive, dynamic, ballistic, proprioceptive neuromuscular facilitation (PFN) and active isolated (AI).

Static Stretching

This is the most commonly used technique. A stretch position is gently assumed and held for 20 to 60 seconds. There is no bouncing or rapid movement. Do not stretch to the point of pain. You should feel a slight pull, but no discomfort. Keep all joints in alignment. Do not twist joints into unnatural positions. The stretch should be felt in the belly of the muscle and not in the joints. This type of stretch works best after your workout rather than before.

Passive Stretching

The basic technique is the same as static stretching. The muscles are kept relaxed and a gentle stretch is maintained for 20 to 60 seconds. The difference with a passive stretch is that a helper actually provides the forces of the stretch. In a static stretch, you get your body into position and supply the force for the stretch with other muscle groups and using body weight. With passive stretching you relax your entire body, while a helper provides the force to stretch your muscles. The same rules apply here. There should be no bouncing or rapid movement. Do not stretch to the point of pain.

Dynamic Stretching

A current popular buzzword among athletes is function training. That basically means training that mimics the actibity you are training for. Dynamic stretching could also be called functional stretching. A dynamic stretch is one in which your limbs are moving through their full range of motion. For example, walking with high knees is a dynamic flexibility exercise that stretches your glutes, quadriceps and lower back. These

stretching exercises are best performed after a warm up and before you begin your activity.

Proprioceptive Neuromuscular Facilitation (PNF)

Proprioceptive neuromuscular facilitation (PNF) was originally developed by physical therapists for reabhilitation purposes. This type of stretch is accomplished by maximally contracting the muscle to be stretched for 5 to 10 seconds. This is followed by a slow passive stretch. This is repeated several times. By contracting the muscle and then stretching, you overcome a tendency for the muscle to resist the stretch, which results in a higher degree of flexibility.

Active Isolated Stretching

Active isolated (AI) stretching is the latest development is flexibility. AI stretching involves contracting the opposing muscle while the target muscles is stretched. The theory is that as one muscle is contracted, the opposing muscle will relax. An example of opposing muscles are the hamstrings on the back of the thigh and the quadriceps muscles on the front of the thigh. By contracting the quadriceps as your stretch the hamstrings, the hamstrings will relax to a greater degree, resulting in a better stretch. Many dynamic stretches are a form of AI stretching.

Which is Best?

With all of these choices, which is the best way to stretch? The recommended methods are dynamic stretching before your training run and either static or AI stretching after your workout. The dynamic stretches do a good job of preparing your muscles for your workout or race without decresasing the energy return potential of your muscles. PNF stretching have been shown to be a high-risk type of stretch. Studies show that AI stretching provides more flexibility than either passive or static stretching. However, all of the stretches are appropriate for beginning runners.