

To Stretch or Not to Stretch...

By Emily Dean, MS, PT

I've had many runners say to me, "I know I need to stretch more, but I just can't make myself do it." Well here's the good news: I won't let you skimp on your warm-up (remember last quarter's newsletter), but you may be able to get away without stretching.

Before blindly embarking on a stretching program, first ask yourself why: do you want to improve performance, increase flexibility, prevent injury, decrease post run soreness, work on improved symmetry; do you have an injury; or are you just doing it because you've heard it's good for you? Additionally consider: When will you stretch? How will you stretch? And how often will you stretch?

Performance:

A large body of research indicates that static stretches performed before running actually decrease performance and running economy. This holds true for both sprint and endurance running. However, long term stretching 3-4 days a week has been associated with improvements in running mechanics, flexibility, power, strength, and endurance.

Flexibility:

If you want to increase flexibility, consider how much range of motion is truly necessary for optimal running gait. For example, many runners stretch their hamstrings, but the hamstrings are never in a maximally lengthened position while running. Multiple researchers have found that increased flexibility is associated with decreased running economy. This may be due to a decrease in stored elastic energy in the muscles leading to decreased force development.

Injury Prevention:

Research examining the effects of stretching on injury risk has been inconclusive.

Post Run Soreness:

Stretching may reduce the amount of bothersome lower extremity soreness after running in some individuals, but has not consistently been shown to accelerate post-run recovery.

Asymmetry and Injury Recovery:

Asymmetries in muscle length and joint range of motion can contribute to running injuries and vice versa. Stretching is an appropriate way to work towards symmetry to prevent or recover from injury and has been shown to be effective for various conditions including Plantar Fasciitis, Achilles Tendonopathy, and IT Band Friction Syndrome.

Dynamic vs. Static Stretches:

Dynamic stretches have been associated with improved neuromuscular control and sprint times. Unlike static stretches, they have not been associated with a decrease in force output or an increase in flexibility, so they may be more appropriate to include in a pre-run warm-up. Dynamic stretches include activities such as leg swings, bounding, skipping, high knee marching, and walking lunges.

Summary and Recommendations:

In summary, stretching is a complicated subject and no one stretch program will work for everybody. Following are my general recommendations for stretching:

- For improved running performance do not perform static stretches prior to running, but do perform daily static stretches targeting areas of stiffness or muscle imbalance.
- Perform dynamic stretches such as leg swings, skips, and high knee marching after a 10 minute warm-up for improved co-ordination while running.
- Do perform static stretches if you want to increase flexibility, but ask yourself why, or where, you want more flexibility and then stretch accordingly.
- Don't worry about stretching for injury prevention or improved recovery time unless you have identified sources of pain or muscle imbalance.
- Don't force your stretches. Stretch only to the point of gentle tension. Hold a stretch for 30-60 seconds (longer if it feels good). Breathe deeply and try to relax into each stretch focusing on the muscle you are stretching.
- If you have questions about appropriate stretches for your unique body and sport, consult a physical therapist.

Emily Dean enjoys participating in local runs. She is a physical therapist who works at Jackson County Physical Therapy in Ashland, Oregon. If you have further questions about stretching or would like a list of stretching references, she can be reached at 541-482-6360.