## **Becoming a Better Runner with Supplemental Training**

When people decide to take up running, the first thing they usually consider is how much time they can commit to running, both in terms of time per day and days per week or per month. Certainly it is important to schedule time for running, but often little or no time is set aside for other activities that may also lead to better running. These non-running activities include such things as stretching, strength training, massage, ice baths, yoga, etc. Unfortunately, some of these things take time and some even cost money, but if you do have the time and finances, they may help.

One type of supplemental training that has been shown in various research studies to result in better running performance is strength training, and I encourage all runners to include some strength training in their weekly program.

If you have access to a gym with weight machines, a few exercises that can help your running include hamstring curls, knee extensions, hip abduction and adduction exercises, and stomach and back exercises. If you have the time and inclination, some arm exercises will not be harmful, but usually not real beneficial in terms of helping you run, but they often make you just feel better in general.

I should mention that possibly the greatest benefit of some leg strengthening is to build a resistance to injury that may result from running. In other words, strength training may not improve your running as much as it builds resistance to running injuries, which allows you to run more or faster without getting hurt. Then the harder run training makes you a better runner. As a sport, running is probably associated with more minor injuries than most other sports, and in fact, a research study some 10 years ago found that the sport which is associated with the most injuries among high school girls is cross country.

In addition to helping ward off injuries, some strength work can actually improve running economy (lessen the energy demand of running). Reasons are not clear, but it is assumed that being a little stronger gives you a more solid base, more controlled stride and less unnecessary movement in run technique. Hill running, both uphill and downhill can also be useful in building strength and running economy. A warning about downhill running is appropriate at this point because running on too steep of a down-hill course or on hard road surfaces can increase your chance of hurting some areas in your hips, knees or feet. The key to downhill running is to use a gradual hill, one of only 2 or 3 degrees of slope (for comparison, the steepest hill allowed on interstate highways is 6%, so make it a fair bit less than those steeper highway hills).

On the other hand, up-hill running can be on just about any steepness of slope because when running uphill you are not really pounding into the ground as hard as on a flat surface, so you get the benefit of strengthening the pushing-off muscles and the hip flexors, while reducing the landing shock associated with flat or down-hill running. If you do uphill running on a hill outside, take it very easy running back down to the bottom. This brings up a great advantage of doing up-hill runs on a treadmill; you can run up for any period of time and when you need a break, you just hop off the treadmill and don't ever have to run down to start the next up-hill run.

Some people refer to supplemental training as "cross training." It really doesn't matter the terms used, the point is to stress some areas of your body that may take a beating while running, especially high-mileage running. If you take on runs that are longer than you have built up to at a gradual pace, you may let your good running mechanics get a little poor and nothing leads to running injury more quickly than poor running mechanics. In fact, any time you feel you are getting "sloppy" with your running technique, it is time to terminate that run. Spend a little more time in the weight room or doing some circuit training or some other activity and you will see your running become more enjoyable and you will feel yourself getting stronger during you regular workout sessions.

Just as you need to carefully increase the amount and speed of your running workouts, so do you need to carefully increase the stress of any supplemental training that you include in your overall program. My general rule is that you give your body a good 4 weeks at one level of training stress before increasing that stress; better to under train than to over train. For example, when considering run mileage, I think you are better to stay at a set amount of weekly mileage for a good 4 weeks before increasing that amount, but when you do increase, then I also think the increase can be a little more than just adding two or three miles to your weekly total. Take the same approach to strength training – stay at one level of stress for about four weeks before moving to a greater stress.

In summary, consider adding some supplemental training to your overall program, even if it is just some exercises that you can do in your house or back yard. Getting stronger will increase your confidence, will improve your running economy, and will help ward off those little injuries that often plague runners at all levels of proficiency.