

Blood is Thicker Than...

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With Halloween just around the corner, I figure this is as good a time as any to talk about blood. Specifically, your blood. And not just because Halloween is the holiday of ghouls and vampires. I want to talk about blood because with Halloween comes cooler weather, and with cooler weather comes changes in your blood.

When talking about physiology, scientists will often liken the human body to a car. But whereas cars have two separate fluid systems to supply energy (the fuel system) and to keep the engine cool (the coolant system), we only have one fluid to do both jobs--keeping the body cool and supplying it with energy in the form of oxygen, carbohydrates and fats--the blood.

The blood can be optimized to do one job or the other well, but not both. With lots of training in cooler weather, the blood becomes very thick with red blood cells and hemoglobin. This thick blood is very good at carrying lots of oxygen to the working muscles, but it's not very good at keeping your body cool. (We cool ourselves by sweating. When sweat evaporates it cools the surface of the skin, and the blood that circulates just beneath the surface. When this cooler blood is pumped to the working muscles, it draws heat away from them.)

When you train in the heat, your body acclimates by increasing your blood's fluid volume, making the blood thinner and easier to pump. The increased fluid volume also acts as a reservoir for your sweat glands. This thinner blood is very good at keeping your body cool when training or racing in the heat, but since it doesn't carry as much hemoglobin and red blood cells as cool-adapted blood, it can't carry very much oxygen. Problem.

Since a lot of your blood--and oxygen--is going to the surface of your skin to keep you cool, you can't train or race as fast in hot weather. And even if you're lucky enough to be able to travel to a race in a cooler climate, if your blood has been optimized for cooling, you won't be able to run or walk as fast. So proper acclimatization for whatever conditions you'll be racing in is important.

And that brings us to our fall racing season. Coming off the hot, humid summer, your blood is optimized for cooling right now. When you race, you'll sweat a lot, you won't overheat, but you also won't be able to race at your best until your blood gets adjusted to the cooler weather. The good news is that the worst of it seems to be over. With night-time temperatures dipping into the 60s, we have months of high-quality training weather ahead of us.

This time of year should be a transition into a relatively high-mileage base-building phase to get ourselves ready for more rigorous training in the late winter and spring as we get ready to peak at the Azalea Trail Run or other races.

With lots of long easy distance training over the next several months, not only will changes come to your blood, but also to your muscles and joints, your heart, and your peripheral circulatory system. You'll grow lots of capillaries to get more of that oxygenated blood from your lungs to your circulatory system, and then to your working muscles. With more oxygen you can run faster and further without accumulating fatiguing lactic acid in the muscles.

You don't have to completely do away with quality work in favor of a monotonous diet of slow distance work. You should still do some speed work. Just not as often or as vigorously as you would leading up to your peak racing season.

The effort for base-building distance and recovery work should range from 65 to 80% of maximum heart rate, and should feel, well, easy. Occasional interval or tempo workouts are fine, but these should be limited to no more than 85% of maximum heart rate. It wouldn't be a bad idea to use the early fall Pacer races like the Harvest Festival 8K, the Wild Ghost Chase 5K and the Senior Bowl 10K as tempo workouts to prepare for a late fall mini-season encompassing the Turkey 10-Miler and the Holiday Half-Marathon, or as preparation for the First Light Marathon. Focusing too much energy on the early fall races can distract focus away from the important endurance work that will get you through the rest of the year. In other words, getting those miles in now can ward off mid-racing-season burnout like garlic to a vampire.

Happy training, and happy Halloween!

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