

**August
2020**

**Volume 42
issue 8**



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KRRC GEAR!

(Limited time only)

Thanks to the efforts of Board Member Debbie Dye, we have an online store to order club gear - for a limited time only! The link to the store is:

[KRRC Store!](#)

The hoodies and all hats are embroidered.

Remember - limited time only. You must order by 8/5/2020 at 11:59 PM.

Shipping is available for a fee, or Debbie will do a mass pickup and set date/time for you to pick your gear up.

If you have any questions, you are welcome to message Debbie or send your questions by email to krrclub@gmail.com and I will forward them to her.

OK, now let's go shopping!

Run stories

Matt Wenzel



A fellow running club member loved by all of us. Cheered us on and pushed us to keep going to the end. He was an inspiration, a fighter, a true friend. He will be missed by us all





Matt Wenzel



Matt Wenzel

Koach's Korner by Ken Klipp

So, what do you think of the name? Got a better suggestion? Of course you do, so let's hear it.

First - some random neural firings from my very crowded mind. I was reminded recently about a training discussion I had a few years ago with a good friend of mine (yes, I have at least one friend!). An avid runner for years, he seemed to always be disappointed in his race times, saying "I never get any faster." So, I asked him - "Have you done anything different in your training?" The answer was no. So, I said "Why would you get faster?" There's a lesson there somewhere. If your goal is to get faster, then you need to "train" for that. If you're happy with what you're doing - KEEP DOING IT!

Okay, enough of that. Let's pick up where we left off the last time. What's that you say? You didn't read last month's column? Well, send me a self addressed envelope and \$500, and I'll send you a copy. Wait, Dave says I can't do that. Okay, then a quick review:

What is the most important thing to a distance runner? Answer: OXYGEN

Why? What do you need it for? Answer: We use it to chemically break down food to release the energy in the food

So, to run faster, you need MORE energy. Therefore, you need more OXYGEN to get it out of the food.

So, what things can be changed in the body to increase your oxygen supply?

1) The number of Red Blood Cells in every cup of blood - as you probably know, RBC's job is to attach to oxygen molecules in your lungs, and carry them to every part of your body so you can use that oxygen to (do I need to say it?) release energy from food. Here are some fun facts about RBC's and

how many you have in your body:

- The compound in RBC's that attaches to oxygen is called HEMOGLOBIN.
- Each hemoglobin molecule can hold on to 4 molecules of oxygen
- EACH red blood cell has about 250 MILLION hemoglobin molecules (Yeah, that's right. EACH red blood cell can carry 1 BILLION molecules of oxygen!!)
- You have 2.4 TRILLION red blood cells in every PINT of blood, and you have 12 pints of blood. (are you keeping up on the math here? You can carry a LOT of oxygen)
- Fun fact - if you lined up all of the red blood cells in your body like a row of coins, they would circle the earth at the equator 5.6 times - don't believe me? Do the math. Each RBC is 7 microns across. Go ahead. We'll wait.

So, getting back to the matter at hand - What can you change in your body to increase your oxygen supply? How about increasing the number of RBC's you have in each cup of your blood? That should do the trick, right? You're racing someone, and you have more RBC's per cup than they do (and each one can carry 1 billion oxygen molecules, remember?) - that is a big advantage (other things being equal, of course)

2) The number of capillaries in your muscle tissue. A capillary, you may remember from Biology class, is a blood vessel whose wall is only 1 cell layer thick. This is where the oxygen (and food, and carbon dioxide, and wastes, and enzymes, and hormones, and ANYTHING) can pass in or out of the blood stream (arteries and veins have thick muscle walls, so no exchange there).

- You have 10 BILLION capillaries in your body
- End to end, they would extend 100,000 MILES!

What if you could bore new capillaries into your muscle tissue? Every muscle cell would be closer to a source of oxygen and nutrients, as well as a place to get rid of waste products like carbon dioxide. This is exactly what certain types of training can do - increase the number of capillaries in your muscles. What type of training does this, Coach? Be patient. But imagine if we can both increase the number of RBC's AND the number of capillaries! Double whammy.

3) Heart stroke volume - this is the amount of blood pumped from your heart with each beat. For an average, untrained person at rest, it is about 50-70 mLs. By training, the heart muscle gets stronger and more efficient, so that the resting stroke volume can be 100 mLs or more. This is why runners have a low resting heart rate - they can pump out all the blood they need with fewer beats because there is more blood being pumped out each beat.

The big pay-off comes during exercise. an untrained person can raise their stroke volume to around 100-120 mLs per beat at maximum exercise. The trained runner can almost double that. Add in the fact that a trained runner can sustain a higher maximum heart rate, and you get a double whammy again. Simple math: Untrained: 100 mLs/beat x 170 beats per minute = 1.7 liters of blood. Compare that to a trained runner with a max stroke volume of 180 mLs per beat x 180-200 beats per minute = about 3.5 liters of blood per minute. Quite a difference. Now go back and add in more RBC's per cup and more capillaries to pump it into, and VOILA! - a significant advantage to the trained runner

4) Number of Mitochondria per muscle cell - don't freak out. Not going to test your high school Biology knowledge. Suffice it to say that mitochondria are the structures in your muscle cells (all cells)

where the food products are broken down by oxygen. All of the enzymes for completing that process are inside of these little power houses. By training, you can increase the number of mitochondria in each muscle cell, thereby increasing the energy supply to that muscle. You can increase the number of Mitochondria in a muscle cell into the thousands for each cell. And not only that - you increase the SIZE of your mitochondria so that each one has MORE enzymes for carrying out their work at a higher level.

5) Blood buffers - In a soon-to-come column, we'll look at "Lactic Acid" - what it is, where it comes from, what effects it might have on muscle cells, what you can do about it, etc. For now, just know that if an ACID accumulates in a muscle cell, it will cause a number of normal functions within the cell to malfunction and therefore the cell will not do its job well. Fortunately, one of the ways we have to combat the acid is with BLOOD BUFFERS found in our blood stream. And you can increase the amount of these through specific types of training, so that you will be better prepared to delay the effects of the acid and continue to run at a high intensity level.

There are a number of other physical parameters that can be improved through different training methods - toughen joints and tendons, increase "fat burning" enzymes (saves sugar for later in the race - Fat=9 Cal/g; sugar=5 Cal/g), efficiency of running form, injury prevention, mental aspects, etc. I listed these five to impress upon you that there are specific things that you can do (and have been doing, as a runner) to increase your body's ability to run faster. The questions now become:

- What types of training change each of the above (and other) factors?
- How far? How fast? How much rest? How often?
- In what SEQUENCE should different types of training be done for best effect?
- Etc.

Be patient. Hope I didn't overwhelm anyone with science and numbers. I'll try to keep that to a minimum. Until next time.

Coach Klipp - OUT! Email: kcklipp@comcast.net Text: 815-954-3683

Mind's Running While Running

By Alan Toronjo

It Doesn't Just Have to be Running"

Did that catch your attention? That tag-line was given to me by our oldest when deciding what to

write about for this month's submission to the newsletter. We've just passed through a full month of summer. What does that mean? Abundant sun; a lack of plentiful breeze (unless we have a front passing through which can bring storms with refreshing cool-downs but it seems that relief is always short and temporary); and humidity that is off the charts, which all lead to some not-so-ideal running conditions.

It's safe to say I do not love running in the heat, and I don't want to sound too harsh by using "hate" for the summer outdoor sweat fests. But it is H A R D when the heat index is boiling, you're desperately searching for that next patch of cooling shade along your route, and you're wondering how crazy it would look if you suddenly took up track and field and performed hurdles over/around/through a neighbor's sprinkler. As I write a portion of this, I just completed an overcast run where the temperature was only about 75 but the humidity left me in one of my sweatiest hot messes that I've ever experienced. Just thinking about getting out when it's over 80 degrees outside makes my pores cringe thinking about releasing all that sweat. After Memorial Day, I was caught up in attempting what is known as a "streak." For those of you who are unfamiliar with a running streak, it is taking on what would seem to be an insurmountable task of running every day (using a minimum of about one mile) for any set of consecutive days. I decided to take on this feat from Memorial Day through July 4th (one of the more well-known summer-time streaks). Everything seemed to be going great until I got derailed. I was making sure to switch up my routes and pace, and doing my best to combat what Mother Nature had in mind for heat and humidity at any given time during the day.

But then came a week get-away to visit family in Texas. I was doing fine and finally getting accustomed (acclimation to heat does take time) to the seasonal solar energy, but due to not partaking in the best diet while down south, not paying attention to proper hydration, and the long drive back at the end of our much-needed vacation, I had a nice, swollen pair of feet and ankles. After a full and almost non-stop 15 hours of driving and at 8pm, I didn't think it was advisable to try to even get one mile at a super easy pace, which brought an end to my streak. Not to mention that I was dealing with some slightly sore and knotty calves from the daily runs from Memorial Day up until our drive back in late June.

However, I was not disappointed in the least. I was extremely happy with my streak and what it had taught me. A continuous streak of any kind and for any amount of time should give you pride and is a tremendous accomplishment. It still took a few days to get back into a semi-regular routine and for my swelling to subside, but more importantly, I gained an appreciation (starting in Texas) for taking part in other activities besides running (gasp!). Our oldest, soon-to-be sophomore (same that assisted in giving the title to this entry), is currently participating in high school cross country and tennis. Much to my delight, he had packed a couple of tennis racquets and a handful of those bouncy, bright, fuzzy balls. I was running under the rising Texas sun in the early mornings and almost every single evening (not quite to the point where the stars -- "big and bright" appeared) was playing matches and sets of tennis. It didn't even matter to me that I was losing; I'm not ashamed to admit that our oldest is quickly honing his skill on the tennis court. I was just enjoying getting used to a different kind of movement.

I'm a firm believer in movement as a means for fitness, in improving demeanor, and in boosting one's health. I always kind of knew the importance of cross-training and how getting different muscles

active or even running muscles in different ways can vastly enhance your daily dashes. Now, through taking a brief break from running but still engaging movement through playing tennis, I see first-hand that it is okay to enjoy the respite, yet know that swinging a racquet still continues to add to my fitness. So if I can't take the heat with a run, I can sweat it out on a court down in Cobb Park (in Kankakee for those unfamiliar with the area). If I want to make my own semi-cooling summer breeze, I can go for a bike ride. I can even take our fur-child Roxy for a walk and know that I am contributing to my overall fitness. "It doesn't just have to be running." Be active, find something you enjoy, and you will find delight in the movement. Please be sure to be cautious and take care against Illinois' double-edged heat and humidity sword as we continue through summer. I'll try a streak again when it gets cooler and I'll be sure to supplement the day-to-day trots with other types of movement. We'll see what my mind "runs" into (and how hot it is) next.

AJT

