What if your path to PR's involved *slowing down* most of your weekly miles? It may seem counterintuitive, but it's rooted in the science of how our bodies work.

Success in running is hugely and primarily dependent on the efficiency of your aerobic system – that is, your ability to efficiently burn fat for energy. A 5k is ~95 percent aerobic. A marathon is 99 percent aerobic. Spending periods of the year patiently developing your aerobic system will unquestionably pay huge dividends come race day.

There are two main types of fuel that can be burned for energy – sugar (or glucose) and fat.

1. **Glucose** –The human body can only store enough glucose to fuel ~90 minutes of intense exercise. Once used up, we must either ingest glucose calories or slow down.
2. **Fat** – Even the leanest person you know has enough fuel on board in their fat cells to complete twenty marathons.

What if you could tap into door number two – this almost limitless supply of energy?

Enter…aerobic training.

Aerobic training involves spending specific periods of the year devoted to running at or below your maximum aerobic heart rate of 180 minus your age.

A 40 year old, for example, would aim to keep her heart rate at or below 140 beats per minute (180 – 40 = 140) during winter training from November to February.

If you've ever worn a heart rate monitor you'll know how easy it feels to run this slow. In fact, you may even have to walk periodically to keep your heart rate low enough, which can be quite frustrating if you're used to the endorphin buzz, euphoria, and satisfying sweat of a more intense run. ***The most difficult thing about adhering to aerobic training truly is giving yourself permission to go slow enough!***

If you don't train with a heart rate monitor, here are some other ways of ensuring you're in a primarily fat-burning state.

1. You can breathe in and out through your nose.
2. You can easily carry on a conversation.
3. You finish feeling great (and perhaps a teeny bit guilty for not being tired or sweaty!).

4. Run at least 90 seconds per kilometer slower than your 5k race pace. (E.g. If you race a 5k in 27:30 (5:30 pace), train at an aerobic pace of 7:00 mins/km or slower.)

If you're aspiring to run anything from a 5k to an ultra-marathon, your biggest return on investment will come from slowing down and teaching your body to become good at burning fat for energy.

What is a Maximum Aerobic Function (MAF) Test?

Most athletes are a bit skeptical about aerobic training and I totally get it. The idea of slowing down to become faster doesn't make any logical sense, and we don't want to have to wait until race day to see if our efforts are paying off. That's where monthly Maximum Aerobic Function tests come in.

When we're more aerobically fit, we can cover the same distance in less time at any given heart rate. So if we can periodically measure how long it takes to run a given distance at our maximum aerobic heart rate of 180-age, then we know our training is working well in advance of race day.

How to do a MAF test?

Especially during the aerobic base building phase (~Nov-Feb and ~July-Aug), it can be very motivating to quantify our aerobic fitness. Here's how.

1. Go to the track, run 8 laps at your 180-age number. Record your finishing time.
2. Go back the following month and do it again.
3. If your time is faster, it means your aerobic training is working (hooray!).
4. If your time is slower or the same, it likely means you're over-trained or over-stressed (boo!). It could also mean you're ready to start layering on some more intense, anaerobic workouts (e.g. tempo and race pace efforts) to take your overall fitness to the next level.

I challenge you to embrace aerobic training at designated times of the year and see how it impacts your overall race performance.

Are you up for the challenge?