**Why Does Coach Get Me To Train So Slowly?**

As the goal of most people’s training is to improve, to get faster, to go further, to perform better, it is only natural that you want to push your training. To push the pace, to increase the effort to strive for improvement.

Intensity in your training is only natural and as your fitness improves it is only natural that you try to push the pace. With each session it is a natural assumption that if you travel further or take less time to cover the distance then therefore you have improved.

What is the purpose of training? I believe it is to improve. How do we measure that improvement?

It is easy to accept the obvious data that can appear in front of you with each training session. But if we ignore this obvious data from each training session we can focus on the aim of particular sessions and ensure that the aim is achieved.

Although this article could be written for any endurance athlete I shall focus on running.

There are a number of reasons why I get my athletes to focus their intensity on the lower intensities.

If we look at the training of many elite athletes, we know that elite athletes conduct a number of quality training sessions at high intensity. When we look at the social media of any elite athlete it doesn’t take long to find a boast about the hard/challenging sessions they complete.

Talk with any athlete friend and they too will boast about the tough sessions they have achieved (often with some exaggeration) or by contrast they will deny they have even been training, but psychological games aside the focus is on training harder faster and/or longer.

When we turn the attention back to the elite athletes research has shown us what they actually do and the vast majority of their training is at lower intensities. In fact about 80% of their training is conducted at the lower intensities. Why is this?

In Matt Fitzgerald’s book 80/20 Running he talks about a runner he coaches called Juan Carlos who is wanting to improve from a 10km time of 52:30.  In an email to Matt Fitzgerald he complains “I can barely run 8:45 per mile [~5:30 min/km] pace any more“. Matt replies to Juan explaining he has no business running 8:45 per mile except in specific moderate intensity runs, which provide little value to his training plan and that a more appropriate pace of 9:30 per mile [~6:00 min/km] for most sessions, which he advised should make up four out of every five runs conducted. I often find myself giving similar advice to a number of my athletes and putting the brakes on the intensity athletes are training at. Note that this is the training intensity and not the racing intensity, which is where the success of the training program or plan is actually measured.

A lot of Fitzgerald’s book talks about research by Stephen Seiler who has devoted his scientific career to analyzing training of endurance athletes. He has researched the training methods of a range of athletes and not limited to swimmers, cyclists or runners and also included cross country skiers and rowers. Overwhelmingly Seiler and scientific colleagues who have researched training habits of the best endurance athletes provide evidence that they conduct about 80% of their training at lower intensities.

Across all endurance sports Seiler (and other researchers) were able to assess (through Heart Rate data) how much training is done at different intensities by different athletes. **The key constant is that across ALL endurance sports the top athletes all spend roughly 80% of their training at lower intensities.** Some studies defined low intensity differently from others, but they are all minor or subtle differences.

**Although 20% of their training is done at higher intensities, and there is no dispute it is this higher intensity work that is what makes athletes faster, it is the lower intensity work that facilitates the success of the high intensity training. Without the low intensity training, the high intensity training WILL NOT deliver your greatest fitness improvement. You need to build your aerobic base first to make the most of the speed sessions.**

**Aerobic Base**

To enable you to develop your speed for your event, it is important to have an aerobic base. Building this aerobic base and enhancing it as much as possible ensures your speed work delivers the greatest benefit to your running.

The aerobic base will ensure your heart and lungs work together efficiently to take oxygen out of the air and then deliver it to the working muscles where it is needed to drive biochemical processes within the muscle fibers. It involves a number of steps in the process and if we can optimize each step in this process through our training, when it comes time for the higher intensity sessions you can reap greater gains.

As you build your aerobic base your lungs get better at taking oxygen from the air and diffusing it across into the bloodstream. The heart also makes changes and develops larger chambers – to pump more blood with each beat, a more muscular left ventricle (the chamber that then pumps blood to the entire body) – in order to pump the blood more forcefully so it gets to the limbs with a reasonable amount of pressure.

Physiological changes that occur at Endurance building intensities, slow twitch fiber development, increased blood volume, increased connective tissue development, increased muscle fuel storage, increased oxidative/glycolytic enzymes and increased capillarisation all occur. Although you might find all these technical words overwhelming, trust me they are all advantageous improvements for an endurance athlete to get. When intensity is higher, you lose a number of those benefits as they don’t occur as the body makes other physiological adaptations.

**What is the intensity you need to train at?**

Aerobic running is using oxygen at an effort level where the amount (or volume) of oxygen inhaled is comfortably enough to supply the demands for the exercise you are doing. You can maintain this intensity for many minutes or hours in a fit athlete. **At slower intensities body fats, as fatty acids are used to fuel the exercise. The more intense the exercise more carbohydrates are used as fuel.**

In *80/20 Running* Matt Fitzgerald defines intensity to develop the endurance system as needing to be a minimum of 60% of maximum Heart Rate (HR). In another of his books, *The Runner’s Edge,* he describes *Pace Zone 3*as corresponding to 65 to 75% of your VO2 max (this is the pace zone I get my athletes to use to develop their base fitness)*.* He goes onto explain **that running at this intensity increases resistance to injury, advances running economy, as well as the better endurance and increased aerobic capacity.**

The other key reference I base my training philosophies about is the process of Jack Daniels’ PhD VDOT system. Similar to Matt Fitzgerald’s system Jack Daniel’s starts off with determining your capability either through races or time trials. With close alignment with Matt Fitzgerald, what Jack Daniels calls Easy Running is to be done between 59 & 74% VO2 max and indicates that this is about 65 – 78% maximum Heart Rate (HR).

As you can see there are a number of different, but closely aligned guides to intensity from different sources, however they all end up pretty close to each other. The benefits don’t simply stop because you are 1 Bpm too high or 5 sec per kilometer too quick. But the benefits decrease the more you stray from the scheduled zones. There is no precise start and stop point but a blending from one zone to the next.

#### So What if I Train Too Fast? I Want To Run Fast Anyway.

At the end of the day if you don’t want to follow this advice or try and beat science it’s not going to impact your enjoyment of running (until you are injured). But if you are wanting to optimize your performance the only successful way to go for the long term is to build an aerobic base first. To do so you need to maximize your time at appropriate intensities.

The other thing that occurs from running too fast is that you will take longer to recover from the session.

#### Why Do You Struggle To Train Slow?

Most people feel most comfortable running a pace that is familiar with them and physically have difficulty running slow if they haven’t done much slow running lately. Matt Fitzgerald suggests that if a runner was to go for a run without a watch they would settle into a pace very close to the pace at which they did on their last easy run (and the one before that…..).

When you train at an intensity that is high, this habitual intensity is hindering your progress. It feels natural, as your stride has become familiar through experience.

#### Summary

To ensure you get the most out of your training you need to build an endurance base first. This is most effectively done by running at lower intensities (but not so low that you are walking).