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# IN THE BEGINNING

**Y**ou're fired up, ready to climb every mountain, sprint for every town limit sign, and bomb down every root-strewn descent. Excellent. Motivation is a critical, often overlooked component of a successful training program (we'll talk a lot more about that later). But before you leap off the sofa and into your Lycra, we need to go over a few things. It won't take long, and I'll try to make it as painless as possible.

## **Concept #1: To ride faster, you need to ride faster.**

I know what you're thinking: "Well, duh." Yet you'd be surprised how many cyclists simply grind out hour after hour at, say, 16 mph, expecting that they'll magically be able to turn it up to 20 mph on the day of the local AIDS ride or citizens' race. To those riders, I have three words for you: Ain't gonna happen. Oh, sure, you'll make the first few miles okay; but soon your muscles, unaccustomed to the increased intensity, will be overrun with lactic acid and grind to a screechingly painful halt. Ultimately, you'll be lucky to average even your normal 16 mph pace.

So, it's clear: If you want to be able to ride 20 mph on the big day, you have to be able to ride 20 mph on the smaller days, too. In fact, you should be able to ride even faster than your goal pace, which sounds sort of mean until you realize that you needn't, nor should you, ride that speed for very long. The concept is similar to that of vaccines: By introducing your body to a controlled amount of something that can be very bad for you (in this case, super-high intensity), you're able to handle the lower intensities without cracking.

## **Concept #2: To ride faster, you need to ride slower.**

I know what you're thinking: "What the heck's wrong with this guy? He just told me that to ride faster, I need to ride faster. That makes sense. Now he's telling me that to ride faster, I need to ride slower. What's he been putting in his water bottle?"

I agree; it defies logic. But it is imperative that you believe me at least enough to keep reading.

There are two reasons that most of your riding time (as much as 80 percent) should be spent at a pace far below that which you're trying to achieve. For one, your body and mind simply can't handle large volumes of high-intensity training. We'll discuss the physiological reasons for this later, but for now, trust me: If you train too hard too often, you'll actually get *slower*. Not good. For another, low-intensity training actually increases the body's capacity to handle higher paces. Again, we'll discuss this in greater detail later on; for now, file this little nugget under Perhaps the Most Important Thing Anyone Ever Told Me about Training.

Okay. Now you know 99 percent more than 99 percent of cyclists know about training. But the real trick—and the reason the remaining pages of this book exist—is seamlessly combining these diametrically opposed concepts into a cohesive training program. And to do that, there are a few more things you need to know. Read on.

## **The Language of Training**

As you dig into this book, you're going to come across words and phrases that may be foreign to you. And even if you've heard them, you may not be entirely sure what they mean or how they fit in the context of cycling. Endurance training has a language all its own; to help you learn how to read and speak it, let's tackle some of the key terms and concepts.

## **Aerobic Capacity**

Also known as max  $\text{VO}_2$ , aerobic capacity is the measure of how much oxygen your body can use during maximal exertion. Obviously, the higher your aerobic capacity, the better. Improved aerobic capacity is one of the major goals of training; but it must be noted that while training can increase aerobic capacity (AC), genetics plays a leading role in determining its boundaries. In other words, pick your parents well. And don't age: Aerobic capacity drops by an estimated 1 percent per year after age 25, though individuals who exercise regularly can reduce that decline significantly.

## **Anaerobic Threshold**

Otherwise known as lactate threshold, the anaerobic threshold (AT) is the level of exertion at which lactic acid begins to accumulate in the blood. That searing pain in your quads during hard efforts? That's lactic acid at work. Accumulate enough lactic acid, and you'll have no choice but to slow down. However, unlike your aerobic capacity, your AT is highly trainable. In other words, smart training can raise it significantly, allowing you to ride at a higher percentage of your maximal ability. In fact, while sedentary folks have an AT that's about 50 percent of their AC, highly trained athletes boast ATs that run about 90 percent of AC. That's why AC is not a very good predictor of performance; just because someone has a high AC doesn't mean that they can work to its potential.

## **Frequency**

This one's pretty simple: how often you do a training session. What's really important to understand is that frequency is a relative term. For a new rider, training four times per week might represent an appropriate frequency, while more experienced riders might train that often in 2 days by performing "two-a-days." The frequency at which you train should be based on your current level of development.

## **Duration**

Again, pretty easy: the length of your training sessions. Obviously, this is largely dependent on your current state of development and your goals for the particular workout. An experienced racer training for a long road race might do regular 4- and 5-hour rides, while a Category 4 criterium racer's program will focus on training rides of much shorter duration.

## **Volume**

Add your frequency and duration, and you get volume, your total training load measured in hours. It's tempting to focus on volume simply because it's so easy to determine. But in and of itself, volume is not a very good indicator of training quality. That's because it ignores:

## **Intensity**

Intensity is the single biggest factor in determining an athlete's success (or lack thereof). Intensity is sort of like salt in a recipe: Get the right amount, and it makes your food sing. But too little or too much, and you'll be pushing your plate away after only a few bites. Consequently, training intensity is the ingredient most riders get wrong. They go either too hard, too often, not hard enough, not often enough, or any combination of the four.

## **Overtraining**

Defined as a condition of lackluster performance resulting from too much volume, intensity, or both, overtraining is the black hole of cycling and has ended many a season (and career) prematurely. Overtraining can be hard to diagnose simply because its symptoms can mimic the opposite cause: undertraining. Most cyclists figure that if they're not riding well, it must be because they're undertrained. In some cases, that's true; but in many, many more, it's overtraining, not undertraining, that's the cause of their woe.

## **Overload**

Overload differs from overtraining in that it's a conscious, even desirable, condition brought on by a short period of intense training designed to stimulate the body into adaptation to higher stress levels. A successful training program repeats an overload-recovery-adaptation-overload cycle that consistently ratchets up fitness. It's critical to understand that overload is merely the catalyst for performance improvement; without adequate recovery, the body will not have an opportunity to adapt, and performance will actually decline.