

## THE ZEN OF PEDALING

I love cycling. I love the workout, the scenery, and the sense of control over one's environment that comes with wedding your energies with the mechanics of a bicycle to cover imposing distances at high rates of speed.

It is a powerful feeling to look at a point on a map some 80-100 miles distant, and to then form the conviction to go out and attack and conquer that piece of terrain.

There are two primary components that affect one's ability to ride long distances at high rates of speed:

1. consistent, methodical training
2. efficient application of one's energy to the mechanical apparatus

I think that the efficiency aspect of the performance equation is too often ignored, both in training and in racing. Yet, given the repetitive nature of cycling, it seems that the concept of pedaling efficiency and cadence should be the foundation off of which we build our fitness.

When I first began my *triathlon adventure*, I went to live and train in Spain because I was to have the opportunity to train with professional cyclists. These were not your run of the mill professional cyclists; my regular training group included members who had won mountain stages in the Tour de France, Giro d'Italia, and had top 10 finishes in the Tour de France and Spain.

Riding with these folks was often an exercise in plain survival, other times it was a question of prolonging inevitable death for as many climbs or kilometers as I possibly could. In my quest to survive these outings, I quickly learned how to best marshal and employ my resources in order that I might endure.

Proper gearing, pedaling technique drills, standing to *rest* and carry speed, all became my lifelines to finishing these outings in the midst of my fellow riders. Hence, my obsession with these topics and my insistence at their usefulness in maximizing cycling performance.

I have long found an indoor trainer, ideally a computrainer, to be an excellent tool with which to practice pedaling efficiency. While practicing various drills, I often close my eyes to eliminate visual distractions that take my focus away from the nuances of maintaining a smooth and efficient cadence. With my eyes closed it is also easier to record sensations that can then be referenced on demand.

Therefore, when doing technique workouts, a large portion of the workout should be done with your eyes closed in order to grasp, record, and commit to memory the sensations that you need to pedal efficiently. If you do this, you will find it much easier to then reach into your grab bag of tricks and work your way through difficult workouts and/or race situations. When I start to fatigue or suffer unduly, my lifeline is always this referencing of the sensations that I need to have a smooth pedal stroke.

In your quality sessions, close your eyes on a regular basis to help get these same calming, order-restoring sensations. I think you will find that it is a very effective way of controlling HR and perceived effort while maintaining speed.

Here are a few sensations/images/drills that you can add to your repertoire:

**Sensation:** Do not push the pedal all the way through on the downstroke. When you mash the pedal all the way down, the result is to compromise the rest of the pedal stroke as well as to tire your primary cycling muscles prematurely. Instead, think of pushing the pedal with "light feet", kind of like if you push it too hard you would snap the pedal off, or that you are pushing on egg shells and they will break if you push too hard. I sometimes imagine a thin layer of air between my foot and the sole of the cycling shoe.

**Images:** Imagine that your feet are merely attached to the pedals, which are moving of their own accord. Imagine also that the pedals are spinning at an increasing rate of speed and that this is also creating a large degree of centrifugal force. You would be amazed at how effective this simple game can be. The centrifugal force aspect helps you to avoid truncating portions of the pedal stroke.

**Drills:** To your list of technique drills that you practice and should be referencing in all workouts and races, add this one: eyes closed, focus on pushing with one leg and pulling with the other. You can do this for 4-5 revolutions and then switch legs, and then descend down to zero; watch how your cadence magically increases with no additional effort, but simply by a change of mental focus.

**Music:** I think we all know that music can have a powerful effect on our stimulus and ability to perform. Here is an added twist to consider. We have discussed how optimal cadence in a neutral environment ranges from 88-92, and that it varies in accordance with the % grade, wind, road surface. Think about different songs or riffs with varying tempos that jive nicely with a given cadence. When I race, I have a song list that I can reference for a wide range of situations and I find that this helps me to maintain focus and intensity.

### **Pedal Full Circles?**

It is often heard of the need to pedal in complete circles. I would qualify this goal to be one where you are not striving for a fully symmetrical circle, but instead you seek to have developed the senses and ability to quickly and easily reference any portion of the pedal stroke.

The pedal stroke will always have a particular phase which is dominant. However, by being able to quickly move in and out of other phases, you can be constantly varying muscle recruitment so that fatigue is not so quick to settle in. Therefore, your goal should not be a perfectly symmetrical circular pedal stroke; your goal should be able to phase in and out of various pedal phase emphasis while maintaining a smooth overall cadence.

**Workout Exercise:** For your quality sessions, experiment with using as little of the pedal stroke or touching as lightly as possible on the dominant phase. It almost feels a bit like cheating because you can find yourself hitting target HR zones yet without the accompanying perceived effort. This is another variation of one of my now familiar mantras “go fast, not hard.” I find this exercise to be particularly useful for the 2.5’ interval sessions.