

# Breathe!

By Marvin Zauderer

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We are affected not only physically, but also mentally, by the mechanics and efficiency of our breathing while cycling. The mentally fit cyclist knows how to use conscious breathing techniques to retrain breathing when necessary, reduce on- and off-the-bike stress, and pave the way for improving core mental skills.

We've covered quite a bit of road over the past year in this monthly column. We started with the **5 Core Skills** of mentally fit cyclists: [Goal-Setting](#), [Self-Talk](#), [Managing Emotions](#), [Concentration](#) and [Communication](#). (For those of you new to Pez, words in blue are links. And welcome to Pez!)

Then we moved on to more advanced skills, built on the core skills, that you can use in **Responding to Adversity**: [Increasing Tolerance for Suffering](#), [Recovering from Injury](#), [Sustaining Motivation](#), [Handling Pressure](#), [Beating the "Winter Blues,"](#) and, last month, [Balancing Self-interest and Cooperation](#).

Today we begin a new series on **Integral Elements**: the building blocks of the mentally fit cyclist's five core skills.

This week, at the beginning of Black History Month, I was touched by [the story](#) of African-American David Sylvester. Since 2002, David has cycled 20,000 miles across three continents in memory of a friend killed in the World Trade Center attacks. Although he's giving the money he raises [to charity](#), I was struck by how much David has *received* from his experience; how much he has been transformed by his journey. His mantra: "Any given moment can change your life."

Is there anything more fundamental to our moment-to-moment experience, consciousness, and awareness than our breath? Consider the word "psychology." [Carl Jung](#), who contributed significantly to psychology's definition and practice, pointed out that its root word, *psyche*, comes from a Greek word meaning "that which breathes." And, *psyche* was used interchangeably by the Greeks to mean soul, spirit, mind, and *breath*. Going even further back, the biblical Hebrew word *neshama* meant both *soul* and *breath*. And let's not forget the thousands of years of meditation traditions, in which following the breath is so often seen as the path to well-being.

In cycling, our mental fitness is often most evident at, or immediately after, specific moments in training, a ride, or a race: reaching or exceeding our limit for suffering, initiating or responding to an attack, getting anxious in the pack, believing in ourselves, getting down on ourselves, avoiding a crash, having a conflict with a teammate or coach, confronting another winter session on the trainer, and so many other "moments of truth." In these moments, our breath can be our strongest ally.

Pay attention to your breathing now. What do you notice? Is it shallow or deep? Is it in your chest or in your belly? Through your mouth or your nose? As you pay attention to it, do you feel more relaxed? More anxious? Neither?

I first became interested in the effects of breathing techniques on athletic performance after reading John Douillard's fascinating book, [Body, Mind, and Sport](#). In it, Douillard makes a compelling case for **nose breathing**. Mouth breathing, he argues, is a "learned response triggered by emergency stress," first used by the infant when natural nose breathing is obstructed. (Are all of you parents remembering your kids' first colds?) In nose breathing, the nasal passageways swirl and treat the air to make it optimal for the prevailing conditions. Mouth breathing, on the other hand, is the "direct, emergency route" for "cold, dry, unfiltered air" to enter directly into the lungs. Douillard notes that mouth breathing appears to activate the fight-or-flight

(ie. survival) response in the sympathetic nervous system, which tends to increase heart rate and adrenaline. Intuition suggests that this may have been “wired in” for us animals: if a predator is about to eat us, having a burst of heart rate, blood flow, and adrenaline seems like a good idea. But if there’s *not* such a threat, then “crying wolf” to our mind and body over and over again is going to be a big waste of energy, not to mention unnecessarily stressful.

Douillard also points out that many of us practice chest breathing, which typically only inflates the upper lobes of the lungs fully. **Diaphragmatic breathing**, with the resulting inflation of the lower lobes, activates the parasympathetic nervous system, which calms your mind and body. While a natural, unconscious mouth breath tends to be a chest breath, a nose breath tends to be slower, allowing the diaphragm time to pull air into your lower lobes. Plus, as your heart rate decreases, the blood spends more time in your lungs, which increases time for oxygen exchange, and thus increases the efficiency of your breathing.

I’m not suggesting that nasal, diaphragmatic breathing – or anything else, for that matter – is going to transform you into a stress-free athlete. To the contrary, many athletes (and effective public speakers) will tell you that a certain amount of stress *enhances* performance. ([Dr. Hans Selye](#), a pioneering stress researcher, famously said, “complete freedom from stress is death.”)

What I’m suggesting is that the Anxiety Family – stress, anxiety, fear, tension, pressure, worry, nervousness – is the primary adversary of the mentally fit cyclist. When your anxiety (and its siblings) exceeds your threshold, it can skew goal-setting, fuel negative self-talk, make emotions harder to manage, derail concentration, and impede effective communication. Breathing techniques evoke the calming forces in your body, reducing anxiety and giving you easier access to the energy, knowledge, and self-confidence within you.

## **Experimenting With Breathing Techniques**

So for some of us, long-used patterns of breathing have separated us from some of the natural strength, calmness, and energy we have within us. For others of us, we might simply use our breathing more effectively to help us seize (rather than, say, seize up in) a given moment. Here are some things you can do to take advantage of the natural power of your breathing:

### **1. Integrate nasal breathing into your on-the-bike training.**

Start with a short, low-intensity section of a ride. See what it’s like breathing only through your nose. Your anxiety may rise a bit, linked with a sensation of not getting enough air. [Dr. George Dallam](#) explains, in the latest issue of [Performance Conditioning Cycling](#), that the slower and deeper nasal breathing elevates carbon dioxide levels in the blood, which creates urgency to breathe. However, he points out, our carbon dioxide receptors adjust to this in time, and the urgency disappears. So use the nasal breathing in your lowest-intensity riding until the anxiety disappears, then start using it at the next level of intensity, and so forth.

Both Douillard and Dallam report that it is possible to extend nasal breathing to the highest intensity levels in endurance sports, and that they have seen increases in performance as a result. Intuitively, this makes sense: breathing is more efficient, and a given power output is generated at a lower heart rate.

### **2. Use your breath when your stress level rises.**

When you’re suffering on a hard climb, or feeling anxious on a fast descent, or having an argument with your coach, or in any number of other stressful situations that affect your cycling performance, focus on your breathing. Take a couple of breaths in and out through your nose. Or take one big, deep breath from your belly. Or, if you’re using mouth breathing, try switching to nasal breathing for as long as you can. Sometimes, even a tiny respite from stress can create just the opening you need – to reach that next 17% grade sign on the climb, to stay fast and safe on

the descent, or to keep from losing it with your coach.

It's certainly natural to become anxious before an important ride or race. Whether it's for a few seconds, a few minutes, or even a half-hour, paying close attention to your breath can help you get to the start focused and relaxed. Rather than cranking Metallica in your warmup, make your breath the anchor for your concentration.

### 3. Develop a regular practice of conscious breathing.

It might be a few minutes upon waking and before bed, once daily, or a few times each week – whatever frequency you choose, cultivate a closer relationship with your breath. I'm not suggesting you *think* about your breath more or try to control it. I'm talking about being more fully in the *experience* of breathing – really feeling the sensation of your breath going in and out of your body.

Dennis Lewis' book, [Free Your Breath, Free Your Life](#) is a terrific reference. It has a wide variety of breathing exercises, most of which take very little time.

In practicing conscious breathing, you'll start to undo any patterns of inefficient or stress-producing breathing. In addition, you may regularly elicit [the relaxation response](#), the body's natural antidote to the stress response. By increasing your experiences of relaxation, you may decrease your baseline stress level, and will then likely become less triggerable by stressors over time.

And for some of us, truly contacting with our breath is one of the best ways to locate our consciousness, our moment-to-moment experience, more in the body – to tilt the balance of our experience more toward our body rather than living so much in our minds.

### 4. Learn yogic breathing.

Many cyclists [practice yoga](#) as a way to increase flexibility, improve alignment, and enhance recovery. (The [yoga handbook](#) developed by accomplished cyclist, coach, and yoga teacher [Dario Fredrick](#) is a simple, inexpensive tool that you can use at home.) [Tony Briggs](#), founder of Turtle Island Yoga in Marin County, California, describes the breath practice of *pranayama* as having the potential to enable “a high level of bodily health and mental clarity.” So check out [Tony's instructions](#). If *pranayama* practice seems like a good fit for you, you might do as the Talmud says (we're ecumenical here) and [“find thyself a teacher.”](#)

During Black History Month we remember Martin Luther King, Jr. In 1966, Vietnamese Buddhist monk [Thich Nhat Hanh](#) persuaded Dr. King to oppose the Vietnam War publicly. The following year, Dr. King nominated Nhat Hanh for the Nobel Peace Prize. To Thich Nhat Hanh, [breathing is](#) “a stable, solid ground that we can take refuge in. Regardless of our internal weather – our thoughts, emotions, and perceptions – our breathing is always with us like a faithful friend.” How wonderful to have that friendship when you reach for “any given moment” – in cycling and beyond – that can change your life.



Marvin Zauderer leads the Mental Training program at [Whole Athlete](#), a performance center in Marin County, California that provides a comprehensive set of coaching, testing, fitting, and consulting services to amateur and professional athletes. He is a [licensed psychotherapist](#), [USA Cycling Level 2 Coach](#), and Masters road racer for [Synergy Racing](#). You can email comments and questions to him at [marvinz@pobox.com](mailto:marvinz@pobox.com).