

THE BIG IDEAS

#1 Obstacle

To optimal breathing = ...

Oxygen Delivery 101

It's all about the carbon dioxide.

#1 Breathing Tip

Breathe thru your nose. All the time.

Effortless Breathing

Quiet, controlled, rhythmic.

Ready to Sleep Better?

Tape your lips shut. Seriously.

The Oxygen Advantage

Simple, Scientifically Proven Breathing Techniques to Help You Become Healthier, Slimmer, Faster, and Fitter

BY PATRICK MCKEOWN · WILLIAM MORROW © 2015 · 368 PAGES

“We can live without food for weeks and water for days, but air for just a few brief minutes. While we spend a great deal of time and attention on what we eat and drink, we pay practically no attention to the air we breathe. It is common knowledge that our daily consumption of food and water must be of a certain quality and quantity. Too much or too little spells trouble. We also recognize the importance of breathing good-quality air, but what about the *quantity*? How much air should we breathe for optimum health? Wouldn't it be fair to surmise that air, even more important than food or water for human survival, must also meet basic requirements? ...

The point of this book is to elevate your awareness of how you can harness your breath to reclaim your body's natural ability to breathe in a way that will help you achieve lifelong health and fitness, whether you are running to catch up with your kids or running to win a gold medal. My promise is that by applying the concepts and simple exercises in this book, each and every person, whether they consider themselves an athlete or not, will be able to attain tangible and profound improvements to their health, fitness, and performance within just a few weeks. Isn't it time you did more—conditioning, winning, living—with less effort?”

~ Patrick McKeown from *The Oxygen Advantage*

Patrick McKeown is one of the world's leading teachers of the Buteyko Breathing Method which was created in the 1950s by a Russian doctor named Dr. Konstantin Buteyko.

McKeown suffered from asthma for decades until he found the Buteyko Method. At which point, he reversed his asthma symptoms and then dedicated his life to helping others optimize their breathing.

In this book, he extends the Buteyko Method into an approach he calls the Oxygen Advantage. It's a fascinating, inspiring read that has fundamentally changed my approach to breathing. (Get a copy [here](#).)

Lest you write off this whole breathing thing as something that shouldn't require any optimization, remember: a) We can live for weeks without food and days without water but only minutes without oxygen—which makes breathing well an essential fundamental; and, b) As with our other fundamentals of eating, moving, and sleeping, how we breathe has been significantly altered since the industrial revolution.

Therefore, optimizing our breathing is huge. And, this is a *great* book to help you optimize—especially if you have asthma and/or you're interested in peak performance in sports or life. (If I ran or coached a sports organization, I'd definitely have fun implementing this with my team.)

The book is packed with Big Ideas and I'm excited to share some of my favorites so let's jump straight in!

“It isn't the mountains ahead to climb that wear you out; it's the pebble in your shoe.”

~ Muhammad Ali

"Just as we have an optimal quantity of water and food to consume each day, we also have an optimal quantity of air to breathe. And just as eating too much can be damaging to our health, so can overbreathing."

~ Patrick McKeown

#1 OBSTACLE TO OPTIMAL BREATHING = ...

"Scientific research, as well as the experience of thousands of people I have worked with, has shown me the vital importance of learning how to breathe correctly. The problem is that correct breathing, which should be everyone's birthright, has become extremely challenging in our modern society. We assume that the body reflexively knows how much air it needs at all times, but unfortunately this is not the case. Over the centuries we have altered our environment so dramatically that many of us have forgotten our innate way of breathing. The process of breathing has been warped by chronic stress, sedentary lifestyles, unhealthy diets, overheated homes, and lack of fitness. All of these contribute to poor breathing habits. These in turn contribute to lethargy, weight gain, sleeping problems, respiratory conditions, and heart disease.

... Modern living gradually increases the amount of air we breathe, and while getting more oxygen into our lungs might seem like a good idea, it is in fact light breathing that is a testament to good health and fitness. Think of an overweight tourist and an Olympian both arriving for the Summer Games. As they pick up their luggage and carried it up a flight of stairs, whom would you expect to be huffing and puffing? Certainly not the Olympian.

The biggest obstacle to your health and fitness is a rarely identified problem: *chronic overbreathing*. We can breathe two to three times more air than required without knowing it."

Here's the first thing we need to wrap our brains around: We breathe too much.

Really? Yah.

We'll talk about the underlying physiology of WHY the way we breathe is sub-optimal then how to go about optimizing it in a moment. For now, let's do a quick check on whether or not YOU overbreathe.

Here are a few signs that you may be overbreathing:

- Do you breathe through your mouth at times as you go about your day?
- How about at night? Do you breathe through your mouth as you sleep?
- Do you snore?
- Do you breathe more from your chest than your abdomen?
- Can you visibly notice and/or hear yourself breathing while at rest?

How'd you do?

Yes to some or all of those suggests a tendency to overbreathe.

Let's take a quick look at why that's a problem and then how to optimize!

OXYGEN DELIVERY 101

"The crucial point to remember is that hemoglobin releases oxygen *when in the presence of carbon dioxide*. When we overbreathe, too much carbon dioxide is washed from the lungs, blood, tissues, and cells. This condition is called *hypocapnia*, causing the hemoglobin to hold on to oxygen, resulting in reduced oxygen release and therefore reduced oxygen delivery to tissues and organs. With less oxygen delivered to the muscles, they cannot work as effectively as we might like them to. As counterintuitive as it may seem, the urge to take bigger, deeper breaths when we hit the wall during exercise does not provide the muscles with more oxygen but effectively reduces oxygenation even further. In contrast, when breathing volume remains nearer to correct levels, the pressure of carbon dioxide in the blood is higher, loosening the bond between hemoglobin and oxygen and facilitating the delivery of oxygen to the muscles and organs. John West, author of *Respiration Physiology*, tells us that 'an exercising muscle is

"So how do we ensure that we breathe correctly so as to make optimal use of our amazing respiratory system? As odd as this may seem, it's not oxygen that exerts the primary influence on your breathing efficiency, but carbon dioxide."
~ Patrick McKeown

hot and generates carbon dioxide, and it benefits from increased unloading of O₂ [oxygen] from its capillaries.' The better we can fuel our muscles with oxygen during activity, the longer and harder they can work. In light of the Bohr Effect, overbreathing limits the release of oxygen from the blood, and in turn affects how well our muscles are able to work."

In 1904, a physiologist named Christian Bohr (father of Nobel Prize-winning physicist Niels Bohr) discovered what is known as the "Bohr Effect"—which is a central component of the Oxygen Advantage.

Here's how Bohr put it: *"The carbon dioxide pressure of the blood is to be regarded as an important factor in the inner respiratory metabolism. If one uses carbon dioxide in appropriate amounts, the oxygen that was taken up can be used more effectively throughout the body."*

Here's the (super) short story on what we need to know: Hemoglobin is the part of our blood that is responsible for carrying oxygen from the lungs and into the tissues and cells of our body.

To optimize our energy, we want to get really good at helping hemoglobin release that oxygen. That requires the proper levels of carbon dioxide. Overbreathing disrupts that level and, ironically, leads to less oxygen released.

The primary goal of the Oxygen Advantage is to help us recalibrate our carbon dioxide levels—essentially getting us comfortable having more of it in our bodies.

The last Note I created was on Dr. Mercola's [Effortless Healing](#). Mercola is a huge fan of the Buteyko Method and McKeown's Oxygen Advantage approach. He actually wrote the foreword to this book. In *Effortless Healing* he talks about this approach and just how important optimal breathing is. Here's how he puts it: *"Getting oxygen into your cells is every bit as important as eating the right foods and drinking fresh, pure water. But we usually take breathing for granted, in spite of it being our most fundamental need."*

Your life likely is far removed from that of your ancient ancestors. Thanks to technology and economic improvements, you are more comfortable, with improved living standards and sanitation. But you are also susceptible to the damage caused by consumption of processed foods, competitive stress in school and at work, and far less physical exercise. All these factors negatively influence your breathing.

You may not realize it, but carbon dioxide plays an essential role in utilizing the oxygen within your body. When your carbon dioxide level is too low, changes in your blood pH make your red blood cells (haemoglobin) less able to release oxygen to your cells. This is a problem because oxygen is the fuel for your cells. Without enough oxygen, your cells can't perform their duties optimally—they become more susceptible to viruses, and they can't create as much energy."

"Correct breathing both relies on and results in the right amount of carbon dioxide being retained in your lungs."
~ Patrick McKeown

And, most importantly practically-speaking, he tells us: *"Ironically, to improve blood flow and body oxygenation, we need to breathe less, not more."*

P.S. Here's a quick look at a quick test to see how comfortable you are with carbon dioxide and whether you're breathing too much. It's called the Body Oxygen Level Test (or BOLT for short). Take a normal breath through your nose. Hold your nose. Time how many seconds you can hold your breath before you feel "the first definite desire to breathe"—not a max hold when you're at a 10 gasping for air but more like a 6 or 7 need to breathe.

How many seconds did you last? 20 is considered a normal starting point. Even though a lot of athletes only score around 20, 40 seconds is the ideal BOLT score for a healthy individual. Every 5 second increase is supposed to deliver significant gains in energy and reduced breathlessness during exercise. (I'm fired up to get to 40. :)

Now we're ready for a super quick look at some Ideas on how to go about optimizing.

#1 BREATHING TIP: BREATHE THRU YOUR NOSE!

"Upper-chest breathing is more likely to be associated with a stress response, while nasal breathing helps ensure regular, calm, steady breathing using the diaphragm."

~ Patrick McKeown

"In order to address breathing volume and increase BOLT score, the first step is to go back to basics and learn to breathe through the nose both day and night. As any child is aware, our nose is made for breathing, the mouth for eating. You were born breathing through your nose, and it has been our primary conduit for breathing for hundreds of thousands of years.

It was only when our ancient ancestors were in dangerous situations that they reverted to mouth breathing to take in greater volumes of air in preparation for intense physical activity.

It is for this reason that mouth breathing is synonymous with emergency, activating the same fight-or-flight response that our ancestors experienced but these days usually without the accompanying physical exercise to allow our operating systems to revert to normal."

That's from a chapter called "Noses Are for Breathing, Mouths Are for Eating."

Short story: You should be breathing through your NOSE essentially *all* the time (even during intense exercise with rare moments for an extra burst via the mouth).

The ONLY time we used to breathe through our mouths back in the day was when we were in a true emergency situation. Now, some of us ALWAYS breathe through our mouths, essentially living in a constant state of fight-or-flight stress. That's not a good idea.

So, the #1 thing we want to do to optimize?

Breathe through our nose.

All the time.

P.S. We also want our breathing to be from our abdomen, not our chest.

Why? Glad you asked! —> "Abdominal breathing is more efficient simply because of the shape of the lungs. Since they are narrow at the top and wider at the bottom, the amount of blood flow in the lower lobes of the lungs is greater than in the upper lobes. The fast upper-chest breathing of people who chronically hyperventilate does not take advantage of the lower parts of the lungs, limiting the amount of oxygen that can be transferred to the blood and resulting in a greater loss of CO₂. Not only this, but upper-chest breathing activates the fight-or-flight response, which raises stress levels and produces even heavier breathing.

Observe your own breathing when you are stressed, or watch the breathing of anxious relatives, friends, or colleagues—you will see that this type of breathing is generally located in the upper chest and goes at a rate faster than normal. When we are stressed we tend to overbreathe and resort to breathing through the mouth. Stressed breathing is faster than normal, audible, produces visible movements, and often involves sighs. Many people habitually breathe in this manner every minute of every hour of every day, holding them in a perpetual state of fight-or-flight with adrenalin levels high. The work of even the best stress counselors, psychologists, or psychotherapists will be limited unless they first help their patients address their dysfunctional breathing. When oxygen delivery to the brain is reduced, no amount of talking and reasoning is going to correct this deficiency. Stressed and anxious patients can only make the progress they really need when their bad breathing habits are addressed."

That's some pretty powerful stuff.

Have you ever noticed how YOU breathe when you're stressed? Check it out and notice how super stressed people tend to breathe.

Remember: Stress <=> rapid chest breathing <=> fight-or-flight = enervating = not the place we want to hang out.

Slow down. Breathe through your nose. Into your abdomen.

THE GOAL: EFFORTLESS BREATHING

"To bring air down into the depths of the lungs, it is not actually necessary to take a big breath, as even the quietest of breaths will activate the diaphragm. When you are practicing abdominal nasal breathing, you should not be able to see or hear your breath during rest."

~ Patrick McKeown

"This philosophy of effortless breathing is echoed by *authentic* teachers of Indian yoga and traditional Chinese medicine. I use the word authentic in order to differentiate practitioners who have a deep knowledge of breathing and how it affects physiology from those who don't. Unlike many modern Western teachers of yoga, who instruct students to breathe hard in order to remove toxins from the body, authentic teachers know that when it comes to breathing, less is more. The traditional Chinese philosophy of Taoism succinctly describes ideal breathing as 'so smooth that the fine hairs within the nostrils remain motionless.' True health and inner peace occurs when breathing is quiet, effortless, soft, through the nose, abdominal, rhythmic, and gently paused on the exhale. This is how human beings naturally breathed until modern life changed everything."

We want our breathing to be quiet, controlled, and rhythmic. In a word: effortless.

McKeown shares a story about meeting a tai chi master who, he said, had textbook perfect breathing: "*It was abdominal, effortless, and almost invisible to the eye.*"

She told him that during tai chi tournaments judges want to see quiet, gentle, and light breathing. Get this: They'll deduct points (!) if breathing is evident. <— Love that.

Thich Nhat Hanh captures the spirit of the type of breath McKeown is trying to help us create. Here's how he poetically puts it [*The Miracle of Mindfulness*](#): "*Your breath should be light, even, and flowing, like a thin stream of water running through the sand. Your breath should be very quiet, so quiet that a person sitting next to you cannot hear it. Your breathing should flow gracefully, like a river, like a watersnake crossing the water, not like a chain of rugged mountains or the gallop of a horse. To master our breath is to be in control of our bodies and minds. Each time we find ourselves dispersed and find it difficult to gain control of ourselves by different means, the method of watching the breath should always be used.*"

So, what about all those "big" breaths we're often encouraged to take? McKeown tells us: "*The commonly used practice of taking big breaths is based on the misconception that taking in more air will increase the oxygen levels of the blood. However, since arterial blood is already almost fully saturated with oxygen (between 95 percent and 99 percent) during normal, healthy breathing, 'big' breathing is rendered totally unnecessary.*"

Fascinating... Our blood is *already* fully saturated so it's not about getting more oxygen into our bodies via a deep breath, it's about getting more oxygen OUT of our hemoglobin and into our cells. And *that's* not achieved through "big" breaths but through effective breathing and carbon dioxide levels as discussed above—which, again, is via quiet, controlled, and rhythmic breathing.

Q: How's YOUR breath?

P.S. McKeown has a bunch of practical exercises to help us optimize. Check out the book for more. One of them is designed to simulate the positive effects of training at altitude in which you go for a walk and practice breath holding.

Basic idea: Go out for a walk, breathe normally through your nose. Then take a small, silent breath in and a small, silent breath out. Then hold your nose closed with your fingers until you feel a strong need to breathe. Quickly recover your normal breathing (through your nose!). (Don't hold for so long that you can't recover your breath within 2-3 breaths.) Repeat.

How many paces can you take? Believe it or not, he can help formerly asthmatic kids get to 60 (!) paces. (I'm excited to get there.)

I'm also practicing breathing through my nose when I exercise—including high intensity training. It's nutty how quickly I'm adapting and how hard I can go while properly oxygenating my muscles while/by breathing LESS.

READY TO SLEEP BETTER?

"As U.S. Army general George Patton wrote to his troops during World War II: 'Fatigue makes cowards of us all. Men in condition do not tire.' And he was right; endurance is relative to how well the body is prepared, and the onset of fatigue occurs when the body is pushed beyond the limits of preparation."

~ Patrick McKeown

"For many years I too woke up tired and lethargic, suffering from poor concentration throughout the day. The key to improving the quality of my sleep was incredibly simple: All I had to do was to learn to keep my mouth closed during sleep. Because we are unaware of how we breathe at night, the only sure way to ensure nasal breathing is to wear light paper tape across the lips to prevent the mouth from falling open. ...

Over the years, I have introduced this taping method to thousands of people with incredible results. Unless you breathe calmly through your nose at night, you have no idea what it feels like to have a great night's sleep. Taping the mouth at night is a simple but very effective technique, and while it may sound a little strange, it is well worth getting used to."

Do you breathe through your mouth at night? (Good signs you may include waking up with a dry mouth and/or waking up feeling lethargic.)

If so, here's the solution: Get yourself some [3m Micropore tape](#) and slap that on the ol' lips before you go to bed.

You'll look like a nut (I promise!) but you'll also train yourself to breathe through your nose which, as we now know, is a key component to optimizing our breathing and therefore our energy. (Wear the tape with [these blue-light blocking glasses](#) if you want to be *really* cool. :)

I'll need to add this Idea to Sleep 102. (More sleep goodness in [Sleep 101!](#))

I hope you enjoyed that quick look at a great book and here's to optimizing our breathing and tapping into the Oxygen Advantage!

B

Brian Johnson,
Heroic Philosopher CEO

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About the Author of This Note

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Brian Johnson is the Founder + CEO of Heroic. He's spent half of the last 25 years as a Founder/CEO and the other half as a Philosopher. Brian loves integrating ancient wisdom and modern science to help YOU become the best, most heroic version of yourself so we can create a world in which 51% of humanity is flourishing by 2051. Learn more at [heroic.us](#).