

THE BIG GULP

*A daily conscious breathing practice creates space for your presence,
where your intuitive self can emerge and truly flourish.*

Kris Franken: The Call of Intuition

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The Chinese are past masters in the practice of meditation and controlled breathing, coupled with slowness of movement, which they call Tai Chi (Tai, meaning ‘great’ or ‘supreme’, and Chi, meaning ‘energy’). The emphasis is on relaxation to facilitate the flow of energy through the body’s energy pathways.

We need a lot of things available to us if we are to continue living on this planet. The absence of breathing is the most dangerous of all, without which the brain, which demands oxygen in quantities many times greater than any other organ, will die in just minutes of being cut off.

Breathing is our lifeline, but simply just ‘breathing’ is not nearly enough. Like most things, breathing can be too little (*hypoxia*), or too much (*hyperoxia*). While breathing is an involuntary action, which means it happens without us being conscious of it on a second-by-second timescale, we can consciously assist in maintaining proper function.

If you go for a run, at the end you will likely find yourself standing with your hands on your hips and taking long deep breaths. This is a result of your brain telling you that your blood-oxygen level is low, and you need to do something to replenish it.

Our bodies function on the ‘demand for action’ principle, whereby nothing happens unless it is preceded by a demand. Too many of us live sedentary lives, which means that when we are sitting, we require much lesser quantities of oxygen to run our organs, and to produce energy (*adenosine triphosphate*, ATP) in an organelle in our muscle cells, the *mitochondria*. The resultant low energy levels causes brain function to slow down, and you become very tired, even though your physical activity level is as low as it could possibly be.

When you increase your energy output over a period of time, your body will produce more mitochondria on demand, but if you stop exercising or working physically hard, your body will kill off the unproductive organelles. So, in order to keep your energy level up you need to keep up regular exercise. The real positive part of this is, your body will produce sufficient mitochondria to produce enough energy to get you through your workout, but that high level of energy will be available to you for the other 23 or so hours in the day. Oh, and forget potions and pills, nothing can increase energy output other than what I have just described.

I have developed a quick two-minute breathing exercise that is guaranteed to have you feeling better. I recommend you do it once each day, and you can do it at home, at school, at your office, or any place you can sit quietly for a few minutes.

EXPLANATION

I am sure you have heard about *haemoglobin*, but in order to understand its function you will need to know a little bit about the physiology of oxygen transfer.

A drop of blood contains millions of red blood cells, or *erythrocytes*—specialised cells that look a lot like donuts with a continuous indented membrane covering the holes. Red blood cells carry *oxygen* to the tissue cells and assist in clearing *carbon dioxide*, the residue from energy production, from your body.

Contained within the erythrocytes is a special protein structure called haemoglobin, a molecule of which contains four polypeptide chains, or *haem* groups. At the centre of each haem is an atom of *iron*, which gives blood its rich red colour.

Oxygen transfer starts and finishes in the lungs, punctuated by a lap around your body. When deoxygenated blood passes through the lungs, each of the four haem groups attract a molecule of oxygen. Oxygen has a valence of 2 (O^2), so think of oxygen as having two arms, one that binds with the haem, while the other is left free.

Because the oxygen is only holding on with one hand, it is a union that is easy to separate. Upon reaching the tissue cells the oxygen is released from the haemoglobin by the action of 2,3-DPG (2,3-Diphosphoglycerate), a highly anionic organic phosphate—but there is a pecking order as to which cells have first dibs on receiving the oxygen. This ensures that the most important cells and organs are serviced first.

In cases involving *hypoxia* (low oxygen levels in the blood), especially when involved with asphyxia or strangulation) the process of organ shutdown commences in reverse order, with the least important organs going first. The brain is always at the top of the list and will be the first to be supplied with oxygen, and the last to shut down.

Once the oxygen is offloaded into the tissue cells, about two-thirds of it enters the *Krebs Cycle*, where it is involved in the production of energy (*Adenosine triphosphate*, or *ATP*). A by-product of this process is the release of *carbon* (C), which binds with the residual oxygen (O^2) to form *carbon dioxide* (CO^2). Some of the carbon dioxide binds with the sites on the haem made vacant by the removal of oxygen, and is transported back to the lungs, while the remainder travels freely in the blood. The bound carbon dioxide is released from the haem in the lungs to join the free carbon dioxide and is expressed from the body during exhalation.

As stated previously, every function in your body is need driven. For example, exercise doesn't just improve muscle function and tone, it stimulates many other important bodily functions. Become a couch potato and the opposite occurs. Because of our predominantly sedentary lifestyles, the majority of people seldom fully extend their muscles, so stretching can be of great benefit as outlined in my free paper: *Stretch Your Muscles - Stretch Your Life*.

The same principle applies to breathing. Most people shallow breathe, which restricts the volume of air they get into their lungs. This in turn suppresses the level of oxygen available to produce energy, and inhibits the expulsion of carbon dioxide.

So, what are the benefits you can expect from performing *The Big Gulp* on a daily basis?

1. During the forced inhalation stage you will stretch the intercostal muscles between your ribs, and pull the diaphragm down to its full extent, thereby increasing their tone.
2. You will fill your lungs to capacity with life-giving air. The tissue cells in your body will become fully charged with oxygen, and you will maximize the elimination of carbon dioxide from the cells.
3. More oxygen means greater ATP production in the mitochondria, which means your energy levels will improve, as will your health and wellbeing.
4. Your respiration will become deeper and the rate will slow, which is also good for your heart.
5. Your body will create more mitochondria to service the demand, resulting in a greater capacity to produce and store energy (ATP) that will keep you at a high energy level, 24/7.
6. Last, but certainly not least, your periods of controlled breathing will result in controlled full oxygenation of your brain.

Wow! All that for just a couple of minutes of you time each day.

The equivalent of just 2 per cent of your lean body weight, your brain accounts for at least 20 per cent of your body's total energy consumption. Where the production of energy in the tissue cells uses fat, glucose, and some protein as fuel sources, your brain uses glucose, or a converted substrate thereof, almost exclusively.

As it is with all tissue cells, the essential ingredient for effective function in the brain is oxygen, which takes place in the *neurons* (nerve cells), bundles of which form the *white matter*, the internal bulk of the cerebral mass. This is covered in *grey matter*, referred to as the *cortex*.

Brain cells deprived of oxygen will start dying within just five minutes, such as occurs during drowning, strangulation or asphyxiation. Low oxygen levels in the brain (hypoxia) may quickly cause stroke and carbon monoxide poisoning.

Carbon monoxide (CO) which has just one oxygen molecule is a toxic gas that when inhaled binds with haemoglobin, but will not let go because it does not have a free arm, thereby depriving the body of oxygen. If this is a bit confusing, free oxygen can only exist as O₂, but it can exist in its single form if it is bound to another element.

Researchers in the United States have discovered that the body produces small quantities of carbon monoxide that is essential in neuronal activity and cellular communication. It may also counter the toxic effects of nitric oxide produced by strokes. On the downside, it appears hypoxia may cause the over-production of carbon monoxide in the brain, evidence that while some is good, more is not necessarily better.

Conversely, *hyperoxia* (too much oxygen to the brain) can cause visual changes, ringing in the ears, nausea, muscle twitching, irritability, anxiety, confusion and dizziness. Sounds a lot like falling in love? In severe cases, intense muscle contraction may be followed by rapid periods of convulsive jerking, which may lead to unconsciousness.

Hyperoxia can be induced by a person hyperventilating, such as with the onset of sudden stress, or fear. On the bright side, those of us who have experienced a 'high' from running will know what it feels like to have controlled hyper-oxygenation of the brain. If you could bottle it, you would make a fortune.

All of this evidence underscores the benefits to the brain and to your body by you simply spending a few minutes every day to perform your *Big Gulp* breathing exercise.

METHODOLOGY

You should partake in the Big Gulp exercise every day. It will only take about four (4) minutes of your time. You can do it almost anywhere where you can have some quiet time without distraction or interruption. Don't do it while you are sitting in front of the television, or on the family throne. You need to focus.

If you perform it during the day, sit quietly in a chair with your hands loosely resting on your lap, palms facing up. Close your eyes and allow your head to fall slightly forward without restricting your throat. Exhale, and then take two (2) reasonably deep breaths expelling each of them fully. When you exhale the second time contract your abdominal muscles and force your diaphragm up as far as it will go. You are now ready to commence the real part of your controlled breathing exercise.

With your mouth open take a long deep breath while lifting your head into the vertical position. Continue breathing in until you can't get another thimble full of air into your lungs. Hold your breath and count for five (5) seconds (in your mind count 101, 102, 103, 104, 105). Exhale slowly, forcing all of the air out of your lungs and again fully contract your abdominal muscles and diaphragm.

Count five seconds and take a second really deep breath through your open mouth. If you attempt to breathe through your nose you will not get nearly enough air into your lungs.

Hold your breath for the count of five seconds and let all of the air out of your lungs while contracting your abdominal muscles and your diaphragm.

Now we get to the really important part of the exercise.

Take a third very deep breath inhaling through your open mouth. Count five seconds and slowly breathe out. Really concentrate on keeping your abdominal muscles contracted and, ignoring as best you can your natural reaction to inhale, and hold for thirty (30) seconds. You will be amazed how long you can hold your breath even though the urge is to gasp for air.

If you only make fifteen (15) or twenty (20) seconds, keep pushing the envelope each day until you reach thirty (30) seconds. You can do it because some free underwater divers can hold their breath against pressure for a really long time. In 2012, German free diver, Tom Sietas, held his breath underwater for 22 minutes and 22 seconds. No, I didn't believe it either, but it's true.

This last step will help expel most of the CO₂ from your bloodstream and your lungs, and free the body up to maximise its capacity to engorge life-giving oxygen.

When you take your next normal breath, the air will rush in and you will probably do three or four quick deep breaths and exhalations before your breathing returns with a feeling of freedom and greater capacity. After a few days you will find you are breathing deeper, and easier throughout the remainder of the day.

The first couple of times you perform this exercise you may feel a little discomfort in the chest wall—that's because you haven't breathed that deeply and fully extended your intercostal muscles (between your ribs) and your diaphragm for a long time.

If you are about to take an exam, attend an important interview, or undertake any other activity that requires you to be 'on the ball' mentally, take The Big Gulp before you start. You'll be amazed at how clear and responsive your brain will be when you need it most. Remember, oxygen is still free, and there's plenty of it, so suck it up and enjoy its life-giving benefits.

Of the options available to me I personally prefer to take my Big Gulp soon after I wake up each morning. This gives me a great start to the day, and I am always amazed just how much the depth and ease my breathing improves before my feet even touch the floor.

There are 168 hours in each week. In less than 90-minutes a week you can do so much to benefit your health and wellbeing, but the good news is—the benefits will last the other 166 hours and 30 minutes of the week whether you are asleep, at home, at work, or at play.

Before commencing your Big Gulp exercise, please read my free download paper available on this website entitled, *Be Careful What You Think – Your Cells Are Listening*. It will significantly influence the effectiveness of your Big Gulp experience, and reinforce your positive perception of yourself, and your life.

Enjoy!
