

CHAPTER THREE

AIR





Photography: Alex Franco

The Air We Breathe

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“If I had to limit my advice on healthier living to just one tip, it would be simply to learn how to breathe correctly.” — Andrew Weil

Breathing is essential to life, yet it's something that most of us don't give a second thought to. So often, we move through our days without considering the ways in which our breath is supporting or hindering how we meet and process our triumphs, trials and tribulations. Thanks to the autonomic nervous system, breathing is something that we are able to do unconsciously, but it is also the one automatic bodily function the we can actually control and manipulate to our advantage. Breathing is not merely a passive action, it is a portal to better health. No matter how healthy we might be in other areas of our lives, none of it matters if we are breathing incorrectly. How we breathe affects every aspect of our physical and mental wellbeing, and there are certain patterns of breathing that we can practice consciously to change how we feel; to change our physiology and improve the sharpness of our minds and the balance of our emotions. In the tech-heavy, whiplash world we now inhabit, this can be an invaluable tool for managing and improving our health.

Stress, anxiety and autoimmune disorders are epidemic and often unresponsive to conventional medicine, which relies heavily on technology and pharmaceuticals and, sadly, doesn't always get to the root cause of the issue. While modern medicine is brilliant at dealing with physical trauma and emergencies, it can be found lacking when it comes to milder, chronic, systemic maladies like asthma, migraines, skin and hormonal imbalances and autoimmune disease. Breathwork offers us one opportunity to take our health into our own hands. The benefits are far reaching and often surprising. Different breathing practices allow us

to stretch our lungs, boost blood flow and energy and stabilise our moods and emotions. They can help us improve our posture and facial structure, offering a gentle and simple way to nudge our bodies and minds back to a baseline of good health. By committing to regular breathwork, we are able to sleep more soundly, move with greater agility, and shake off the stresses of the day to allow more room for peace and relaxation. Just by changing the way we breathe, we can influence everything from our digestion, metabolism and liver health to our heart rate, blood pressure and kidney function. When our health is compromised, breathing techniques can help us resume equilibrium as well as serving as an efficient preventative measure. Respiration is restoration.

With all this in mind, it's worth stopping once in a while to check in with your breath. Notice how it changes when you are excited, stressed, anxious or angry; when you are moving and when you are working or sitting in front of a screen. You'll be surprised at how often you are actually not breathing at all. According to one estimate, up to 80% of office workers suffer from what is known as continuous partial attention. Unable to focus on a single task, they skip from one email / document / text message to the next, constantly jumping between apps and screens to get that dopamine hit and field boredom. In this cycle of perpetual distraction, breathing grows increasingly shallow and erratic, often stopping altogether for up to minute, sometimes longer. This so-called 'email apnea' can be as harmful as sleep apnea (when breathing stops and starts during sleep): detrimental to our mental, emotional and physical welfare.

For those of us who suffer with stress, anxiety and panic, learning to breathe properly and incorporating breathwork into our daily routine can be life changing.

Science tells us that the greatest indicator of life span is not in fact diet, genetics or our motivation to exercise daily, but the capacity of our lungs. Larger lungs = a longer life. While the average adult human typically engages only 10% of their diaphragmatic range when breathing, just a few minutes of conscious and intentional breathing a day can greatly expand and improve the health of our lungs and consequently our whole bodies. Stretching the lungs with breathwork can be transformative. Exercise helps too. Studies have shown that even regular walking or cycling can stretch the lungs up to 15%. In contrast, frequent shallow breathing can trigger elevated blood pressure, circulatory malfunctions and stress the heart. We can certainly get by on a prescription of short, shallow breaths, but it is incredibly unhealthy to do so.

Overbreathing (when our breath is fast and deep) is equally problematic and something which many of us do without realising. Taking in more air than is needed by the body can be damaging on a cellular level. This is because overbreathing causes us to offload too much carbon dioxide, which hinders blood flow, making it harder for our cells to get the oxygen they need to thrive. This is something that is very common in people with asthma, anxiety and panic disorders. Simply breathing at a slower rate, through the nose, can have a profound healing effect on these conditions. Slow nasal breathing allows the body to pressurise the air, sending more down to the depths of our lungs where the gas exchange can happen more efficiently.

Studies have demonstrated that breathing just 10% more than the body needs can upset our systems to the point of imbalance, causing hypertension, high blood pressure, headaches, heart disease, ulcers and chronic inflammation, all of which are linked to imbalanced circulation, metabolism and blood pH. The pH levels of our blood are particularly important as our bodies function best within a very specific range, with almost all cellular functions taking place at a pH of 7.4, that sweet spot between acid and

alkaline. When we breathe too much, we expel too much carbon dioxide, creating a more alkaline environment in the body. Conversely, breathing too little, or holding our breath can lower the pH of our blood, making it more acidic.

While the rate at which we breathe is key to our health, so too is how we breathe. The optimal way, being through the nose. When breathing through the nose, there is a little more resistance. The process is a little harder. But, this means that we are ultimately able to bring more air into our bodies through force, further inflating the lungs. Since nasal breathing takes more work, and draws in more oxygen, it facilitates a longer exhale, so that we slow our breathing to a balanced rate. A first line of defence against the pathogens in our environment, the nose also filters the air that enters our system, while the sinuses release nitric oxide into the body, a molecule that is essential to increased circulation and the delivery of oxygen to our cells.

Mouth breathing on the other hand, is ill advised to say the least. Many of us have become accustomed to breathing through our mouths, simply because it can feel easier, but this can lead to massive disruption within the body - causing our stress hormones to spike, our breath to smell bad and our energy levels to dip, as well as negatively impacting our facial structure, posture and general health. Mouth breathing also causes us to lose up to 40% more water, leaving our bodies dehydrated and depleted, disrupting sleep (sleep apnea and snoring) and surprisingly, increasing our need to urinate - this is because sleep apnea can interfere with the body's production of vasopressin, the hormone which communicates with our cells to store more water in the kidneys. Snoring and sleep apnea have also been linked to bed-wetting, ADHD, diabetes, high blood pressure and cancer. In a report by the Mayo Clinic, it was detailed that chronic insomnia, once assumed to have been a psychological issue, is often down to poor breathing technique. Some people may need medical intervention to correct these issues, but simply taping the mouth shut at night can

be a quick fix for many. Our bodies are just not designed to process unfiltered air for any length of time, so the mouth should really be viewed as a back-up ventilation system.

With every breath we take, tens of billions of molecules enter our bodies, influencing our organs and systems and altering their efficiency for better or worse. One of these systems is the autonomic nervous system, of which there are two parts: sympathetic, which keeps us alert and ready for action, and parasympathetic, which stimulates rest and restoration. When faced with the stresses of modern life, we often find ourselves stuck in a sympathetic state, unable to fully wind down or relax. But our bodies are built to stay in this state for short periods and only on occasion, so leaving it 'switched on' for hours at a time can be problematic on many levels. To help us move out of the sympathetic state, we can consciously slow our breath until we reenter the parasympathetic realm. This is such an important piece when it comes to our health as much research has shown that many modern immune disorders are tightly bound to a dysfunction of the autonomic nervous system, which must be in balance for the body to be able to heal naturally.

These days it's not uncommon to feel stressed out most of the time. We are so wired and primed for disaster that our nervous systems have been thrown completely out of sync, meaning that we often experience the same levels of anxiety receiving an unwanted email as our ancestors felt when running from a wild animal. Furthermore, we frequently find ourselves in a myriad of controlled and unnatural spaces filled with harsh fluorescent lighting and recycled air. This artificiality makes it harder for our bodies to discern when they actually need to react to a threat. For those of us who suffer with stress, anxiety and panic, learning to breathe properly and incorporating breathwork into our daily routine can be life changing. The autonomic nervous system can be immediately impacted by controlled breathing, which can proffer results in seconds. Different types of deliberate breathwork, specifically box breathing and cyclic sighing, done for just five minutes a day have been shown to outperform meditation in terms of long-term stress reduction, improved sleep and mood. Even one physiological sigh done during an intensely stressful situation is said to be the fastest way to shift the autonomic nervous system into a more restful, calmer state, restoring the balance between the sympathetic and parasympathetic systems.

Like all habits, breaking patterns of dysfunctional breathing can take months, but doing the work is well worth it in the long run, as over time, you will come to breathe naturally through your nose, and at a pace that best supports

your body and your mind. Eventually, considered breathing will become second nature. A great way to begin, is to think of breathwork in the same way as you would your daily movement. Sneak it in whenever you can. It really is one of the most valuable and accessible tools we have at our disposal.

BREATHE BETTER FOR BETTER HEALTH

Breathwork practices are zero cost and require minimal time, yet they provide a unique and powerful avenue to improve the quality of our lives that is clearly grounded in science. Here are a few of the ways that breathwork can support us day to day...

REDUCED STRESS & ANXIETY

Erratic breathing is a reflection of an erratic mind. By simply slowing our breath and extending our exhales, we can activate the parasympathetic nervous system, reducing heart rate, relaxing our muscles and soothing feelings of stress, anxiety and panic. Be mindful of when you might be holding your breath or taking shallow sips of air as this will exacerbate feelings of unease.

Practice cyclical sighing for instant stress relief. This involves a series of physiological sighs: two inhales through the nose - one long, one quick - followed by a long exhale through the mouth. This cycle optimally balances levels of oxygen and carbon dioxide, helping us move out of our heads and into our bodies to connect with the here and now.

Breathing can actually alter our personalities, allowing us to show up for ourselves in more positive ways. When trying to crowd out unhealthy habits, breathwork is invaluable, regulating the nervous system and quelling cravings or feelings of discomfort.

EFFICIENT DIGESTION & BALANCED BLOOD SUGAR

Steady breathing improves circulation and increases blood flow, supporting our digestive organs, and stabilising metabolism and blood sugar - all of which contribute to better mental health.



When we experience disordered breathing during the night, we stress the body out. This can lead to hypertension and increased insulin and blood sugar. Over time, we can become desensitised to this increase, leading to issues like adult onset diabetes.

INCREASED ENERGY & PERFORMANCE

We get most of our energy from our breath! Breathing in a way that supports our physiology throughout the day, as well as committing to regular breathwork practices, will boost the oxygen levels in the blood.

If we over breathe when exercising, an excess of lactic acid is released into the body, making it harder to recover. When warming up for a jog, or any form of cardiovascular exercise, slow your exhales to achieve higher levels of carbon dioxide. With this bonus carbon dioxide, we gain higher aerobic endurance.

SOUND SLEEP

Breathwork practices that activate the parasympathetic nervous system calm our bodies and minds, preparing us for a night of restful sleep. If you don't already, it's also imperative to train yourself to breath through your nose at night, to allow for the correct levels of oxygen to enter the body. When depleted, we can become hypoxic which leads to under-breathing, snoring and sleep apnea - this, in turn, can cause cognitive dysfunction and exacerbate issues like stress, anxiety and dementia. Try taping your mouth closed at night to induce nasal breathing. When walking, exercising or even working, mindfully and consciously breathe through your nose. Over time, this will become second nature, so that our unconscious breathing is healthier too.

HEALTHY SKIN

Anxiety and stress often manifest on the skin, showing up as breakouts, rashes and other irritations. Regularly practicing a breathwork exercise like 4-7-8 breathing can induce long-term calm, so that what's going on on the inside doesn't show up externally. For this exercise, prepare by quickly exhaling. Breathe in through the nose for a count of four, hold for seven, then purposefully exhale through

the mouth for a count of eight. Repeat four times. After one month of doing this practice, increase to eight repetitions.

IMPROVED FACIAL STRUCTURE

Breathing is so powerful it can actually affect the structure of your face. Persistent mouth breathing can lead to poor head and neck posture, crowded teeth and changes in the shape of your jaw and nose. Switching to nasal breathing can hugely improve our facial aesthetics, realigning the teeth, jaw and cheekbones and reversing any damage done.

Chewing food properly is important in this endeavour as chomping down regularly and efficiently signals our stem cells to build more maxilla bone in the face. The more we chew, the better we breathe! Unlike other bones in the body, the bones in our face don't stop growing during our twenties, but have the ability to remodel and grow stronger well into our seventies and potentially beyond. This means we can influence our facial structure at (almost) any age.

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