

Breath: The New Science of a Lost Art

An Interview with James Nestor

EDITORS' NOTE James Nestor is an author and science journalist who has written for *Scientific American*, *Outside Magazine*, *BBC*, *The New York Times*, *The Atlantic*, *National Public Radio*, and more. He spent the last several years working on a book called *Breath: The New Science of a Lost Art*. *Breath* was an instant *New York Times*, *Wall Street Journal*, *Los Angeles Times*, *Sunday London Times* bestseller. *Breath* was awarded the prize for *Best General Nonfiction Book of 2020* by the



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American Society of Journalists and Authors and was a *Finalist for the Royal Society Best Science Book of 2020*. *Breath* has been released in 35 languages and has sold more than one million copies worldwide. Nestor's first narrative nonfiction book, *DEEP: Freediving*, *Renegade Science*, and *What the Ocean Tells Us about Ourselves* (2014), was a *BBC Book of the Week*, a *Finalist for the PEN American Center Best Sports Book of the Year*, an *Amazon Best Science Book of 2014*, *BuzzFeed 19 Best Nonfiction Books of 2014*, *ArtForum Top 10 Book of 2014*, *New York Times Book Review Editor's Choice*, *Scientific American Recommended Read*, and more. *DEEP* has been translated into more than seven languages and was the basis for the Emmy-nominated *Virtual Reality* documentary, "*The Click Effect*." Nestor has been an invited speaker at *Stanford Medical School*, *Harvard Medical School*, *Yale School of Medicine*, the *United Nations*, *UBS*, as well as more than 100 radio and television shows, including *Fresh Air with Terry Gross*, *The Joe Rogan Experience*, *BulletProof*, *ABC's Nightline*, *CBS Morning News*, and dozens of *NPR programs*.

Will you discuss the journey that led you to the study of breathing and writing the book, *Breath: The New Science of a Lost Art*?

I wish I could say that I had a grand plan, but what happens a lot in journalism is that you stumble onto one thing that leads to another thing which leads to another. This is exactly what happened with my interest in breathing. I had been suffering from a number of respiratory problems – bronchitis, mild pneumonia, wheezing – while I was exercising. All pretty common, and nothing too serious, but it went on for years. Every doctor I saw told me the only solution was

to keep taking antibiotics or to be less active which didn't really work for me.

I discovered breathing as a way to first dampen the symptoms of my respiratory problems, then, after several months, all the problems I experienced disappeared completely. I haven't had them since and this was more than a decade ago. But this was just my personal experience so I kept it to myself. As a journalist, I was not going to write a memoir about my breathing which, frankly, sounds awful, so I just filed it away until years

later as I read more and more scientific research on breathing therapies and the profound effects they could have on asthma, snoring, anxiety, respiratory infections, and more. I also read about how poorly the modern species was at breathing. We're the worst breathers in the animal kingdom. After five or six years of doing very casual research, I went to my agent and told her that I had an idea for a new book. She asked me what the focus would be, and when I said it would be about breathing, she thought it was one of the worst ideas she had ever heard. It took another year of convincing her. So, yes, in many ways the book was an overnight success that took about 12 years of constant work and hearing the word "no" from everyone.

There is a major focus on the impact of breath and breathing today. Is the conversation taking place the right conversation and what do you feel are the key elements that need to be addressed?

Each of us has our own breathing fingerprint. We all breathe in a unique way, and the vast majority of us have unique breathing dysfunction. We get it wrong in our own individual ways. Along these lines, everyone responds slightly differently to breathing retraining and therapies. When you hear people say that breathing cures chronic panic attacks, asthma, autoimmune issues, or depression, it is true that it has worked tremendously well for some people, but that doesn't mean everyone is going to have the same transformative response. The good news is that improving your breathing – just like improving your diet or exercise regimen – will only have benefits. It's always a net gain. For some people, those benefits will be subtle while, for others, it will dramatically change their health and change their lives. I've seen

this in hundreds of people, and experienced it myself, which is one reason I kept digging into this research for so many years, even while my journalist friends and agents were mocking me the whole time.

Do you feel that there is a strong awareness and understanding of the impact and benefits that breathing can make?

Everybody breathes, just like everybody eats and everybody sleeps. I think that there is considerable scientific evidence showing that it's not just that you are eating food that's important, it's what you are eating, and how much. The same goes for sleep. It's not just that you go to sleep every night that counts, but how you sleep, how long, what ratio of deep sleep, REM, and light sleep. We know our diets and sleep are essential to good health, but fewer people talk about breathing. They are just focusing that we are breathing, not how; which foods, how much – same goes for sleep. But how we breathe is as least as important as what we eat and how we sleep. Consider, we get the majority of our energy from our breath, not from food and drink, but from air. How you get that energy will determine so much of your mental and physical health, and even your longevity.

The science around breathing has been there for decades and decades, and while it was new for me, it was not new for people who have been studying it, mostly to little fanfare, for the past 50 years. These researchers were at top institutions – *Stanford*, *Yale*, *Harvard* – and constantly publishing in academic journals, but the general public never got the message. Most of what I just have mentioned was documented at *Stanford* in the 1970s, and even earlier.

My role in writing the book was to try to give those people a little louder bullhorn and to put their research together so that people might listen, because what they were saying impacts every single person on the planet.

As you look at your journey in writing this book, were there many surprises along the way?

Yes, to say it mildly. In nonfiction, you write a book proposal and then you pitch that proposal to secure an advance, which is usually a pittance of cash to just get by until you finish the book. I spent about six months writing up a 60-page book proposal, and at the end I thought I was all set, but I did not realize that the real story behind breathing was not two layers deep, but 10 and 20 layers deep. It wasn't anything you could really find on the

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Internet. I had to keep rewriting this book over and over again over several years because I was discovering new things that completely rocked the foundation of this research. Ninety percent of this book was cut and thrown out. That hurt, but it’s just part of the process. At the end of the day, I wanted to present this story to be accessible to the general public. What good are scientific discoveries about human health if the vast majority of humans never hear about them? What I wrote documented my own path into this field of research: the most revelatory angles and facts I found over so many years of plugging away.

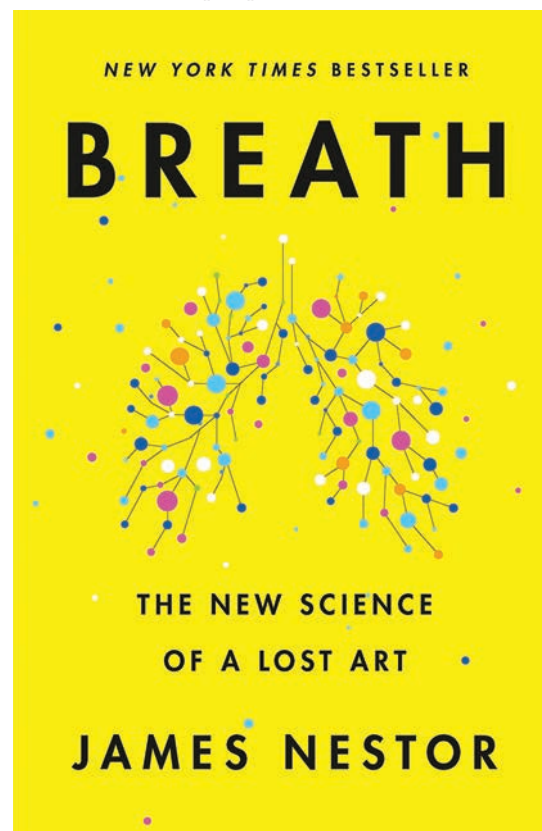
Readers notice that about a quarter of the book is End Notes filled with several hundred scientific references. I told my publisher that nobody was going to believe the content until they saw the research for themselves, and saw where it was coming from. But even with all that, even though I included photographs, X-rays, and hundreds and hundreds of clinical studies, there are still people who will not believe that breathing can really have a big effect on asthma or improve the curvature of your spine or reduce autoimmune diseases. At the end of the day, I learned that people want to believe what they want to believe, and that’s perfectly fine. My role as a journalist should never be to try to convince anyone of anything. My role is to objectively and honestly present information and people can do with that information what they want. But before you doubt something and call it baseless, at minimum, do your research, remove your politics, and look at the data. So often we learn that things we thought were impossible 20 years ago are now accepted as self-evident.

How important is it for the focus on breath and breathing to be introduced and taught at a young age?

I have been lucky enough to speak at a number of schools and it is amazing how the kids respond to this. I have not seen a group of kids not become affected, even after only a few minutes of learning simple breathing exercises. While a lot of kids may not focus on their health, they do focus on how they look and if you are able to show them what is going to happen to their face if they mouth breathe – how that is going to influence the downward, sloping, structure to the face – then they start really paying attention. Teachers are also very interested in

breathing since it is a great way to get the kids to calm down and focus.

One of the things that many of us have lost track of is the number of kids suffering from sleep disorders or other respiratory issues which are often misdiagnosed. It’s a catastrophe. In my opinion, these breathing issues are at the center of a public health crisis. We’re dealing with all the downstream impacts of this and still, so few people are focusing on it.



You participated in an intensive breathing study at Stanford. How were you impacted by the study?

The majority of people breathe in a dysfunctional way, and upwards of about 50 percent of us are mouth breathers; meanwhile more than 60 percent of us breathe through the mouth while sleeping. People don’t realize that the symptoms of headaches and bad sleep and problems exercising could be tied to how they are breathing, specifically the pathway through which they inhale and exhale air. I am not a habitual mouth breather, but I made myself one for this experiment, as did another volunteer. We knew our health would suffer – the science

is clear on that. But what was shocking was how profoundly it all happened, and how quickly. Within a day or two we were complete wrecks: our sleep, mental abilities, physical health, all of it. You can only imagine all of the kids and adults that are experiencing this laundry list of problems that they think is just part of growing up or part of growing old. What I learned is a lot of these chronic maladies are tied simply to how we breathe.

Who do you feel has the responsibility to lead the effort to educate and inform about this issue?

You could ask this same question about nutrition – is it doctors, the FDA, the government, teachers, parents? I would say all of the above. The same with breathing. It’s all our responsibility. A lot of people put the blame on doctors, which I find unfair. Many doctors are seeing five, ten patients an hour – they just don’t have the time to look at their breathing, ask them about their sleep, teach them some exercises. Our medical system is not set up for the doctors to do this. I know this because there are doctors in my family, and I’ve talked to dozens and dozens of other doctors and most say the exact same thing. They are as frustrated as the patients. It will take a collective effort to drive awareness and change in this area.

How important is it for you to make the distinction that you are a journalist telling these stories and not a breath therapist?

It is very important to me. And it’s a struggle – not for me to set clear parameters, but for the general public to realize I am not the person to reach out to in order to diagnose and treat your chronic illnesses. People come up to me all the time and share the most emotional and desperate pleas: how a child is suffering from ADHD and not getting better, how a grandparent has COPD, how their wives snore, how they have sleep apnea and want to get off CPAP. As a human being, I, of course, want to help these people, but as a journalist that is not my job. I don’t have the capacity, for one, and I also am not qualified to prescribe treatments. The best thing I can do is refer them to people who are leaders in the field, whether it be a pulmonologist or an ENT or dentist. I am not here to give medical advice. I am here to give the leading medical professionals and researchers in these fields a louder voice.

It is really hard since I have seen firsthand how many people are struggling with

respiratory disorders and not getting help, or are getting the wrong help, and now their health is really deteriorating. Hopefully, if I have been able to do anything with this book, it has been to offer readers a little more perspective and connect them with people who are certified and able to provide the care they so desperately need.

Did you realize as you worked on the book that it would make the impact that it has on so many people?

I wish the answer was yes, but it is a resounding no. I think of my wife, who had to watch me rewrite this book over and over, then watch my deadline slip away by months, then a year. I was bringing in no paychecks during this process – writing this book was a 24/7 job for several years. Even my wife, after seeing me rewrite the book for the fourth time and being two years late on the delivery of the book and not getting paid for four years, questioned what I was doing writing this book on breathing. She definitely got nervous when I went to the Paris Catacombs on research, and traveled to talk with all these dentists. She kept asking me, “This is a book on breathing, right?” I told her yes and that it would all make sense in the end. The truth is I had no idea how I was ever going to put the pieces of this puzzle together. And when it was all done, I honestly did not know if anyone was going to care. These are doubts every author has, and I had them in spades at the end of this process.

So, the book was done in late 2019, and printed shortly thereafter. In publishing, you are basically locked in a year in advance. Then, a few weeks before the release of the book, the world was bludgeoned with COVID. We certainly had no idea that the book would come out six months before the onset of COVID, a global respiratory pandemic. Humans are reactionary. We often only care about things once we’ve lost them. The pandemic raised people’s appreciation of breathing, especially since so many tragically lost their ability to breath during this time. If there is any silver lining to the last two awful years of COVID, it’s that I hope it’s made the public more

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What do you want people to take away from the book?

The credit for the book needs to go to the researchers who have worked largely in vain, in silos, for decades and decades. The area of mouth breathing was researched in the 1970s and there were hundreds of papers published, but no one listened. The issue of breathing dysfunction and respiratory disorders are a global pandemic of its own kind, and if the book is able to help a few people out, then that to me is the highest compliment; if it helps raise awareness for that even a little bit, then that to me is the highest compliment – it is amazing. If the book is able to help a few people, that is even better.

You have spent your career as a journalist and focus on science and data. With the debate over fake news and truth in journalism today, what would you tell people who may be apprehensive about the importance of healthy breathing?

I think it is great that the public is questioning a lot of things because much of what

we have been fed for a long time is incorrect. If you look at what we have been told about nutrition, or the safety of toxins in the environment, and to some extent medicine, we now know that so much of what we’ve been told is wrong. A doctor told me that more than 50 percent of what we’ve known about medicine throughout history has been proven wrong. That includes right now. So, it is healthy to question things, because that’s how you move science forward. What is a healthy diet, what we eat or, this macho culture saying that all we need is three hours of sleep – so much of this does not have our health and well-being at the center and it is good that people are questioning these things. At the same time, it is really hard to find the truth because there are so many voices out there.

One of the things that attracted me to the topic of breathing was that is easy to measure, there are no negative side effects, and you can experiment on yourself for free, anytime, and see what works, because what works ultimately comes down to personal experience and what works for you. Unlike a diet, or exercise, which can take weeks or months to show real benefits, the effects of changing your breathing can happen after a few minutes, or seconds. You feel what happens to your mind, your body, your clarity. It’s not a placebo effect. This is you hacking into your biology. You can measure it with blood pressure, HRV, even brain waves, stress tests. Once you see what breathing can do for you, and you don’t have to wait weeks or months to see it – after a couple of minutes of breathing differently and breathing in a healthy way you can experience the transformation that happens in your body. If you can elicit such a powerful and beneficial response after just a few minutes, just imagine what will happen after a few hours, a few days, a few weeks, a few months, a few years. I have seen what happens. I have seen what this can do for people. I think that once people see it and feel it for themselves, they don’t need any more convincing. It is self-evident because it is not something that is happening in your mind, it is biology. ●

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