

The Strength of Strain
How Stress Leads to Healthier Bodies, Minds, and Souls
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By
Rev. Dr. Todd F. Eklof

Many are familiar with Friedrich Nietzsche's saying, "What does not destroy me, makes me stronger," even if they don't know it's from his 1888 essay, *Twilight of the Gods*. It's one of forty-four maxims meant to help his reader remain cheerful during gloomy times. The entire saying goes, "Out of life's school of war: What does not destroy me, makes me stronger."¹ It's similar to what's meant today by "the school of hard-knocks," referring to the wisdom one gains from difficult experiences. But Nietzsche wasn't referring to hindsight. He meant for to understand the challenges before are us are worth going through because they can make us better and stronger.

Anyone who exercises knows this. Exercise requires us to intentionally strain and exhaust our bodies so we can benefit from better health. Stressing our bodies makes them stronger. The same is true for our hearts and minds. What doesn't kill us can make us stronger. This isn't to suggest the injustices and problems others create for us are justified, or the unexpected tragedies of life should be celebrated, only that we don't have to let them weaken us. We can emerge from them better than we were. They don't have to destroy us. If we can endure them, they can make us stronger. Yet, just as we must sometimes force ourselves to exercise, even when we're tired or have other things to do, avoiding the discomfort of straining our bodies eventually leads to atrophy, not health. Our muscles strengthen and our endurance improves only after our bodies repair what damage we've caused by overworking them.

These days we can go to the grocery store and buy bib lettuce and baby spinach because many prefer the sweeter taste of these immature plants to that of their bitter elders. But the bitterness that comes with age is due to the natural chemicals that thicken and harden their flesh to defend it against sunburn. This is also what makes them nutritious for us to eat. Immature leaves have little nutritional value compared to the thick skins of bitter chard, collards, and mustard greens. Add a little vinaigrette, avocado fat, or fatty nuts (if nuts haven't been banned from your table), to help mitigate the bitterness, but understand it is the bitterness that's most healthy for you, not the sweetness of innocence and immaturity.

Yet it is our natural tendency to avoid the bitterness of life. We prefer to make our lives as easy as possible. Were this not so, we wouldn't have any of the wondrous technologies we have today, let alone their ancestral pitchforks, wagons, or railroads crafted to make our lives easier. As a result, however, very few of us would know how to survive if we suddenly found

¹ Nietzsche, Friedrich. *Twilight of the Idols* (p. 3). Unknown. Kindle Edition.

ourselves alone in the wilderness, as our ancestors lived most of human history, with no grocery or convenience stores to stop into when they we're hungry, no clothing or shoe stores, or roads to travel, or GPS, or heat and air conditioning, or hospitals when we're injured, or any of the conveniences that make our lives easier. In this sense, our modern comforts have made us weaker, not stronger.

In their book, *The Coddling of the American Mind*, Greg Lukianoff and Jonathan Haidt say today we are suffering from an untruth that is the complete opposite of Nietzsche's maxim. They call it "The Untruth of Fragility: What Doesn't Kill You Makes You Weaker."² They explain this by talking about the growing peanut allergy epidemic. In his son's preschool, Haidt says, "The most important rule, judging by the time spent discussing it, was: no nuts. Because of the risk to children with peanut allergies, there was absolute prohibition on bringing anything containing nuts into the building."³ This particular preschool played it extra safe by also banning "anything produced in a factory that processes nuts, so many kinds of dried fruits and other snacks were prohibited, too."⁴ Given the severity of some allergic reactions, including death, they don't blame the school for being so cautious, but they also raise concerns about some unintended consequences.

Despite many schools, as well as other places, banning peanuts and nuts, peanut allergies have tripled between the mid-1990s, when they were rare, and 2008. Why? Lukianoff and Haidt cite a study explaining, "peanut allergies were surging precisely because parents and teachers had started protecting children from exposure to peanuts back in the 1990s."⁵ The study followed 640 infants who were at high risk for developing peanut allergies. Half of them adhered to the standard advice of avoiding all peanut products. The other half were exposed to peanut snacks three times a week. Among those protected from such exposure, 17% developed peanut allergies, compared to only 3% of those who ate the peanut snacks. The reason, as I'm sure you know, is because those who had been exposed to the potential allergen developed a natural immune response to it. By being exposed to the danger, their bodies learned to cope with it.

To back this up, I recently watched a lecture by Kari Nadeau, Director of the Shawn Parker Center for Allergy and Asthma Research at Stanford University. Dr. Nadeau confirms that allergies and asthma are on the rise. According to her statistics, 1 of 3 people around the globe have an allergy, leading to secondary conditions like sinusitis, pneumonia, or infection. 1 in 5 have asthma because of pollution, genetics to a lesser degree, and, mainly, because of the way we live our lives today compared to the way our ancestors lived. And 1 in 10 adults have food allergies, half of whom didn't have them as children. In the U.S., 1 in 12.5 kids have

² Haidt, Jonathan, and Lukianoff, Greg, *The Coddling of the American Mind*, Penguin Press, New York, NY, 2018, p. 19.

³ Ibid.

⁴ Ibid.

⁵ Ibid., p. 20.

allergies, similar to those who have them in countries like China, Europe, and Australia. 42 percent of these are food allergies, and 6 percent are peanut allergies.

Nadeau explains this rise is happening for several reasons, including over-sanitizing our environments. Not being exposed to as much dirt as we used to be, makes for an unhealthy microbiota, including a less diverse population of microorganisms in our gut, which is essential to a healthy immune system. Many cleansers and detergents also cause dry skin and eczema, allowing unwanted allergens to get past the skin barrier. Worst of all, the guidelines recommending parents delay the introduction of foods like milk, eggs, and peanuts into their infants' diets were wrong. This actually causes the immune system to more likely interpret common food microbes as foreign substances they must attack.

To prevent this, immunologists today are recommending a diverse diet begin early and often in an infant's life to help immunize their gut. This alone reduces their risk of developing allergies to common foods by 50 to 80 percent. The new guidelines calls for them to begin eating solid foods at four-months old. It's also good to have pets around, especially dogs, that expose our sanitized households to lots of good healthy dirt. But if it's too late for prevention, Nadeau says the cure for these allergies isn't further sanitizing our environments from every possible threat, only making them more threatening in the process, but through immunotherapy, which means using pills and patches to expose kids to small amounts of the very substances they are allergic to.

In his book, *Evolving Ourselves: How Unnatural Selection and Nonrandom Mutation Are Shaping Life on Earth*, Juan Enriquez says:

The overall explanation, says the hygiene hypothesis medical sub-tribe, is that our immune system, which developed over millennia to cope with eating raw meat off of dirt floors, has ever less to attack in our over-washed, scrubbed, sanitized, de-bacterialized environments. So our own defense mechanisms, having ever less to focus on, become ever more sensitive to the smallest perturbations.⁶

Unfortunately, our pursuit of comfort and safety for ourselves and others isn't limited to what we eat, but to just about everything. We're all looking for a life on Easy Street. "There's an old saying, Lukianoff and Haidt remind us, "Prepare the child for the road, not the road for the child."":

But these days, we seem to be doing precisely the opposite: we're trying to clear away anything that might upset children, not realizing that in doing so, we're repeating the peanut-allergy mistake. If we protect children from various classes of potentially upsetting

⁶ Enriquez, Juan. *Evolving Ourselves* (pp. 29-30). Penguin Publishing Group. Kindle Edition.

experiences, we make it far more likely that those children will be unable to cope with such events when they leave our protective umbrella.⁷

None of this is new information. It's old wisdom. I know it goes at least as far back as Socrates 2,500 years ago. Training his body to endure hardship while in the military, enabled him to go without food longer than anyone else, and to withstand the bitter cold without wrapping himself in extra blankets or covering his feet with fleece. One of his military commanders later wrote that Socrates, "walked out in that weather, clad in just such a coat as he was always want to wear, and he made his way more easily over the ice unshod than the rest of us did in our shoes."⁸

The stoic philosophers, who came shortly after Socrates admired and tried to emulate him in this same way. One of my favorites, Musonius Rufus, said those who are unwilling to exert themselves are unworthy of good since, "we gain every good from toil."⁹ In his book about Stoicism, *A Guide to the Good Life*, William Irvine refers to the stoic practices of self-denial and discomfort—intentionally enduring hardship in order to toughen ourselves up. "Musonius takes this step one step further," he says:

He thinks that besides *living as if* bad things had happened to us, we should sometimes *cause* them to happen. In particular, we should periodically cause ourselves to experience discomfort that we could easily have avoided. We might accomplish this by undressing for cold weather or going shoeless. Or we might periodically allow ourselves to become thirsty or hungry, even though water and food are at hand, and we might sleep on a hard bed, even though a soft one is available.¹⁰

For the stoics, preparing ourselves to endure hardships wasn't merely about having strong bodies or healthy immune systems, or to get through difficult times. It was about making ourselves more virtuous. Living our values, doing what we believe is right, even when it means going up against the authorities or the opinions of the status quo, can make life difficult and get us in a lot of trouble. But since they considered virtue the greatest good, stoics needed the confidence to know they were strong enough to endure whatever necessary to maintain their moral integrity, whether or not doing so was popular or safe. "How much more fitting ... it is that we stand firm and endure," Musonius said, "when we know that we are suffering for some good purpose, either to help our friends or to benefit our city, or to defend our [spouses] and children, or, best and most imperative, to become good and just and self-controlled, a state which no [one] achieves without hardships."¹¹

⁷ Lukianoff and Haidt, *ibid.*, p. 24.

⁸ Stumpf, Samuel Enoch, *Philosophy: History & Problems*, 3rd Edition, McGraw-Hill Book Company, New York, NY, 1971, 1983, p. 35.

⁹ Bellinger, Alfred R., *Yale Classical Studies*, Volume 10, Yale University Press, New Haven, CT, 1947, p. 59.

¹⁰ Irvine, William B., *A Guide to the Good Life*, Oxford University Press, New York, NY, 2009, p. 110f.

¹¹ Bellinger, *ibid.*, p. 59.

Two thousand years after Musonius said these words, today's scientists have begun telling us the same thing. In his new book, *Lifespan: Why We Age and Why We Don't Have To*, David Sinclair, professor of genetics at Harvard Medical School, perhaps the leading aging expert today, and the guy who discovered Resveratrol, the chemical in red wine that's supposed to be good for us, writes a lot about the reasons we age and some of the things we can do to live vital lives well into our years. Although he talks a lot about some of the medicines and technologies just on the horizon, he also tells us a few of the things we can do right now to live longer, healthier lives. What's remarkable is that Harvard's lead geneticist is giving us exactly the same advice as the stoics two millennia ago.

His first bit of advice is to *eat less*, through intermittent fasting—going longer between meals, or periodically without meals—and calory restriction. In Okinawa, where the greatest number of people living past 100 years are, they follow the 80 percent rule when it comes to eating. This means stopping just before one feels full. The stoics consider this the virtue of *temperance* or moderation. Eating less also limits our amino acid intake. We all know amino acid is vital to our survival, but occasionally restricting it stresses our bodies, which causes our survival circuit to activate, signaling certain chemicals to go into action repairing our bodies. When we overeat, these vital healing processes sit idle.

Another rule is lots of exercise to improve blood flow throughout our bodies. “When researchers studied the telomeres in the blood cells of thousands of adults with all sorts of different exercise habits,” Sinclair says, “they saw a striking correlation: those who exercised more had longer telomeres.”¹² Telomeres, of course, are the ends of our chromosomes that diminish in length as we age. The longer they remain, the longer and healthier we live.

Another thing we can do, just like Socrates and Musonius and other stoics did, is to endure the cold. Lowering our core body temperature, by taking a cold walk, or a cool shower, or lowering the thermostat a tad. Calorie restriction naturally lowers our core temperature, too. Studies show that by lowering the temperatures of mice by just half a degree causes them to live 12 to 20 percent longer and usual.¹³ Regular exposure to the cold increases the amount of brown fat in our bodies, which, until recently, was believed to exist only in infants. Brown fat is good for mitochondrial health, the engines that power our cells.

In short, as Sinclair puts it, “A bit of adversity or cellular stress is good for our epigenome because it stimulates our longevity genes.”¹⁴ This is so, he explains, because evolution has endowed us with a survival circuit that only activates when we are stressed. The survival circuit causes chemicals to flow through our bodies to repair damage to our cells, and recycle those senescent, or zombie, cells that otherwise remain in our bodies even though they can

¹² Sinclair, David A., *Lifespan: Why We Age and Why We Don't Have To*, Simon and Schuster, New York, NY, 2019, p. 102.

¹³ *Ibid.*, p. 106.

¹⁴ *Ibid.*, p. 112.

no longer reproduce, causing lots of inflammation and aging. Isn't it something to see science confirming the wisdom of our ancient forbears? Again, as the stoic philosopher, William Irvine says, "voluntary discomfort can be thought of as a kind of vaccine: By exposing ourselves to a small amount of a weakened virus now, we create in ourselves an immunity that will protect us from a debilitating illness in the future."¹⁵

The point of all this isn't that we should go out and immediately take on more stress in our lives, at least not much more. It is only to show that avoiding stress, and strain, and pain at all costs can make our lives worse, not better. Nor does this justify causing others to experience stress, strain, and pain. That's a lousy thing to do. Yet we have a responsibility to take on some stress in our lives in order to make us stronger and healthier in body and mind. Just as immunologists strengthen a weakened immune system by exposing it to potential threats, we can intentionally stress ourselves out by allowing some discomfort, through a little hunger, cold, and exercise, making ourselves stronger in the process.

In the same way, rather than protecting ourselves, and worse, paternalistically protecting others, from ideas we might find disagreeable, we should expose ourselves to them, and learn that it's possible for us to survive in a world of differing ideas and disagreements, without any compulsion to resolve them. Engage our mental survival circuit so we can simply learn to live in such a world, with all those ideas floating around, being expressed, having no impulse to attack them as a threat, as if we're having an allergic reaction against something that should be no more dangerous than a peanut.

¹⁵ Irvine, *ibid.*, p. 112.