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BODY ON FIRE

How Inflammation
Triggers Chronic Illness
and the Tools We Have to Fight It

“...a useful resource for anyone interested in attaining better health”

FROM A FOREWORD BY ANDREW WEIL, MD

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1

A Juggling Act

BALANCE, INTERNAL STABILITY, AND HOMEOSTASIS

Homeostasis: The tendency of the body to create internal stability and equilibrium, despite stressors. It is the body's need to have balance.

Homeostasis is the concept that our bodies strive to stay in balance without any excesses or depletion of resources, and it is the foundation for staying healthy. No over- or under-stimulation. Balance. It is what our bodies desire, and it is vital to keeping our bodies healthy, stable, calm, and free of illness.

Our bodies have many adaptive mechanisms for maintaining homeostasis. In times of stress and trauma, we activate various hormones to bring our systems back into balance. Day-to-day activities trigger these adaptive devices. But often, we expose ourselves to too much stimulation, excessive stresses, and overuse. Our bodies then become depleted of resources and cannot maintain homeostasis. We lose our balance—and without balance, our bodies suffer and we develop illness.

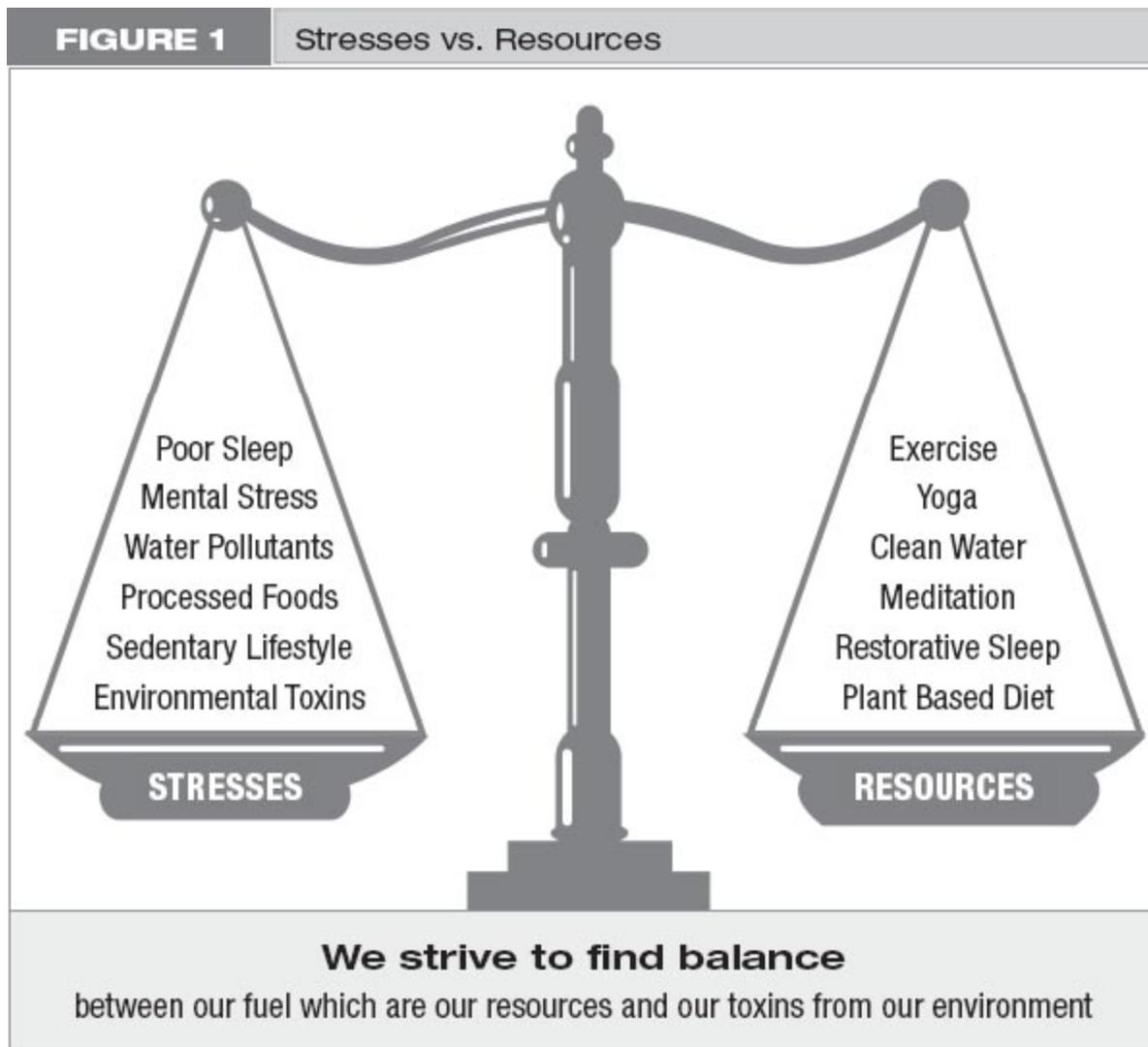
Stress comes from many places. Stress comes from pressures at home and work. It comes from what we put into our bodies, such as recreational drugs or medicinal ones. It comes from the food we put into our bodies. It comes from lack of sleep and overstimulation. In this modern era, we have so many external stimuli. We are continually receiving information through our computers and phones. We have the internet to answer our every question. We receive information through our smartphones that notify us of every weather change, of important news bulletins, and of every email and text from people who want to communicate with us. We are constantly moving. Our society is always “on.” We go to bed with the glow of tablets at our bedsides and wake to the buzzing of text messages and social media notifications. The stimulation is immeasurable. Each of these stresses impacts our bodies. These stresses disrupt the internal homeostasis. Our bodies have to use an abundance of resources to keep in balance again. But with time, those resources are lost and we become sick. This overuse leads to the onset of illness. (See Consider 1.)

CONSIDER 1

THE STRESS OF ALWAYS BEING CONNECTED

- ✓ How many times do you look at your phone when you are having a conversation with someone? At dinner? When you first wake up in the morning?
- ✓ Do you have audio notifications for all of your social media? Do you consider turning these off?
- ✓ How often do you check your email? How many times per hour? Can we just make a point to check them once every hour or every two hours instead of every time we hear the notification bell?
- ✓ Consider keeping your phone away from your bed, and plan a time after which you don't look at your phone. Maybe one to two hours prior to bedtime will be electronics free. If you use your phone as an alarm, get a different alarm.

We have many resources in our treasure chest. Those resources are our fuel and help us balance our bodies when they are being depleted by stress. Resources are in our foods, such as amino acids, omega-3 fatty acids, phytonutrients, and spices. Other resources come from nourishing good gut bacteria and stimulating detox and anti-inflammation pathways with sleep, sunlight, meditation, and exercise—and much more. (See Figure 1 on the next page.)



Over the centuries, there has been a surge in the prevalence of many illnesses, such as obesity, heart disease, cancer, and autoimmune disease. We are seeing more heart attacks in younger people; more lung cancers in nonsmokers; and more lupus, rheumatoid arthritis, and inflammatory bowel disease. One could argue that we see more of these diseases now because

people are living longer and getting more age-related diseases. But we have to consider, as well, that in the current day, there are many more toxins and stresses our bodies are exposed to, triggering more illnesses.

Today in medicine we have become quite advanced and have learned to treat many of these illnesses. We have learned to treat cancers with chemotherapy and radiation. We have learned to treat high blood pressure with pills. We have learned to treat clogged heart arteries with pills and then stents. If the heart becomes weak, we have learned how to put in mechanical hearts and do heart transplants. If the joints go bad from excess weight, we replace the joints.

We have become a society that focuses on fixing messes instead of preventing them. We install new joints before we discuss weight loss and building muscle. We perform gastric bypass (weight-loss) surgery before we educate people on what they can eat to lower their risk of obesity. We prescribe cholesterol-lowering agents and blood pressure medicines before we teach people about sodium and cholesterol, saturated fats, and trans fat. Our insurance covers antidepressants before it covers psychotherapy. We do not focus on root causes of illness, such as stress and inflammation-induced imbalances, but only the end result. With all of the advancements in health and technology, are we any better? Are we healthier?

As patients, we, too, look for magic pills to cure whatever ails us. We want pills that cause us to lose weight. We ask our doctors to prescribe pills to give us energy and ease pain in our joints. We look for pills that clear up our skin and treat our allergic reactions. We want to eat whatever we want and then take a pill to treat the resulting high blood pressure, high cholesterol, and heart disease.

But there are no magic pills. Every pill has a side effect, a cross-reaction, a potential adverse reaction. If you have taken medications before, you know this to be true. So let us try to move away from the lure of magic pills and instead implement lifestyle interventions that will give us the best chance to become healthy. Let us be empowered and go on this journey together! See Consider 2.

CONSIDER 2

BROKEN PILL PROMISES

- ✓ Every pill has a side effect.
- ✓ There are no magic pills.
- ✓ Would you rather take a pill for every ailment or make an intervention that has a lasting effect?

CHAPTER

2

How My Daughter Saved Me

Dr. Monica Aggarwal's Story

When I was little, I used to think that I didn't bleed. I was never injured and rarely even received a cut. When my son was born, I remember laughing at myself because of my surprise that when he fell, he would bleed. For some crazy reason, I think we all believe when we are little that we are invincible. I carried that feeling of invincibility into my 30s. I was a powerhouse. I worked hard and long hours, then came home and crashed, only to wake up and do it again the next day.

I felt I had it all. It is a tricky thing being a career woman, though. We spend our lives studying to reach the top of our game, but then that goal often coincides with the years when we want to have children. I had three children in five years. I poured the same intensity from my training years into my children. I nursed them all. I made fresh meals daily, baked their birthday cupcakes, and knit their Halloween costumes. I was exhausted. It was a hard life, but I felt that it was a burden I had to accept in order to have it all.

After my third child was born, life changed for me. I recall the time so vividly. I went back to work eight weeks after the baby came. I remember

the utter exhaustion of sleeping for three hours, going to work, then running home to nurse, cook meals, and start the routine all over again. Every night my husband would drag me out of one of our children's bedrooms so I could fall asleep in my own bed, until the next cry woke me up. I was haggard. I felt I had to sacrifice myself temporarily to have it all. One morning, four months after my third child was born, I woke up to the baby's cry and I couldn't move my right shoulder. It was red and hot. I ignored it and figured it was a trauma I couldn't remember. Three days later, my left fourth finger was red and hot. I started having trouble buttoning the kids' clothes. A day later, I felt like glass shards were piercing the bottoms of my feet.

I still ignored the pain. I started taking the elevator at work because my feet hurt too badly to climb the stairs and I couldn't bend my knees. After about a week, I knew that something was really wrong. I recall the day vividly, almost as if it was a dream. The alarm went off at 5:30 a.m. I remember feeling exhausted in my bones. I could barely get out of bed. I hobbled down the stairs to let the dog out, but my feet were worse than ever. The glass kept cutting my feet. I made it downstairs, but I could barely open the door to let the dog out. Then the baby cried. I started to run up the stairs on impulse, so as not to let the other children wake with the noise, but I couldn't get there. I couldn't run. Every bone in my body burned. I couldn't climb the stairs to reach her. I can still taste the salt in my mouth from my tears as I crawled up the stairs. I remember reaching her crib but not being able to lift her out. It was then, as I lay on the floor crying so that my husband had to pick up the baby and give her to me, that I realized I was in real trouble.

Two weeks later, I had a diagnosis of severe rheumatoid arthritis (RA). My rheumatologist looked at my inflammatory markers and told me that my prognosis would be a severe, debilitating course if I didn't begin advanced therapy immediately. After my first meeting, I was fairly sure that I would no longer be able to practice cardiology. All of the pictures from medical school of advanced RA came flooding back. The baby was now five months old and I was nursing. My rheumatologist told me to stop nursing as soon as possible, because he was very concerned about the destructive signs that my lab markers portended and about how symptomatic I was. He wanted me on drugs within one week.

So I followed his advice. I stopped nursing my baby. I cried every moment of those seven days. Every time I heard the baby cry, I had to walk away. My breasts were engorged and painful, yet I could not feed her. I still want to cry as I write this because of the deep sorrow I felt at those moments. I felt my choice was taken away from me; I had to give up something that was so dear to me. But every patient learns quickly that you have few choices. As patients, we have to rely so much on our physicians and suspend our own disbelief.

As I started losing my hair and my daily nausea became more severe, I felt more and more bitter and lost. I started to blame my daughter. I thought that if I hadn't had a third child, none of this would have happened. After a few months of being on the medications, though, I started to feel better. I became better adjusted to the drugs and had fewer side effects. It was around that time that I started coping with my disease, but I still hadn't released the anger. I still blamed my little girl for my disease. One day, about six months after beginning my treatment, I met a woman who would soon become a dear friend. She was a holistic nutrition consultant and was interested in educating my patients about diet. I was immediately skeptical, and she offered to do my nutrition profile. It was then that I started considering the effects of the foods we eat on inflammation in our bodies.

It is commonly thought that people develop illness after their bodies receive multiple insults. The first insult is often genetic, and then environmental triggers add to the initial insult. For instance, a person may be genetically predisposed to heart disease (the genetic insult) and have high LDL (bad cholesterol) and low HDL (good) cholesterol levels. Then she adds a diet rich in saturated fats and hydrogenated oils, plus a sedentary lifestyle and smoking (the environmental insults), and we have a young woman with premature heart disease. Similarly, with cancers, there is likely a genetic component, then we suffer some sort of environmental insult that creates stress (oxidative stress), which then triggers the abnormal cells to arise.

Those environmental insults or triggers can be different things to different people—lack of sleep, cigarettes, excessive sun, saturated fats, gluten, or dairy. Understanding what causes their inflammation is the key. **We believe that when you change your diet, remove stressors, and make anti-inflammatory choices, you can decrease inflammation.**

It takes time to learn our own bodies' sensitivities. Dairy and other animal products are often the source of inflammation. I was already vegetarian, so I started with dairy elimination. I cried when I gave up my pizza. Like most Americans, I also worried about not getting enough calcium and protein in my diet. It took me a lot of self-teaching to understand that so much of our calcium and protein comes from the beans and greens we are eating.

It took me four years to admit to others that I had an illness. I always felt that if I said it out loud, people would judge me or think I was less adequate as a physician, as a mother, and as a person. Now I realize it is because I have an illness that I understand and connect with my patients better. I can relate to their reluctance to take a medication. I feel their fear as if it were my own. I feel their helplessness and anger as the fire in my own heart. I also know now that, at the end of the day, we are all affected. Then, it is about learning to avoid environmental triggers and nurturing our bodies with a plant-based diet, low in oils and refined sugars, and undergoing lifestyle changes, such as increased sleep and more vigorous activity.

It has taken me a long time to embrace my disease. I have learned that it is not illness that defines us but, rather, how we respond to it that makes us who we are. A person like me who was so controlled and rigid falls hard when illness hits. I blamed my poor daughter for being the cause of my illness. I was angry for a long time. But now I feel healthier than ever before. My cholesterol is super low. My inflammatory markers are nonexistent, and I take no medications. I am strong. Two years after my diagnosis, I came off all of my medications. Soon after that, I did my first triathlon. Six years later, I remain off *all* medications. I feel great. I have learned to take time for myself. I have learned to laugh more and not worry so much about being late or about climbing a ladder. I thank my body every day for what it has to give me, and I forgive it for what it cannot. In some ways, the crazy thing is that getting sick was the best thing that happened to me. I have my girl to thank for bringing me back from a world in which I was drowning. I realize now that my daughter didn't make me sick; she saved me.

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