

# 1



## Toxic Stress – You Won't See It Coming (Neither Will Your Doctor)

Ted Daley awoke one August morning to air that felt oddly tropical – both warm and cool, a whisper of a moist breeze – so convincingly tropical that he thought for a second that he was back in the Rift Valley, in Kenya, facing another day of teaching in his Peace Corps assignment. Then the hum and the gentle vibration of the blood pressure cuff tightening around his upper left arm awoke him further to the reality that what he was facing was another August morning in Pittsburgh.

Eight years before, he had risen every day to that tropical air and the racket of birds and the challenges of teaching in that village classroom dimly lit with one lightbulb. His Peace Corps project had shown him he had the grit to maybe even make teaching in impoverished countries a calling.

Instead, he tuned in to his wife's job worries at PNC Bank and the rush of getting Josh off to daycare and the productivity metrics

awaiting him at his office in Carnegie Mellon University's PR and marketing department. Waking to this comparatively "corporate" life, he felt a long way from that Rift Valley classroom.

Alice had not yet stirred, and Josh was quiet too, so Ted released his CPAP mask strap and flipped the machine switch off. As he hoisted himself from bed, he felt heavy, the heaviness of unfinished sleep and the possibility of another drag through the day on six, maybe seven broken hours. He tapped the PDA digital device and answered the same routine of questions: Mood level? Stress level? Fatigue level? Who did you talk with in the last hour? Nobody.

This was day two of four (Tuesday and Wednesday, Saturday and Sunday) during which Ted would help a team of stress researchers at the University of Pittsburgh, under the direction of Tom Kamarck, PhD. As a volunteer in the SHINE study, Ted would collect data on how he responded to daily stressors.<sup>1</sup> Just a day in the life of Ted Daley, actually four days as a test subject in a vital research study.

At thirty-eight, Ted felt pretty good. He knew he was a bit overweight, but he carried it well. He wished he slept better. Last year his doc had diagnosed him with sleep apnea (thus the CPAP machine), but other than that, he'd never had medical problems and didn't take any meds. Ted felt reassured to know he was participating in one of the best stress response studies in the country, yet what did they know about how he handled hearing his brother had died? How high was his heart rate while sleeping last night? Is his blood pressure up because this study is more of a hassle than he expected?

## Stress Runs the Show

Although we're usually unaware of it, most of what we do minute to minute in our daily lives is motivated by our instincts for stress relief. Rest and sleep relieve fatigue. Dressing relieves the insecurity of nakedness. Eating relieves hunger. Fighting is an effort to

appease fear. Overeating, a shot of whiskey, or a deep drag on a joint take the edge off our anxiety, we hope. Talking cuts down on doubt, or disconnection, or loneliness. Learning reduces the uncertainty of not knowing. Evenings, weekends, and vacations ease the toll of work.

Under the surface actions of doing our jobs, going on a date, or taking care of chores, we are also toiling daily in the nether regions of our minds to avoid the troubles we expect from our past experiences and from the wilds of our imaginations – the universal troubles that come with rejection, failure, ignorance, poverty, fatigue, hunger, misery, pain, and illness.

When our efforts at stress relief fall short, we try something else – such as trying again, praying, cursing, slapping a dashboard, slapping the nearest cheek, or bingeing on a bag of Doritos or drinking a six-pack. We do this not because we're clever, but because, like all animals, we've evolved to seek stress relief, fast. We seek relief intuitively with our animal brains, deep beneath the cortex of consciousness, because that capacity to attend reflexively to stress relief has meant the difference between survival and death for our species, and for most others.

Stress, and how we manage our stress, runs the show, day and night. This chapter looks at how coping with stress is such a fundamental part of our lives that we forget it is so.

And Madison Avenue knows this about us. The advertising industry learned early to appeal to our appetites for stress relief. We buy stress relief every time we buy groceries, cigarettes, life insurance, a semester of college, a new pair of shoes, and most things we carry out of our corner drugstore, including pills, sunglasses, and M&M's.

Hollywood knows this about us too. Our appetites for the struggles of others, and our cravings for vicarious resolution, feed the bank accounts of the movie industry, the book industry, and theaters around the world. Storytelling exercises our appetites for the challenges of life and for stress relief. We willingly spend much of

our time and money seeking these safe experiences of controlled stress exposures. Stress is a social experience. Stress is a mental challenge. And stress is often a physical exertion.

Stress in our culture, now that we have perhaps more choices than ever in the history of the human race, is both universal to all of us and increasingly particular to each of us. In spite of our modern comforts and buffers, we're all still threatened by pain, fatigue, isolation, illness, violence, and death. Yet we vary widely in how we respond to these universal threats.

The same crying baby that invites solace for the doting grandmother may bring rage to its overwhelmed teenage mother. The repeated updates in yet another weather report on a distant hurricane far out in the South Pacific may bore the wife of the man who obsesses over storm reports for several hours a day in his desperate efforts to protect his family in Cincinnati from storms in the South Pacific.

## The Big Four Sources of Stress in America

Every year since 2007 the American Psychological Association has conducted a population-based survey of adults with the help of the Harris Poll called *Stress in America*, tapping current perceptions of stress and its consequences. Consistently the four sources of stress that we have worried most about have been work, money or the economy, family responsibilities, and health. These have not changed during the COVID pandemic.

The good news from the 2021 report was that three-quarters of us continued to fare well in spite of the pandemic. Overall self-reported stress levels held steady for most of the population – a testament to resilience among the majority. That's good news unless you're one of nearly a quarter of us who have been struggling so much we've had trouble making basic decisions, like eating

and working. That's good news unless you earn less than \$50,000, unless you're a Millennial or Gen Xer or Gen Zer, unless you check your devices constantly, or unless you happen to be a woman or a parent or a caretaker, all of whom consistently report disproportionately high stress levels.<sup>2</sup>

Among those who earn under \$50,000, worrying a lot about money roughly doubles our chances of “sedentary or unhealthy behaviors” such as watching more than two hours of TV a day (thank you, Netflix and Hulu), surfing the Internet, napping or sleeping more, eating more, drinking alcohol, and smoking. Unhealthy means these behaviors in high enough doses for long enough substantially raise our chances for serious illness, such as obesity, diabetes, and heart disease.

Note that worse than poverty is worrying about poverty. Not making much money may be about half as toxic as worrying a lot about not making much money. The stress of poverty is tough on health, and worrying makes it tougher. Perceptions count as much as reality.

Gen Zers, Millennials, and Gen Xers report higher stress levels than their parents or grandparents. Does that suggest that life is more stressful now than in previous generations, or is the experience of aging a good teacher of stress management? Maybe we learn to worry less, or we worry more effectively as we age.

Some recent studies of ratings of stress across the life cycle show trends toward higher stress in the first half of life (ages one to forty) than in the second half,<sup>3</sup> but it's difficult to compare the stresses of child-rearing, for example, to the stresses of retirement, illness, and aging.

Life has always been stressful, and always will be, every day. And the demands shift throughout life. Negotiating family conflict may get easier as negotiating three flights of stairs gets tougher. Technically, getting out of bed is stressful: it requires overcoming gravity, whether you're a Manhattan princess or a Kalahari bushman.

At its easiest, daily life presents us with a series of small and manageable challenges, most of which we take care of without a thought or fret: dressing, eating, walking, completing routine tasks at work, cleaning, settling into bed at night. Our modern American culture has made more resources available to us for managing stress than ever before in the history of the human race. Is that reassuring? Probably not.

## Stress around the Globe

At various times in my career I've worked in clinics in Cameroon, Honduras, and Kenya. I've taught the principles of mental health care in low-resource countries as part of the Global Health Curriculum of our family medicine residency at the University of Cincinnati. And I've conducted research on maternal depression in the aftermath of the 1998 Hurricane Mitch in Honduras.

Working across these language and culture barriers has reminded me in every setting that, in spite of our apparent differences, we struggle alike around the globe. We struggle to survive, to work, to play, to love and be loved, to avoid being left out or alone.

I've spent the bulk of my life in the US, and this is where I've practiced medicine the most, so this book focuses on examples from the US. But the range of variation around the globe is often instructive. For example, many of the best health outcomes on a national level are found in countries with established national healthcare systems (for example, in all the northern European nations, Spain, Canada, Taiwan, and New Zealand). Countries with poor human rights records, such as North Korea, Syria, Turkey, and Pakistan, have relatively poor health indicators. The US, by contrast, has good human rights records but no national healthcare system, and our health indicators are pretty mediocre.<sup>4</sup>

Cultures influence the experience of stress. In 1994 when Rwanda erupted into civil war, the national language Kinyarwanda had no word for traumatic stress, and no tradition for how to talk about the effects of watching your neighbor hack your mother and your child to death with his farm machete. They soon invented a vocabulary for talking about this process of recovering from these local and national traumas. How we experience stress depends in part on the linguistic as well as clinical resources of our cultures.

In South Africa in the late 1990s President Nelson Mandela asked Archbishop Desmond Tutu to create a procedure for reconciliation to set a national example for the repair of the atrocities of apartheid. This example established a deliberate alternative to the Nuremburg Trial approach and sowed the seeds for the later creation of The Forgiveness Project, a worldwide collection of accounts about how victims and perpetrators of all stripes have found ways to reconcile their differences in daily life.<sup>5</sup> This is global learning at its best about the management of the stresses of toxic relationships.

Until the 1990s brought us the Global Burden of Disease Study, we had no sound way of knowing how much illnesses varied around the world. As we will see in the next chapter, one of the lessons we've learned since then in studying global cultures is that stress-related disorders are not limited to highly developed countries, but rather are common and universal around the world, contributing substantially to the global burden of disease.<sup>6</sup>

## Toxic Stress Is Bigger Than You Think

How big a problem is toxic stress, the kind of stress that makes us ill? This is not a simple question to answer. It varies with time and definitions of stress and points of view. As we'll see in more detail later, we begin by focusing on those people who live with a pattern of severe and persistent stress. They are the people most likely to

suffer stress-related illnesses. These are your friends and neighbors, coworkers, parishioners, the checker at the grocery store, your daughter's husband, the Uber driver, maybe you.

One lens on this question comes to us from the Centers for Disease Control and Prevention's program on the Behavioral Risk Factor Surveillance System, which has been collecting data on adverse childhood experiences since 2009. People who reported four or more adverse experiences in childhood were at highest risk for adult illnesses. I'll introduce you to someone who fits this category.

But how many people fit this category? More recent data from the same program found that about one in six men and women reported four or more adverse events in childhood.<sup>7</sup> They carry a high risk of illness into adulthood. That's one good estimate of how big our problem of toxic stress might be: one in six.

Another angle on the size of the toxic stress problem comes from the number of adults who live with multiple chronic conditions. What is more stressful than living with a chronic illness? Multiple chronic illnesses. Surprisingly, 19 percent of adults in the US live with four chronic conditions, and 12 percent live with five or more.<sup>8</sup> Again, this group is about one in every six adults, most of them elderly. Many of them live with severe and persistent stress. And the rates of chronic illnesses around the world have been the focus of recent public health reports and initiatives.<sup>9</sup>

A third way to guess about how many people live with toxic stress comes from the data on poverty. Daily life in poverty is the living definition of stress – namely, demands that exceed the resources available, day after day. Officially, the US poverty rate in 2021 was 11.6 percent. Globally it was closer to 9 percent.<sup>10</sup>

These three sets of stressors or stressful exposures – childhood adversity experiences, multiple chronic conditions, and poverty – each capture a segment of our population exposed to extremes of persistent stress, likely with lots of overlap. It seems reasonable to assume that about one in five adults in the US have been or are



currently exposed to the kinds of toxic stress that will lead to illness and early death, and this estimate is likely to be true for many other countries.

## Meet Teresa

Teresa Langford grew up scrappy in Gurley, Alabama, a small country town near Huntsville, the third of four children. Her parents worked as dairy farmhands. Unlike her two sisters, Teresa spent most of her early years keeping up with her older brother, “Buggy,” and playing his games.

When she was eight, her parents separated. Her father took Buggy to live with him, and her mother took the three girls to Florida, looking for work. Within months her mother landed in prison for writing bad checks for food, so the girls were moved back to Gurley with Teresa’s grandparents for the four months of the prison sentence. How does a nine-year-old girl manage losing touch with her father, her brother, and then her mother in less than a year?

After her mother got out of prison, Teresa and her sisters were taken back to Florida to find a woman named Winnie had moved in with them. And Winnie slept in her mother’s bed. This was rural Florida in the 1970s. Eventually Teresa understood that her mother’s sleeping with Winnie was part of what made it hard for her mom to keep steady work.

They moved around a lot. “Between second and sixth grade I went to more schools than I can count. Sometimes we slept in the car,” she remembers. Teresa learned young how to run and win and scramble for safety whenever and wherever she could. She was tough and scrappy and proud of it.

At the age of thirty-four, after two tours in the Army, Teresa’s routine checkup at the Cincinnati VA primary care clinic showed she had high blood pressure, high cholesterol, and obesity, a

condition called metabolic syndrome – alarming at that age. Other than chronic pain in her left knee, Teresa had no complaints. She was tough and upbeat, an example of resilience against adversity – at what cost she had no idea.

So far in her life, she had coped with several major life stressors, only one of which was noted in her health record. Though her father had died at fifty of a stroke and her brother, Buggy, had died at twenty-nine from a heart attack and her mother had had three heart attacks by age fifty-three, it would take a near-death experience with necrotizing pancreatitis at age forty-six before Teresa would seek help for stress. To both patient and doctor, stress as a source of trouble was invisible.

Teresa Langford grew up with more than her share of childhood adversity. By the time she showed up for a routine physical exam at age thirty-four, she already had multiple risk factors for what would become within her next decade six chronic conditions. She and her doctors never saw it coming.

Teresa's story unfolds as this book progresses. You will come to know how life's adversities showed up as toxic stress in Teresa's health and how she and her doctors (I am one of them) helped her tap into her natural resilience to overcome several types of adversity. Teresa has asked me to share her story with you.

## The Lightbulb Changed Our Sleep–Wake Cycle

The caveman and my grandfather had their worries. And they died younger than we do today. One torrential rainstorm in the night could drown the sleeping caveman, and one streptococcal infection to a wound from a car accident could take my grandfather's life at thirty-five, leaving five kids and a wife with no life insurance.

I, in my modern life and house, sleep on the second floor where floods can't drown me, and I have health insurance to buy any antibiotic or vaccine that will save me and my family from streptococcus, AIDS, COVID, and the other bugs that might shorten my life.

Does my safe living save me from big worrying? I wish. I know too much. I know that bugs like staphylococcus can develop drug resistance, and instead of floods I can worry about thieves – they have ladders now and they pick locks and shoot fast and drive get-away cars.

In my lifetime what has changed are the types and patterns of stress we're exposed to, our society's awareness and capacity to talk about stress, our widespread access to electric and fossil fuel power, and the big money that industry has learned to make from our growing capacity to spend money on our worries.

Until my grandfather's generation in the early 1900s, humans all over the world rose and fell asleep by the light of the sun. Today in the rural villages of most developing countries where power is scarce or unreliable, the sun still rules, forcing most people to sleep most of the night.

So consider for a moment what the advent of the lightbulb and all that came with it in the early 1900s has done to our day-night rhythms. In developed countries insomnia is now as common as the common cold, sleep medications bring billions of dollars to big pharma, and every academic medical center has a sleep lab.

Add to the lightbulb the exciting and sometimes enraging eleven o'clock news ritual, bedtime Kindle reading, cell phones beeping at the bedside with every incoming tweet and Instagram, and Netflix bingeing – it's a wonder and a testament to our resilience that we sleep at all.

Add all the hours we spend sitting in chairs – the opportunities to ruminate on our troubles have mushroomed in the past century. Evolution did not prepare us for this level of stimulation and rumination, day and night.

These daily challenges to our circadian rhythms take their toll. After months of insomnia, my grouchiness or yours eventually drifts into patterns of work errors and inefficiencies and insecurities that could lead to anxiety or depression that then lead to demotions and job loss. Like alcohol, sleep deprivation in heavy enough doses can make us untrustworthy, erratic, or even mildly dangerous.

Yet most of us will continue to cheat on our sleep as a way of life. We choose to pay the price. It's part of our culture. Everyone does it.

That's a new type and pattern of stress that didn't dog our species until the last century brought us bright lights and urban living. The more recent arrival of screens and devices has jacked up that all-hours stimulation load, day after day, night after night.

Evolution has equipped us well enough for managing acute stress. We instinctively rise to the threat of a brush fire or the attack by a rival band or a car accident. We run or fight or gather our families, and then we recover. We bear a child in labor and then recover. With the help of our tribe, usually, we recover more fully and faster than if we try to cope alone.

Recovering – our ability to return to our resting state – is the key to resilience, the key to preventing the series of acute stressors of daily life from becoming the crushing load of unremitting toxic stress.

According to Eric Nestler, MD, PhD, Director of the Friedman Brain Institute at the Icahn School of Medicine at Mount Sinai, and one of the leading researchers on the genetics of stress, “Through evolution we were only really exposed to acute stresses. Either you survived predator stress or famine or drought, or you didn't. The kind of chronic social stress that we've created for ourselves is very different and not subjected to evolutionary pressure.... All these things that happen to us in response to acute stress are good for us.... With repeated chronic sustained stress, that's when these systems begin to go awry.”

By “these systems” he means the many organ systems that make up the stress response system. It's repeated, sustained stress

without recovery that kills us young – the relentless toll of daily life in a dangerous neighborhood, the barking hallucinations of schizophrenia over many years, or the persistent toll of caring for a disabled family member while managing our own multiple chronic conditions – anything that accelerates the progression to and through hypertension, diabetes, heart disease, and obesity-related conditions to early death.<sup>11</sup>

Yet where do we draw the lines between good stress, tolerable stress, and toxic stress? Where I draw those lines will be different from where you draw them, and neither of us will benefit from treatment unless our doctors draw those lines with us.

## Frame Shot Measurements

That morning, our study participant Ted removed the blood pressure cuff but showered and shaved with the Actiwatch wristband and Sensewear armband on his right arm. Then he slipped the cuff onto his left arm and pulled on yesterday's pants, clipping the cuff pump onto his belt at his right hip. It had become a stretch to get his belt buckle into the third hole, and today, with that extra clip for the cuff pump and the PDA in his back pocket, his pants felt tight.

He hitched the tube from the cuff on his upper left arm around his back and across his waist, plugging it into the pump on his belt over his right hip. Then he pulled his T-shirt on over the cuff and tube, put on a fresh dress shirt and the tie Alice had made from that Tanzanian kikoi. With his watch on his left wrist and the cuff on his left arm and the Actiwatch band on his right wrist and the Sensewear band on his right arm, all of them with their Velcro straps pulled snug, Ted was strapped and ready to go.

Today he had a couple of meetings and two minor deadlines, a lighter day than usual, dull compared to his peak times of year. Maybe the most stressful thing today, he thought, was going to be

reporting to the stress researchers every hour. Like the day before, at random times he'd have to tell the app how good or bad he was feeling, and what he was doing, and who he'd been talking with, and what he was thinking or worrying about.

The process, called ecological momentary assessment, collects data beamed to a central website through the PDA and the Body Media Sensewear armband and the Actiwatch wristband. Together these devices record his heart rate and blood pressure and physical activity and sleep patterns and daily events or hassles.

Five times today he would be prompted to pop a dry white pellet into his mouth and suck on it for a minute until it swells with enough of his spit to collect his salivary cortisol, a measure of variations in his stress hormone level. He would drop the swollen pellet into a labeled tube, write the time and date on the label, cap it, and later set it into its slot in the study box in his fridge at home.

Twice today, once in the morning and once in the evening, he would prick his finger and drip five drops of blood onto five circles on a piece of blotter paper and bag that paper and store it in the study box in his freezer, this one to check on IL-6 levels, a measure of variations in his inflammatory responses to daily stress.

Effective treatment of chronic conditions requires measurement. As sophisticated as measurement in medicine has become in the past hundred years – think of MRIs of the brain and genetic profiles for personalized cancer treatments – we still base many of our treatment decisions on the slightest slices of life. What does a single fasting glucose tell us about the range of blood sugars over the past month? A hemoglobin A1C gives a better summary of the average glucose levels. What has your blood pressure been like during your sleep, your jogging, your sexual encounter with your mistress during last Thursday's lunch hour?

Your doctor will only know what your pressure is in her office, and she will use those numbers to decide about your next dose adjustment. Most of what we know about our stress response

systems comes from a few isolated measures, which is like trying to guess the content of a movie from a few frame shots. Modern medicine has a lot to learn from more sophisticated measurement of the stress response system over the course of our days and nights. When we can see the whole movie, we're likely to change our definitions of stress, illness, and our treatments. Until then the measures we have are better than no measures at all.

Ted Daley hopes to get more of a window into his stress response system than most of us get. If he's lucky, he will see a four-day slice of his life, months later, when the data have been analyzed and interpreted and presented to him. He's not sure what it will tell him, but it's bound to reveal something useful, he hopes.

## Stress to Straitjacket

The slow march of civilization over the centuries has brought most of us a safer, kinder, less violent, and more predictable way of life.<sup>12</sup> Yet we worry because a certain dose of anxiety is necessary for survival. If we're not worrying, we may not be alert enough to dodge the next fist or insult or bus.

Some experts propose that nature has evolved us to expect the worst, to be always on alert, ready to react to the next challenge. We only rest when we're reassured of our safety, something we subconsciously check on many times each day. No wonder we all feel so insecure. We procreate and live longer if we live that vigilant way, and the practice of effective and efficient worry is an acquired skill.<sup>13</sup> If some kinds of worry save us, then what kinds of worry slowly kill us?

Ian is a meticulous man with an accounting job and a pregnant wife. She forced him to come see me as her due date approached because she was alarmed at the hours he was spending on the Weather Channel and on his weather apps.

As he faced fatherhood for the first time, his lifelong fear of storms escalated, and he now spent many hours a day and night (five or six, sometimes more, at the expense of his job as a CPA) ruminating over the weather stories and data, trapped in the unspoken conviction that vigilant worry could protect his new and fragile family. His wife and his boss had tried to snap him out of it with threats of losing his job and divorce, but Ian couldn't – he was stuck and scared.

A hundred years ago Ian would have had a harder time tapping into this endless well of alarming information about distant disasters. He would have studied the sky more than others, maybe prayed harder and more often, but he would have been forced to attend to his physical labors for many hours of the day, usually in the company of his fellow tribesmen, and the dark quiet of long nights bedded close to his family would have imposed many hours of sleep and recovery time.

Disrupted sleep and information overload – two modern sources of chronic stress responses – are unlikely by themselves to derail Ian onto a path of chronic illness in his early thirties. But play it forward. If he toughs it out, or if he skips seeking help, or if he loses his job and his wife, he soon could face the added burdens of unemployment, poverty, and housing insecurity (she said, “You choose the tube, you move!”). That's fertile ground for fast-food by day, fast beer by night to put him to sleep, and no one to soothe his worrying.

Let that combination of stressors play out for a few years, and Ian may then find himself talking with his primary care doc, if he can afford one, about pills for high blood pressure or heartburn pills or WeightWatchers or antidepressants.

Is this how it started for his father, who dropped dead on his riding mower one Saturday when Ian was ten and Dad was forty-five? Who knows? The family never talked about it. Ian told me, “Right as he was rounding the jungle gym, I watched him fall off the mower like a clown and never get up again.” Ian, stuck in



his straitjacket of anxieties, was caught in a vicious cycle of managing stress in unhealthy ways.

## Spotting the Blind Spot

So Ian went to see his primary care doctor about all this stress. Ian's chief complaint was insomnia. His doctor, who was in her late thirties, with special interests in diabetes care and developmental disabilities, gave him a fifteen-minute appointment that included a history of his recent insomnia, a physical exam, routine lab work, suggestion for an over-the-counter drug for the associated heart-burn, counseling about diet and exercise and sleep hygiene, a referral to a therapist for his concerns about his job and marriage, and a follow-up appointment with her in three months.

(Ian explained he had had trouble with sexual side effects on an antianxiety pill a few years ago, so he didn't want to risk taking an anxiety or sleeping pill if he didn't have to.) He avoided mentioning the embarrassing flap with his wife about his time on the Weather Channel, since that happened mostly during the day.

For a first visit about a stress-related condition, this sounds pretty good, right? Why is it not good enough?

Ian walked out of this appointment with no measure of the severity of his insomnia or his anxiety with which to gauge progress or worsening in the coming interval between appointments. He had no grasp of his condition, other than the general term *insomnia* or *anxiety*, which is like saying heart disease without saying what kind. And neither he nor his doctor understood whether he needed low- or high-intensity mental health treatment based on his other risk factors for stress-related conditions. Neither of them mentioned his father's death by heart attack at forty-five.

Is Ian's anxiety a self-limiting simple problem or an urgent, complex, and chronic problem? Is three months soon enough to

reevaluate? Compared to most people his doctor sees, Ian has just one condition, takes no medications, and is not likely to need precious medical resources. Watchful waiting seemed good enough.

Seasoned primary care doctors see a lot of stress-related conditions and become adept at sorting out the self-limited acute stress conditions from the more chronic and toxic ones. Reassurance, watchful waiting, and brief treatment of symptoms take good care of most acute stress. These clinical encounters generally go well.

But ask a group of seasoned primary care doctors how confident they are about changing persistent stress-related health behaviors such as long-term insomnia, binge eating, smoking, or physical inactivity. Most clinicians will groan or change the subject. They don't do well, and they know it.

Primary care clinicians are lucky if they get 20 percent of their smoking patients to quit and stay smoke-free six months later.<sup>14</sup> Their numbers are no better for meaningful and sustained weight loss for the obese. If you as a clinician expect to fail four out of every five tries at behavior change, you will soon try less often. You will turn instead to interventions that reward your efforts and avoid those that frustrate you.

By the time these patients and their stress-related conditions get to the specialists, they are often part of a complex set of multiple chronic illnesses and behaviors that defy single interventions and fifteen-minute appointments. And yet, primary care is the setting where most people should and could get the most timely and effective help with toxic stress. If only we could see it.

Ian and I will learn in later appointments with me that he has obsessive compulsive disorder and attention deficit disorder, in addition to the scar of having watched his father die when Ian was ten, an experience that convinced him you can't be too careful in this world. His anxiety symptom severity rating, if he had completed one during that first primary care visit, would fall in the severe range on a self-report symptom scale. That finding would

have surprised Ian and his primary care doctor, since Ian's a handsome, impeccably well-dressed, tightly wrapped guy who is good at sparing others the terrors of his inner world.

The weather is not the only thing Ian obsesses about. He has five other active targets for his obsessions and compulsions that interfere mostly with his relationship with his wife: dirt, money, time, food, and the law. And by the three-month follow-up visit scheduled by his primary care doctor, their baby will be two months old. Ian may be living at home, or he may not. He may be employed, or he may not. When Ian told his wife about his doctor's assessment and recommendations, she yelled at him, "If you don't see that therapist this week, you and your Weather Channel are moving out!"