

Chapter 2 - Making Sense of Fibromyalgia

Every night it was the same. Lying in bed, my body felt like it was on fire. At times, I thought I would go out of my mind with the urge to scratch my arms and legs. Instead of sleeping, I would find myself in the bathroom applying a cream to my intensely painful skin. The prescription cream, guaranteed by my dermatologist to relieve any rash, was utterly useless on mine. Covered in balm, I would return to bed and try to sleep. Sometimes, my skin would feel comfortable enough that I would just start to drift off. Then, just before the refuge of sleep, my body would jerk awake. As the minutes on my alarm clock clicked by, the horrible itchiness would return in full force. Soon, I'd start worrying about not getting enough sleep. Before long, I'd trudge back up the stairs to put on more skin cream, and the whole cycle would start over again. This could go on all night. Knowing that I had to see patients in the morning, I would take a sleeping pill and finally drift off in the last hours before dawn.

That's how my symptoms started, with an inexplicable and painful itching. I wondered what was happening to me. Even when I wasn't going crazy feeling too hot or itchy, I couldn't sleep. My mind was always racing, planning and worrying. I replayed arguments with my

wife over and over in my mind. I worried about the mortgage and obsessed about my most complicated patients. I felt confused and tired. Why couldn't I just close my eyes and fall asleep? My brain was always on overdrive – I couldn't stop it.

At work, I was tired but functional. I began seeing more and more patients suffering from fibromyalgia. I remember looking at one particular patient's chart and reviewing the list of symptoms she had checked off:

Trouble sleeping – Yes
Joint pain – Yes
Abdominal pain and nausea – Yes
Itching – Yes
Depression – No
Joint swelling – No
Restless feelings in the legs – Yes

I walked into the room, and attempting to be reassuring, I introduced myself as Dr. Dryland, the new rheumatologist from Yale. She shot me a look that said she didn't care about my credentials—she cared about answers. Her history and exam were straightforward. I hated telling my new patient that she had fibromyalgia. I couldn't tell her why she had it, but I explained that her muscles likely hurt because she was either stressed or depressed. She just wanted to know how to find relief from the pain. I offered her what little I could, one prescription for pain medication and another to help with sleep. She shook her head and said she had already tried both of these prescriptions and they didn't help. She questioned how stress could cause such severe pain. “I don't know,” I said. “Nobody knows. I'm sorry. I wish I could help.”

During the early years of my medical practice, I watched sick and desperate patients walk into my office, willing to do anything to get better. I remember how desperate I was for some sort of medical epiphany on those tired, pain-filled, days and nerve-racking sleepless nights as my own symptoms persisted. One day something clicked – an unnerving realization that my symptoms were almost identical to the ones I saw in my fibromyalgia patients. As I started asking my patients more questions about their sleep, the racing mind, the itching, the hot and cold sensations, the intense restless feelings in their legs, and even the violent jerking

at night, I quickly understood that I was on the same path – the same slippery slope to full-blown fibromyalgia that these patients had traveled. I knew there must be something that triggered these common symptoms in their bodies, and in my own body.

None of the rheumatologists I worked with had any real answers and I began to interview all of the doctors I knew about their views on fibromyalgia. Some of the physicians I talked to jokingly told me that fibromyalgia (fortunately) wasn't their problem "That is the rheumatologist's problem to deal with," they would say. Some doctors even insisted fibromyalgia didn't really exist. They insisted that *those patients* weren't actually in real pain, they were just depressed. Other medical doctors confessed their belief that fibromyalgia shouldn't be treated outside of the psychiatrist's office. Frustrated with their responses I began investigating stress, and how stress might affect fibromyalgia.

I went back to my dermatologist to ask whether my itching could be related to stress instead of a rash. Finally, she took me quite seriously. She had seen patients scratch themselves raw when stressed. Yet, not a single colleague or any doctor I interviewed could give me a plausible reason behind the symptoms of fibromyalgia. I searched through my medical books, but all I found were recommendations on various medications to help with pain and sleep. Having already prescribed most of these, I knew that at best they offered fleeting relief for only some people. After reviewing what little knowledge I had about fibromyalgia, I started to dig for more information.

The Search for Answers

I spent my life training to think like a doctor. I learned to rely on hard facts to make decisions. It's easy to understand that when a blood vessel to the heart gets blocked, a patient will have low blood flow to that area and have a heart attack. When a patient herniates a disc in her back, the subsequent pressure on a nerve causes great pain. Modern medicine understands problems like these and as a result, has developed effective treatments. But what about treating a problem where there doesn't seem to be a readily understandable cause? Unfortunately, the prevailing response in health care regarding problems that can't be understood or explained is to disregard their existence.

In medical school, I was taught that when people are stressed or depressed, they can spend all day focusing on their bodies, until they start to believe that they have painful problem areas. The take home message from medical school was that fibromyalgia wasn't a real medical problem and therefore belonged in the psychological realm. I was told to reassure these patients that everything would be fine if they would just get some psychological help.

As I struggled with my own fibromyalgia symptoms and those of my patients in the late 1990s, I started to understand why physicians avoided fibromyalgia patients whenever they could. There just wasn't a clear way to help these people. Fibromyalgia patients made physicians feel frustrated and inadequate. Now, I was the one suffering unexplainable symptoms. As a patient, I knew my symptoms were real. As a doctor, I couldn't explain them and neither could anyone else. I felt completely alone. I had real symptoms and no science to explain why. I was at a personal crossroads in my career and my life.

My search for answers started close to home. I began asking more questions of my fibromyalgia patients. I asked about their marriages, sleep, jobs, kids, car accidents, restless legs, itching, foggy thinking, recent moves, finances, family history, childhood experiences, and even their own beliefs about fibromyalgia. Their answers surprised me. It seemed like every major life change caused fibromyalgia. Many patients were just fine until their divorce, and then their symptoms began. For others it was a motor vehicle accident or work injury that seemed to trigger their symptoms. One patient insisted her rheumatoid arthritis, a painful swelling of the joints, had initiated her fibromyalgia. (This didn't make sense because even after I treated her disease and the swollen joints subsided, her fibromyalgia symptoms persisted.) I discovered a similar pattern in other patients. Taking careful case histories, I could usually help my patients identify an initial traumatic event, injury, or sequence of events that likely initiated fibromyalgia. However, in most of these cases the patient had already recovered from the initial event or injury. The painful divorce was years ago, the initial injury had healed, or the son was out of jail and doing better. What baffled me, was that the fibromyalgia symptoms and pain continued and even grew worse long after the initial fibromyalgia trigger was gone.

In my own research, I found confirmation that increased levels of stress, traumatic injuries, and poor sleep were starting to be associated with the onset of fibromyalgia. Conversely, lowering stress levels and getting better sleep was known to help alleviate fibromyalgia symptoms. Throughout my review of the existing medical research on fibromyalgia, I found many reports of potential causes, but little that explained the science behind the symptoms. I knew there had to be a central cause that could explain this otherwise baffling assortment of symptoms.

Adrenaline and the Autonomic Nervous System (ANS)

I was intrigued by a 1998 study that identified abnormalities in the autonomic nervous system of fibromyalgia patients. The autonomic nervous system (ANS) is a nerve and chemical circuit board connected to every part of the body. Think of it as an *automatic* nervous system. It automatically makes adjustments to our heart rate, blood pressure, digestion, respiration, and other bodily functions in response to changes in the body's internal environment. The ANS consists of the sympathetic nervous system and the parasympathetic nervous system, each of which acts in opposition to the other. The sympathetic nervous system is closely correlated with the fight or flight response.

When the brain senses any type of threat (psychological or physical), the sympathetic nervous system goes into action and floods the body with stress hormones that prepare it to respond to an emergency. The most commonly known chemical involved in this process is adrenaline (also known as epinephrine). We all know what it feels like to get an adrenaline rush – everything seems to speed up, and that's exactly what happens. Our heart rate and blood pressure increase to supply extra blood and oxygen to our muscles. Our pupils dilate for better vision. Our mind sharpens and focuses on the potential threat. Adrenaline is only one of many chemicals designed help us respond to an emergency. Noradrenaline and dopamine are also released, stimulating a cascade of changes and chemical releases throughout the body. These chemicals are also referred to as catecholamines, neurotransmitters, and neurohormones. The changes initiated by these key chemicals give us the strength and endurance to fight or flee in times of acute danger. Once the threat has passed, the parasympathetic nervous system helps return the system to normal.

by slowing the heart, lowering blood pressure, constricting pupils, and redirecting blood flow to our extremities. This balancing act between the sympathetic and parasympathetic systems is an integral part of the autonomic nervous system.

In the 1998 study, Dr. Manuel Martinez-Lavin of the National Institute of Cardiology in Mexico City studied the ANS in 30 people with fibromyalgia and 30 people without fibromyalgia by monitoring heart rate variability. Typically, ANS activity fluctuates throughout the day for all sorts of reasons. Most of us can identify with rapidly escalating adrenaline levels in times of extreme stress, but are generally unaware of the more subtle fluctuations from everyday stressors. Mild adrenaline releases take place when we stub our toe or run into an old friend at the grocery store. In contrast, the parasympathetic system takes over after a meal, making us tired so that the body can focus on digestion. In a 24-hour cycle, the ANS activity rises during the day and falls back down at night. This cycle of change is part of our natural circadian rhythm, allowing us to maintain a regular sleep cycle. In general, a person's sympathetic nervous system is more active during waking hours, and the parasympathetic nervous system takes over at night. This rhythm ensures that we are more alert during the day through elevated levels of adrenaline and other chemicals. As we begin to retire for the evening, these chemicals dissipate, reaching their lowest levels when we are in the deepest of sleep.

In his heart rate variability studies, Dr. Martinez-Lavin discovered that people with fibromyalgia had overall higher levels of sympathetic nervous system activity. In other words, these patients had consistently elevated levels of adrenaline as if their fight or flight response was always on high alert. He also found that the autonomic nervous systems of the fibromyalgia subjects did not have the usual 24-hour circadian rhythm. Their ANS activity remained elevated, falling only slightly at night when compared to the controls (Figure 1). Dr. Martinez-Lavin suspected that this unusual cycle was directly associated with the sleep disruptions previously reported in fibromyalgia patients.

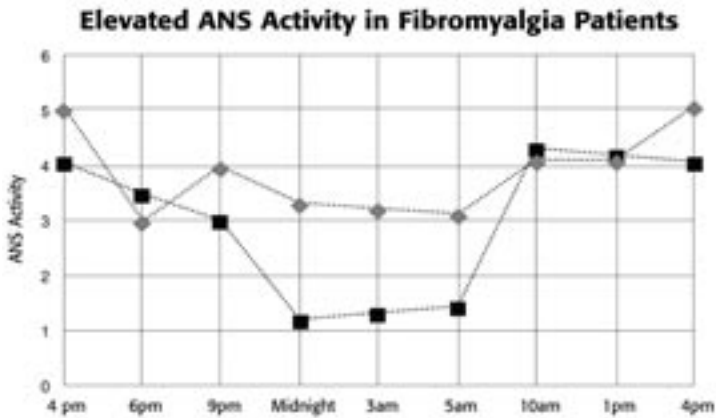


FIGURE 1 – Elevated ANS Activity in Fibromyalgia Patients

The Martinez-Lavin study uncovered an important common denominator. Most of my patients had generally experienced physical pain or a psychological stress prior to the development of fibromyalgia. What did car accidents, illness, sleep problems, and divorce have in common? Each of these situations causes stress, whether it is an emotional stress, a physical stress, or sleep-deprivation stress. Likewise, in each of these situations the brain sends a warning to the autonomic nervous system, activating the fight or flight response. Typically, once a threat has passed, the body's on-guard mode relaxes. However, it appeared that in fibromyalgia patients, the normal balance between the sympathetic nervous system and the parasympathetic nervous system was chronically disrupted.

The Martinez-Lavin findings were confirmed in 2000 by cardiologist Dr. Satish Raj and his colleagues at Queen's University in Ontario, Canada. Dr. Raj used a tilt table to study the ANS response of 17 fibromyalgia patients and 14 controls. In this test, patients lie on a table and are slowly tilted upward. A patient's physiological reaction to this stimulation provides important information regarding activity levels in the autonomic nervous system. Dr. Raj confirmed that patients with fibromyalgia have a more active sympathetic nervous system – or fight or flight response. Dr. Raj wondered if this increased activity was the cause of fibromyalgia or simply the result of having fibromyalgia. Although I still wasn't sure how these studies explained the pain and other symptoms experienced by fibromyalgia

patients, they certainly seemed to identify a significant imbalance in the body's normal functioning. Was this the systemic cause I had been looking for?

The Dopamine Connection

Another important piece of information fell into place when I met Dr. Andrew Holman, a rheumatologist at the University of Washington. We were among only a few clinical rheumatologists studying fibromyalgia. He was interested in the correlation between fibromyalgia and restless legs syndrome (RLS), another condition treated by rheumatologists. People with RLS experience an extremely unpleasant and difficult to describe feeling in the legs. These sensations, described by some as creeping, crawling or itching, cause people to continually move their legs in an effort to avoid these sensations. A disproportionate number of people with fibromyalgia also suffer from RLS. Dr. Holman recognized the overlap between RLS and fibromyalgia and wondered if fibromyalgia patients might benefit from the same drugs that help RLS patients. RLS, like fibromyalgia, also appeared to be associated with abnormalities in the autonomic nervous system and elevated adrenaline levels. The most effective medications for RLS are drugs that mimic dopamine in the brain. Keep in mind that dopamine, like adrenaline, is one of the key chemicals the autonomic nervous system uses to regulate bodily functions.

Dr. Holman's instincts helped turn the tide in the fight against fibromyalgia. In 2000, Dr. Holman published the first-ever study detailing how he successfully treated fibromyalgia patients with high doses of Mirapex (pramipexole), the same drug that effectively alleviated symptoms of RLS. He later followed this initial study with a successful placebo-controlled clinical trial in 2005. After meeting Dr. Holman in 2001, I began prescribing these medications to my own patients. The results for those able to take this drug were phenomenal. One of my early patients shuffled in on a cane, hardly able to walk from the pain. I started her on Mirapex and within weeks, she literally threw away her cane!

I initially prescribed Mirapex to 85 patients with fibromyalgia and carefully tracked the results. Of this initial group, 62 were able to take Mirapex – albeit not always at the optimal dose due to some unpleasant side effects. In fact, the average dose people in that initial

group were able to handle was less than half of the optimal dose. Of the 62 who were able to take the medication, 58 improved. Each one of these showed at least a 50 percent reduction in his or her pain score over the period covered by the study. Of the 23 patients who were unable to tolerate the medication, nausea was the chief problem reported. A few patients stopped taking the medication due to anxiety, poor sleep, confusion, or bad dreams. Most of the people who stopped taking the medication did so within the first week.

My patients who could tolerate Mirapex found that many or all of their fibromyalgia symptoms disappeared. For many of them, this was the first specific treatment that ever helped them. This was extremely exciting, but I also knew that Mirapex was not necessarily the cure for fibromyalgia. The high doses required for successful treatment result in some pretty intense side-effects. Almost 30 percent of the people who tried Mirapex could not continue to take it for long enough to see results. That left too many of my patients out in the cold in terms of effective treatments. I also knew that I didn't want my patients, or myself, to be dependent on a drug for the rest of our lives.

The successful treatment of fibromyalgia with a drug designed to simulate dopamine production in the brain confirmed my suspicions that an imbalance in the autonomic nervous system – specifically an overactive fight or flight response - was somehow the root cause of fibromyalgia. If we could virtually cure fibromyalgia with a drug that mimics dopamine, then altered dopamine levels must play a central role in causing fibromyalgia! This latest revelation raised as many questions as it answered. What was going on here? Why did increasing dopamine, a chemical that should already be elevated due to a hyperactive fight or flight response, help alleviate a condition potentially caused by the fight or flight response? It was a seemingly unrelated study that helped me answer these questions.

In the late 1990s, Dr. Nadège Altier and Dr. Jane Stewart of the Center for Studies in Behavioral Neurobiology at Concordia University in Canada were studying the role of dopamine as an analgesic (pain reliever) in the body's pain suppression system. As a chemical messenger, dopamine has many important functions in the body. A lack of dopamine in one part of the brain leads to the movement problems and tremors seen in Parkinson's disease. Increased levels in another part of the brain lead to feelings of

pleasure associated with the brain's reward pathways. A specific type of dopamine naturally filters (and thus blocks) pain signals that would otherwise reach the brain. The role of dopamine in blocking painful sensations is so powerful that most prescribed narcotics inhibit pain, in part, by increasing dopamine activity in the brain. Dr. Altier and Dr. Stewart, were specifically studying the role of dopamine in the autonomic nervous system's fight or flight response by reviewing existing research and conducting their own studies.

Have you ever had an accident that didn't actually hurt until several hours later? Most of us have heard stories of people who experience traumatic injuries, but claim that they didn't feel any pain until later. It turns out that dopamine provides significant pain relief at the time of the injury. When someone is injured, the fight or flight response kicks in, elevated dopamine levels help ensure that excessive pain doesn't get in the way of their ability to either fight or flee. In 1999, Dr. Altier and Dr. Stewart studied the association between acute stress and pain suppression by enlisting some unsuspecting laboratory rats. Lowered into water, the rats were forced to swim for their lives with no opportunity for escape. The researchers removed the frightened rats after a period of time and measured their pain response by injecting a needle into a tender paw. Ouch! Right? Do you cringe just envisioning that painful situation? Well, the rats didn't flinch. A stressful situation for anyone, the forced swimming fully engaged the rat's fight or flight response, releasing dopamine, adrenaline and other neurohormones designed to protect the rats in times of danger. While adrenaline help the rats swim harder and faster, elevated dopamine protected them from immediate pain in the same way that someone in a bad car accident doesn't always feel a broken bone right away.

Dr. Altier and Dr. Stewart continued to investigate the degree to which dopamine levels were related to diminished pain responses in the laboratory rats. In a subsequent test, they artificially elevated the rat's dopamine levels by giving them a drug instead of forcing them to swim. Once again, the scientists found that increased dopamine levels provided the same pain relief as the natural stress-induced dopamine. They also studied what happened if the stressed rats were deprived of dopamine (by giving them dopamine-blocking drugs) and then subjected to painful stimulus. They found when the rats were deprived of dopamine, the usual stress-induced pain blocking mechanism seen in these previous tests could not be repeated. This

particular test confirmed that dopamine was the key chemical responsible for blocking pain in times of stress. These studies confirmed the role of dopamine as a powerful pain blocker in times of acute stress. They also helped explain why high doses of Mirapex alleviated or eliminated symptoms of fibromyalgia in my patients.

Subsequent studies in 2000 and 2001 further revealed the link between dopamine depletion and fibromyalgia. Researchers at the Universidade Federal do Rio Grande do Sul in Brazil, and also at the University of Zulia in Venezuela took the initial rat studies a step further. Whereas Dr. Altier and Dr. Stewart studied rats exposed to acute stress, these next two studies measured the impact of chronic stress and the subsequent pain response in rats. It turns out that when rats are exposed to chronic stress, they start to lose the pain protection previously provided by dopamine. If the rats are exposed to stress on a daily basis for an extended period of time, the rats develop hypersensitivity to pain, in much the same way that people with fibromyalgia have an increased awareness of pain. Pain medications also proved less effective than normal with chronically stressed rats. Similar findings have been reported in studies run at a variety of other labs. Many of these studies paid special attention to those areas of the rat brain where dopamine activity regularly intensifies in times of acute stress. In stressful situations, dopamine levels increased and clearly afforded the rat protection from pain. However, under chronic stress dopamine levels greatly decreased – not just to normal levels, but to less-than-normal levels. With depleted levels of dopamine, the rats lost their natural ability to filter pain signals and were more sensitive to mild pain stimuli than would normally be expected. Interestingly, these studies indicated that while dopamine becomes ineffective, adrenaline remains a powerful component of the stress response. Although the rats were lacking in dopamine, they continued to exhibit the signs of stress prompted by elevated adrenaline levels.

A Complete Picture

Science had not let me down. The rat studies were the final piece of the puzzle. Earlier studies provided proof that an overactive fight or flight response was closely linked to fibromyalgia. The rat studies demonstrated exactly how this connection worked. Designed to protect us from pain in the short-term, an extended activation of the

fight or flight response constantly depletes our supply of dopamine. Our body normally replenishes dopamine while we sleep. The Martinez-Lavin study provided evidence that fibromyalgia patients often have a disrupted sleep cycle. Without restorative sleep, dopamine production doesn't keep up with the increased demands of an overactive fight or flight response. A decreased supply of dopamine creates a hypersensitivity to pain and other sensations.

The rat studies also answered another important question: Why do people with fibromyalgia continue to experience symptoms once the initial stress is gone? The stressed-out rats used in those studies continued to show a heightened response to painful stimuli for as long as four weeks after the chronic stress conditions were alleviated. This explained why fibromyalgia might persist long after you have resolved the initial event or events that triggered fibromyalgia in the first place. Although the initial stressor is gone, the pain from fibromyalgia continues to keep the fight or flight response on high alert, further disrupting natural sleep patterns. This chronic activation of the fight or flight response continues to burn through any dopamine produced by the body. Once this happens, fibromyalgia becomes self-perpetuating, creating a vicious cycle that is hard to escape.

Final confirmation of the link between dopamine and fibromyalgia came in 2006 when Dr. Patrick Wood of Louisiana State University announced the results of his research on dopamine depletion in the brains of fibromyalgia patients. One of the world's leading dopamine researchers, Dr. Wood designed a system to study dopamine levels in the brains of fibromyalgia patients with PET scans. The PET scans allowed Dr. Wood to accurately measure dopamine levels in the brain. He was able to conclusively demonstrate that dopamine levels are consistently lower in patients with fibromyalgia when compared to people without fibromyalgia. Perhaps even more important, he also found that the dopamine levels of fibromyalgia patients returned to normal and their pain improved once they took the necessary steps to begin resolving fibromyalgia.

Let's take a closer look at how altered levels of dopamine affect people at different stages of stress.

Figure 2 – The Effects of Dopamine Depletion

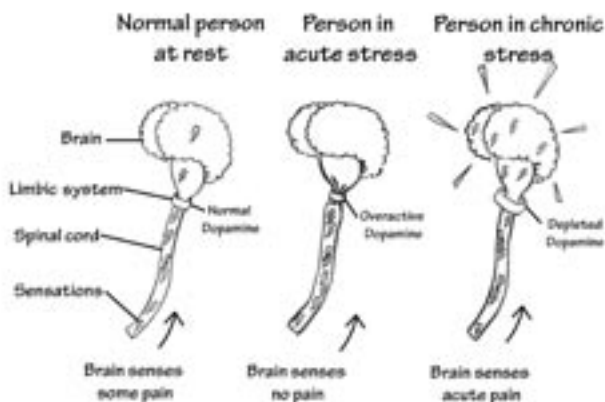


Figure 2 presents three scenarios. In the first, dopamine serves as a filter, selectively blocking out miscellaneous sensations so that you can concentrate and get things done. Under normal circumstances, you never feel anything to the fullest extent. All day long, you are filtering out the touch of your glasses, your socks, and the hum of your refrigerator. If you stub your toe, it definitely hurts, but not nearly as much as it would without the filtering action of dopamine. The second illustration demonstrates what happens when you experience acute stress, such as in the event of a serious car accident. The brain responds to the situation by increasing dopamine and blocking incoming sensations so that pain won't get in the way of a fight or an escape. In the third scenario, the brain has been under stress for so long that dopamine has become depleted and the brain is suddenly bombarded by hundreds of unwanted and even painful messages. Although people often focus on the pain associated with fibromyalgia, all of your sensations become amplified once your dopamine levels run low. You lose the ability to selectively filter out everything, and the world you live in dramatically changes.

I quickly realized that in order to help my patients, I would have to draw from many different disciplines. For centuries, science-driven western medicine, and spiritually-based eastern healing therapies have existed in opposition to one another. Western medicine focused on the tangible body, while eastern medicine focused on the intangible mind. Western medicine has given us flu shots,

chemotherapy, polio vaccines and Tylenol. Eastern medicine has given us meditation, yoga, tai chi, energy healing, and acupuncture. By its very nature, fibromyalgia shatters the barrier between these distinct bodies of knowledge. If there was ever an illness that proves the power of the mind-body link, it is fibromyalgia.

What we saw next, is that fibromyalgia can be reversed. The balance of the autonomic nervous system can be restored, and people can once again lead healthy, active lives. Once I made use of my newfound knowledge with my patients, most of them felt better within weeks of their first office visit. In addition to working on reversing the causes of each person's fibromyalgia, I continued to prescribe medications that would help with pain, depression, and fatigue. Many patients just needed to give themselves space to heal and find out what was activating their fight or flight response. Most of the time, just understanding their situation helped patients to feel better. Over time, my own symptoms disappeared, and I became more determined than ever to help people with even the most severe cases of fibromyalgia. I have learned that just as every patient has a different story of how they developed fibromyalgia, each one has a different path to recovery. Despite these differences, there is a consistency in fibromyalgia's root cause and a predictable set of steps that lead to recovery.

Remember Sophie – the patient I described at the beginning of this book? Sophie was lucky that she came to see me at the beginning of 2005. Several years before, I would have told her exactly what she didn't want to hear. I would have looked at her chart, reviewed her tests, and sadly told her that she had fibromyalgia. I would have explained that fibromyalgia is a syndrome, which means that it is a set of commonly associated symptoms rather than a specific illness. I would have told her that the medical community doesn't really understand what triggers fibromyalgia, what causes the pain, or why it doesn't go away. The best I could have offered would have been a vague hope that maybe someday we would know more about fibromyalgia.

Fortunately for Sophie, she came to see me after I had already helped a lot of other people recover from fibromyalgia. After reviewing her medical background and current symptoms, I did diagnose Sophie with fibromyalgia. I didn't, however, give her the grim prognosis that I described above. Instead, I carefully explained what causes fibromyalgia, where the pain comes from, and more

importantly, I explained how she could move beyond fibromyalgia.

Her mouth dropped open and she stared at me. “Are you telling me that I have fibromyalgia but that I can *get better*?” she asked in disbelief.

Absolutely, I said.

“Do you mean that I can feel good enough to have children someday?” she asked, tears welling up in her eyes.

When I said yes, she wanted to know what was going on with the rest of the world.

“How come I haven’t read a single thing that said I could get better?” “How come nobody has explained it like *this*?”

If you can relate to Sophie’s pain, then you should find inspiration in the second part of her story. I first met Sophie in February. She started to feel better almost as soon as she began following the program we developed together. Each day a piece of her life fell back into place. First, her fatigue went away. She felt as if an enormous fog had lifted from her entire body. She still had pain, but everything was a little easier. Life now felt a little bit lighter. Gradually, she regained her independence and could drive her own car, shop for groceries, and prepare a meal to share with her husband. Sophie found joy in everything that had once seemed mundane. By May, she had her first pain-free days in over a year. She continued to work hard and make slow, but steady progress. It wasn’t always easy and she had to make some tough decisions along the way. Slowly, she let thoughts about a bright future seep back into her mind. She started making plans without worrying about whether she would feel good enough to follow through. By October, Sophie knew she had made it. She had taken her life back, and it had never felt so good to simply be alive.

In a Nutshell...

- Fibromyalgia isn't forever – you can recover!
- People with fibromyalgia have an overactive sympathetic nervous system, also known as the body's fight or flight response. An overactive fight or flight response results in the continual release of adrenaline, dopamine and other important stress-related hormones. If this elevated level of fight or flight activity continues, dopamine will become depleted.
- Disruptions in your sleep cycle (which you may or may not be aware of) prevent dopamine from being replenished at night.
- When your body experiences fight or flight fatigue, dopamine loses its effectiveness as a filter. It's like taking out earplugs at a rock concert and discovering that the music is so loud it hurts. Once you lose the protection of dopamine, a pain blocker, all of your sensations (pain or otherwise) are suddenly amplified.
- The pain caused by depleted dopamine continues to trigger the fight or flight response and fibromyalgia becomes a self-perpetuating illness.
- There is a solution to fibromyalgia. With knowledge and an effective treatment plan, you can rebalance your nervous system and reverse the fibromyalgia cycle.