Back in Control: Condensed Version

by David Hanscom

Contents

Introduction……………………………………………3

Chapter 1: My Personal Experience………………..……6

Chapter 2: The Path to Chronic Pain…………………..8

Chapter 3: Reversing the Chronic Pain Process……….11

Chapter 4: Stress Management………………………….15

Chapter 5: Anxiety………………………………………..16

Chapter 6: Anger/Victimhood……………………………20

Chapter 7: Anxiety and Anger……………………………23

Chapter 8: Reprogramming…………………….……..25

Chapter 9: Awareness…………………………………….28

Chapter 10: Stress Management: The Homework………33

Chapter 11: Rehabilitation………………………………..37

Chapter 12: Spine Surgery: State of the Union.…………40

Chapter 13: Do You Really Want (or Need) Surgery?…43

Chapter 14: The Need to Believe…………………………47

Introduction

In medical school we are taught that back pain goes away naturally most of the time. The implication is that as long as your patient is comfortable, it doesn't matter much what treatment is prescribed during the first six weeks of care. Typical care consists of medications for short-term pain relief and some type of physical therapy or chiropractic treatment. For some patients, this leads to relatively quick improvement, but the number of such patients is not as high as I was taught. Many other patients become sufferers of chronic back pain.

<u>My Evolution</u>

I am a salvage spine surgeon; a role that I'm sorry even exists. I am the one that patients see after they've had several, sometimes many, failed back surgeries. I am grateful for the opportunity to help these patients. However, I am disturbed by the fact that a significant percentage of the original spine surgeries could have been avoided.

In 2005, this country spent a staggering $86 billion on treatment of low back and neck pain. Spine care costs rose 65% from 1997 to 2005. Despite the increase in spending, many patients' mental health and ability to function got worse. The spike in costs was largely due to an uptick in the number of surgeries performed. In my mind, this increase in surgery has been unwarranted; in fact, I think that many surgeries are performed before a full regimen of structured rehabilitation has been done. Even then surgery should be performed only in the presence of a specific anatomic problem that correlates with the symptoms.

I thought differently at the beginning. During my first seven to eight years of practice I felt compelled to offer patients the surgical option. I performed dozens of surgeries for low back pain. In the late 1980's, studies showed that Seattle was doing nine times the rate of spine surgery per capita as hospitals in the Northeast, on the other side of the country. We thought we really had it figured out.

However, it became apparent that a significant fraction of the patients were not doing very well. Many improved, but not as much as they had expected. Often they were the same or worse. After technically well-performed surgeries, I was frustrated and troubled when my patients were still in pain.

Around this time, I was introduced to the field of physiatry. Physiatrists specialize in non-operative rehabilitation. They understand the key roles that sleep, anxiety, and physical therapy play in chronic pain. It was a new concept for me.

The more I witnessed the effects of physiatry, the more I concluded that no matter how much a patient may be suffering from chronic low back pain, it can't be assumed that they need surgery. It's crucial for patients first to familiarize themselves with all aspects of their pain. There are three factors to consider:

- Is the source of your pain structural? Structural problems include ruptured discs, pinched nerves, or spinal deformities.
- Is the source of your pain nonstructural? Non-structural problems are injuries to the muscles or ligaments (soft tissues) supporting the spine.
- What is the state of your central nervous system? This is where pain impulses are received and interpreted.

Much of the unnecessary surgery stems from the fact that surgeons tend to look at low back pain from a mechanical perspective. The assumption is that if the body as machine is not working, there must be one distinct problem, aka the "pain generator." If a problem can be solved surgically, then the pain should go away. However, pain is multifaceted. Nothing in the mechanical world approximates the pain experience: machines do not have pain fibers, a nervous system, emotions, or memories.

If you are frustrated, angry, anxious, and not sleeping, you are simply not in a good place to make a major decision regarding a surgery that will significantly alter your body's anatomy.

At the same time I was introduced to physiatry, I began to doubt the effectiveness of fusions, and also to see the significant downside of failed fusions. (A fusion is a surgical procedure in which we "weld" the vertebrae together with a bridge of bone. Metal screws and rods hold the vertebrae still until the bone graft heals.) The spine would not only break down around the fusion but the problem would frequently progress into a severe deformity. About eight years into my practice I stopped doing fusions for non-structural low back pain.

This doesn't mean a fusion should never be performed. When back pain is the result of a structural problem, then a fusion may be warranted. However, most chronic back pain is nonstructural. If back pain stems from a nonstructural problem, a fusion rarely works – in fact, it can make it worse.

The DOCC Program (Defined, Organized, Comprehensive Care)

That's why I came up with an alternative treatment to surgery that, when followed, will help rid patients of their chronic pain. In the late nineties I began to utilize the concepts I had learned from the physiatrists. I was very pro-active and aggressive in implementing and following up on treatment plans. I found that through a systematic approach dealing with all aspects of a pain problem I could almost always prevent disability. What's more, many patients who had been disabled for quite a while would experience a remarkable improvement in their pain, come off narcotics, and resume an almost normal lifestyle. I had not anticipated that type of response.

This was the birth of my treatment plan, which is called the DOCC Program. DOCC stands for Defined, Organized, Comprehensive Care. It's a plan that I have perfected after over several years and thousands of patients. The program incorporates a whole range of variables that affect the pain experience. By aggressively addressing their sleep issues, setting goals, managing stress, dealing with any underlying anxiety or anger, and undergoing rehabilitation, my patients have been able to get rid of their chronic pain.

In early 2006, I ran across a patient named Jean who took the DOCC program to a whole new level for me. After a six-level spine fusion had been recommended to her, Jean came to me for a second opinion. Her spine was relatively normal and she had had little treatment thus far, so a fusion seemed unwarranted. Then I discovered that her back pain started after her 23 year-old son had drowned. This circumstance was a powerful demonstration that outside stressors plays a role in chronic pain. The case affirmed for

me how crucial it was to take a full view of the patient's life and circumstances instead of just reviewing their physical condition and running tests.

You may be thinking, "I have tried sleep medication! I have done stress management! I still have pain!"

It's no news that stress is a major factor in our health and overall well-being. It's true that you may have already tried one or more of the parts of my program. But the current medical system has not been set up to help patients deal with stress. It does not reward doctors for the time they spend talking to patients and coordinating their care. That weakness in the health care system is why it's best to take your care into your own hands.

The DOCC framework is organized around the following factors: sleep, stress management, short-term medications, goal setting, education, and rehabilitation. Instead of addressing only one part of the pain experience, you're taking the full view into account. For example, while the painful soft tissues supporting your spine can be rehabilitated with excellent physical therapy, it's much harder when you are tired, stressed, and worried that the pain will never diminish.

With the DOCC program, you can take control and release yourself from the bonds of chronic pain. The biggest goal of this book is to give you enough information to enable you to take charge of your own care. It's the step-by-step, structured combination of tools addressing ALL of the aspects of pain that will improve your quality of life. As you become more educated, your anxiety will decrease. As your sense of control increases, your anger and frustration will diminish and you'll have made a significant start in calming down your own nervous system. It's the best way to help your body to heal. Good luck on your journey!

Note

Page 1. "In 2005, this country spent a staggering ….mental health and ability to function got worse." Martin, BI, Deyo, RA, Mirza SK, et al. Expenditures and Health Status Among Adults with Back and Neck Problems. JAMA 2008; 299:656-64.

Chapter 1: My Personal Experience

In working with patients to relieve their chronic pain, I draw not only on professional knowledge but also on personal history. Firsthand experience has enabled me to relate to my patients more effectively: when they say they feel trapped, or that chronic pain has ruined their lives, I know what they're talking about.

Anger and anxiety go hand in hand in chronic pain. Pain causes anxiety, and the inability to quell the anxiety (and the pain) makes you feel like a victim. Those feelings evolve into anger, which further inflames your pain. I have never met a chronic pain patient who was not angry on some level. My own experience with chronic pain confirms this.

I did not recognize my anxiety until it manifested physically in my thirties. My marriage was headed for divorce, and it was an extremely difficult time in my life. My anxiety was so intense that by 1997 I had progressed to a full-blown obsessive-compulsive disorder (OCD) -- the ultimate anxiety disorder. In my case, it was something called internal OCD, where your mind battles with itself: intrusive thoughts provoke "counter-thoughts." The more I fought, the more powerful the intrusive thoughts became. Eventually they evolved to become part of my identity. Needless to say, the process took up a lot of my emotional energy.

All my life I had denied my own anger but finally I could no longer avoid it. With the OCD, I found myself angry most of the time. I routinely told my patients that it was deadly to hold on to anger, and now it was *me* who couldn't let it go. Anger was grinding me down.

Around this time, I began to feel a severe burning pain in my feet. I'd experienced an extra warmth in my feet for many years but it had never diminished my quality of life. That changed one night, however, when I was distraught about the divorce and the breakup of my family. It was like a bomb went off in my head. Within twelve hours, my feet were so hot that it felt like they were in a toaster oven. Nothing I could do would relieve the pain and it interfered with every aspect of my life. I became despondent.

I asked my colleagues for help. They concluded that tiny sensory nerves in my feet were firing spontaneously and that it was probably hereditary. It was more or less untreatable. I was placed on Neurontin, an anti-seizure drug, which had no effect. I could not take narcotics because I was actively performing spine surgery.

One of my realizations during this period was that I had been on an endless pilgrimage to reach the one answer that would relieve my suffering and change my life. But one day I realized that there *is* no one answer; instead, it's an ongoing process.

Luckily, I remembered that I'd had some success many years earlier with cognitive behavioral therapy (CBT) via the brilliant book *Feeling Good* by David Burns. Burns's first plea in the book was to write. So I began to write. I could not stop writing. In retrospect, writing pulled me out of my tailspin. It was life saving.

A second crucial turning point came while I was washing my future wife's car. It was a beautiful day in 2002. I was with my loved ones, but I was feeling miserable. I was not only severely depressed, but feeling sorry for myself that I was depressed. This juxtaposition of the lovely day and my misery made no sense. It led me to a powerful realization: I was playing the victim. I had many good things in my life and was letting

my circumstances and pain cancel all of them out. Why couldn't I enjoy a single day of my life, one where most things were going right? My self-pity was obviously holding me back. It suddenly hit me: I needed to let go of my victim role.

The sequence of events that brought me to this revelation was drawn out and complex, but the decision itself was simple. It took some time for me to feel the results of this shift in thinking, and to stick with it, but within six weeks my anger began to abate.

In the months that followed, my pain began to decrease. This, of course, was no coincidence. Anger triggers stress hormones in your body like cortisol and adrenaline, which mean your pain receptors and nervous system exist in a different chemical environment, one in which your senses are heightened. When your anger lessens and you're more relaxed, it follows that your pain will lessen as well. By January of 2003, I was back to where I was before the flare-up started.

My transformation was not a matter of enduring the pain, mind over matter, positive thinking, or using medications; I was able to reduce my suffering by letting go of anger and thus reducing the stress that over-sensitized my nervous system.

Today, my pain persists, but only at the level it was when it started twenty-four years ago. I still do the writing exercises on a regular basis, as well as utilizing several other "reprogramming" methods. For me, it's a continuous journey and I hope to make the strong point to you that there are no shortcuts. If I stop for more than a few weeks, I begin to drift back into my old neurological patterns of thinking.

Now, I have been able to use the methods that I developed during this period with my own patients. As difficult a journey as it has been, it turned out to be a great gift. I feel highly privileged to be able to pass it on to my patients and peers.

Chapter 2: The Path to Chronic Pain

If you're in chronic pain, you're probably wondering how it got to this point, where the pain is so debilitating that it interferes with your life and work. Many circumstances lead to chronic pain, but some generalizations can be made. Namely, there are four major steps in its evolution: 1) There is a source of the pain, which may or may not be readily identifiable, 2) Your brain becomes sensitized to the pain impulses, 3) Your nervous system memorizes the pain and 4) Emotions alter the pain experience.

As a first step towards recovery, it's vital to understand all these factors and recognize how you are currently dealing with them.

The Source of the Pain—"Pain Generator"

Surgeons and patients tend to assume that the source of chronic low back pain, aka the "pain generator," is an identifiable *structural* problem. A structural problem is an anatomical issue such as a ruptured disc or pinched nerve that is distinctly identifiable on a test. (And the patient's symptoms correlate with the test results). A *non-structural* issue is generally an injury to --or inflammation of ---the "soft tissues" (muscles or ligaments supporting the spine).

In truth, it's only about fifteen percent of the time that physicians can make an exact diagnosis of the source of low back pain. Usually, we do not know the specific cause. There are several reasons why it is so difficult to identify the precise source of pain: First, the soft tissue injury usually occurs at a level that is below the sensitivity of any diagnostic test. Tissues can be irritated without being torn—another undetectable injury. The irritation occurs through inflammation, which is a chemical, not mechanical, cause.

Although we often cannot identify the exact source of the pain, we do know that pain fibers are being stimulated and are sending messages to the brain. It is not "imaginary" pain that is being experienced. You may be frustrated without an exact diagnosis, but remember that it does not matter *why* the pain fibers in your brain are firing. They are firing and causing real pain.

If you are one of the unfortunate people who experience pain longer than a couple of months, it may evolve into a neurological problem. When the nervous system is attacked day after day with pain impulses, the brain sends out signals that alter the body's chemistry. The brain and the pathways to the brain become sensitized to these pain signals. Eventually, the central nervous system "memorizes" the pain.

Pain Sensitization

When the brain is hammered with the same pain impulse day after day, it becomes very efficient in processing them. Soon, it takes less of an impulse from your back to elicit the same response in the brain. This is called pain sensitization.

Water torture provides a crude example of how the brain gets sensitized. A poor prisoner is strapped to a board and water is dripped on his or her forehead. It is only a drop of water; the intensity of the "source" of the sensation is mild and does not change over a period of time. However, because of the repetition, the nervous system becomes focused on the dripping and the sensation becomes intolerable.

The sensitization phenomenon was clearly documented in a clinical research study done in 2004. Volunteers with no significant experience with chronic pain had a carefully measured pressure stimulus applied to their thumb. A functional MRI measured the brain's response. One small area of the brain lit up, signifying a limited reaction. They then applied the same stimulus to patients who had experienced chronic pain for more than twelve months. In these patients, *five* parts of the brain lit up in a highly magnified response to the pain. The difference in the response was consistent and dramatic.

Memorization of Neurological Circuits

Repetitive negative thoughts lead to the next phase. The brain becomes so focused on the thoughts associated with your pain that they are "memorized," creating new neurological pathways, aka "circuits" in your brain. It's what I call memorization of neurological circuits.

Author David Burns, who has written many books on cognitive behavioral techniques, calls these negative thoughts "ANTS," which stands for "automatic negative thoughts." In my own experience, whenever I have an "ANT," I become either angry or anxious (or both). These emotions then fuel the thought and it becomes repetitive.

Regardless of what sets these patterns of thinking off, they are a universal part of the human experience. This is true whether chronic pain is involved or not. The pain keeps these circuits *really* spinning. Instead of a bad day, you have a bad week, or month, or year.

Feeding Repetitive Thoughts

Suffering, suppressing, and masking are all ineffective methods for getting rid of repetitive negative thoughts. These methods only feed them.

When you suffer, you have the same set of thoughts over and over, a process that clearly reinforces a given neurological circuit.

Suppressing entails ignoring negative thoughts, which only makes them stronger when they reoccur. Studies have documented this phenomenon.

Masking is obsessive behavior that's used to get you mind off of a negative situation. Some masking activities-- such as pursuing a passion--are not problematic. However, if the pursuit is driven by anxiety, be aware that it's impossible to outrun your anxiety without paying some price.

In my experience the only way to break repetitive negative thinking is by using reprogramming techniques, which are discussed in depth in Chapter Eight.

Emotions and the Pain Experience

In chronic pain, the "modifiers" are what generate an emotional response to the pain. The three key modifiers are lack of sleep, anxiety, and anger. Each can raise stress and change your body chemistry. Your senses are heightened and you may experience even more pain.

The first step in the DOCC program is to get at least a month of adequate sleep. It calms the nervous system. Studies have show that the less sleep you get, the higher your sensitivity to pain. None of the rest of the program is effective unless you are rested.

Next comes anxiety. The ability to deal with anxiety is critical for anyone, but especially for someone with chronic pain. When you're experiencing anxiety, chemicals are secreted that create an arousal state. Your senses are heightened. This alters your perception of pain and your ability to cope with it.

In terms of anger, forget about physical pain for a moment. Instead, visualize a day when you were angry with a relative, co-worker, or a troubling situation. What was your quality of life like that day? Not great, right? When you add in the pain, the day becomes intolerable.

Methods for dealing with all of the above modifiers will be covered in later chapters.

The Path to Chronic Pain: A Summary

There is always a source of pain. It may be an identifiable structural anatomic problem or it may stem from chronic inflammation of the soft tissues around the spine. It is your physician's responsibility to know the difference.

If your central nervous system is "on fire" you will not be able to tolerate manipulation of these already inflamed tissues; your brain will experience an exaggerated response. The next step, therefore, is to calm down the nervous system by understanding the factors that rev it up.

<u>Notes</u>:

Page 1. "In truth…fifteen percent of the time." Nachemson, A. Advances in low-back pain. Clinical Orthopedics and Clinical Research 1985; 200: 266-278.

Page 2. "This phenomenon…study done in 2004." Giesecke, T, et al. Evidence of Augmented Central Pain Processing in Idiopathic Chronic Low Back Pain. Arthritis and Rheumatism 2004; 50: 613-623.

Chapter Three: Reversing the Chronic Pain Process

Once you understand the source of your chronic back pain, you can start pulling yourself out of it. It's crucial to take action and work with work your doctor instead of waiting for all the answers from the medical system. That is where the DOCC (Defined, Organized, Comprehensive Care) program comes in.

DOCC is a way of organizing your care so that you have an overall plan and a framework for carrying out that plan. Instead of being at the mercy of your circumstances, you can take charge of them. Following the program will build confidence by making you feel more in control and less anxious.

Diagnosis

The first phase of the DOCC program is to consider whether your back pain is structural or non-structural. (See Chapter Two for definitions of structural and non-structural issues.) Chapter Twelve: Do You Need Surgery? provides you with enough information so you can engage in an in-depth conversation with your doctor about your specific anatomic problem.

Structural problems typically require surgery; non-structural ones do not. Working with your doctor, you need to pinpoint your problem and decide whether to get immediate surgery before you start the DOCC program. If you don't label your problem, the ongoing anxiety over the source of your pain will hold you back from progressing through the DOCC program and getting better.

If a problem is structural and significant then it makes sense to move ahead with surgery relatively quickly and implement the DOCC program later. If the problem is structural but not severe, you can attempt the DOCC program first to see if there's enough of an improvement to avoid surgery.

If the problem is NOT structural, I do not recommend surgery under any circumstances. I spend a good deal of time explaining to my patients why they don't need surgery.

If you have been living with chronic back pain, you are vulnerable to someone who says: "I can take care of you with surgery." Such an operation may be not only unnecessary but also potentially damaging. Instead of trusting your outcome entirely to someone else, consider the options on your own so that the decision makes sense to you. The last four chapters of this book will help you in this effort.

Calming the Central Nervous System

If you've been diagnosed with a soft tissue problem, your central nervous system must be "calmed down" before you can be treated. Here's why: treatment of soft tissue pain involves stretching and strengthening your muscles and ligaments. The process requires significant force from your physical therapist in order to be effective. This manipulation of your inflamed tissues is painful at the very least; if the nervous system is also "fired up," it will be intolerable.

In this chapter, we will consider four crucial parts of the DOCC program: sleep, medication, education, and goal setting. Stress management will be dealt with in detail over the next several chapters.

Sleep

In treating chronic back pain, sleep is the trump card. It affects everything. I see my patients back frequently specifically to check on sleep. You should do the same with your own doctor. Not sleeping obstructs successful treatment of chronic pain.

<u>Sleep Hygiene</u>
Sleep hygiene is a term that's used to describe strategies that help you to get a good night's sleep. In the context of chronic pain, these strategies often need to be supplemented with medication.

First, you must be proactive in getting a full eight hours of sleep each night. Next, you should:

- Avoid watching TV or reading in bed.
- Avoid caffeine after noon.
- Minimize alcohol intake in the evening
- Avoid heavy exercise in the evenings.
- Relax each muscle group in your body

<u>Sleep Medications</u>

Sleep medication can be very effective if used correctly. Work with your doctor to figure out which medication is the best for you. There are many different types – don't be afraid to ask for a full rundown and/or do research on your own. Once started, check in with your doctor every week. If the first treatment plan isn't working, adjustments should be made promptly so that you're sleeping well within three to four weeks.

<u>Stress Management at Bedtime</u>
When you are under stress your brain is on a Formula One racetrack. Hardly anything will slow down your thoughts during the day, and it becomes much worse at night without any distractions. Just getting to sleep with meds is the starting point. As a next step, consider doing the writing exercises outlined in Chapter Ten at bedtime. It's remarkable how quickly writing can slow down these whirlpools of obsessive negative thoughts.

Medication Management
With chronic back pain, it can be difficult to get out of bed and move around the house, never mind going to work. The first goal of the DOCC program is to improve your ability

to function, and then relieve your pain. Taking pain medication on a short-term basis can help you to become more functional so that you can fully engage in your care.

As with sleep medication, work with your doctor to find the right pain medication. Be direct in this conversation in order to determine the specific purpose of each medication and its potential side effects.

Education

Learning about your care is a critical part of the DOCC program. There's a lot of information and the process requires a strong commitment, but think of it as your responsibility in the recovery process. Start with your specific condition and identify the different treatments available, both operative and non-operative. Reading this book is an important step, and there are many other resources.

Goal Setting

Whether we have chronic pain or not, it's easy to fall into "surviving and fixing" mind-set. When was the last time you thought about living your life based on a strong vision of a better future, instead of just getting by day to day?

To start the goal-setting process, first write down the three questions: Where am I now? Where do I want to go? How am I going to get there?

Answering these three questions -- both for your life in general *and* in the context of chronic pain -- will provide you with focus and direction.

To stay on top of your goals and your treatment plan, it's important to be organized about it. This involves checking everything on a weekly basis and updating as needed. You may think that you're not an organized person, but that's not true: organization is a learned skill.

One book I highly recommend is *Getting Things Done* by David Allen. He shows how to categorize and file away all your tasks so that they're easily retrievable instead of spinning around in our short-term memory.

Goal setting and getting organized will help you to create a plan for your chronic pain problem. Coming up with and implementing a plan decreases stress, clears creative space in your head, and moves you forward on as many fronts as necessary.

Next Steps

At this point, you should understand your anatomic issues. You will either have learned that the potential benefit of surgery is not worth the risk, or you will have undergone surgery. If it's surgery, it may have not lived up to your expectations. In both cases, you've educated yourself and have begun to move forward with the DOCC program. Remember, it's crucial to address **all** of the variables that potentially affect your perception of pain. Treating any one of the variables in isolation will not be successful. With full engagement, you have a high chance of improving your quality of life. Your goal is to be back in control.

Notes

Page 3. “First you must….Relax each muscle group in your body.” Van der Heijden, Kristiaan B. et al.: Sleep hygiene and actigraphically evaluated sleep characteristics in children with ADHD and chronic sleep onset insomnia. J. Sleep Res. (2006) 15, 55-62. Retrieved on 2008-06-22

Page 5. “One book I highly…short-term memory.” Allen, D. (2001). Getting Things Done. Penguin Books, New York.

Chapter 4: Stress Management

At this point in the book we've established that stress plays a major role in chronic pain. The inability to recover from chronic pain is an inherently stressful situation, one that causes frustration, anxiety and anger. Add in the normal stresses of everyday life – work, relationships, travel – and your stress level can go into the stratosphere. Stress hormones, including adrenaline and cortisol, become elevated. These chemicals cause your heart to race and your senses to be on constant alert. Your nervous system gets fired up. The entire process can wear you down.

To effectively manage stress and increase your chances of healing, it's critical to do activities that build up your energy reserves. Examples are adequate sleep; consistent exercise; hobbies; enjoyable time with friends and family; setting boundaries; positive conflict resolution; and time alone. These simple things can have a huge effect on the quality of your day. It takes some effort to get stress under control, but the rewards are immeasurable, particularly in the presence of chronic pain. You must be pro-active in re-energizing yourself.

If you don't manage your stress, you're more likely to experience frustration, anxiety, and anger. Anxiety and anger drain your energy. If the drain is continual, it's impossible to build up your energy reserves to a level where you can enjoy your life. Picture yourself in a tub trying to fill it up for a relaxing bath, but the drain is wide open and a foot in diameter. No matter what you do you do you can't plug the hole. Or, you're trying to cross a large body of water in a slowly sinking boat. You can't navigate the boat and bail at the same time. Even if it were possible, it certainly detracts from the enjoyment of the trip. Your only focus is on survival instead of having a good time. You're exhausted.

This scenario is what it's like if you're under constant stress. It would be a negative situation for anyone, let alone someone with chronic pain. With chronic pain, it can be disastrous.

When you're in chronic pain it's likely that you're not spending time with friends, pursuing new passions and hobbies, or getting enough exercise, all things that help you cope with stress. It's more likely that you feel like you're sinking into quicksand.

Now envision yourself running the bath water with the drain closed. You can relax into the tub and calm your senses. With the boat no longer sinking, you can sit back and enjoy the experience. You have energy not only to survive but also to live life fully. This is what it's like if your stress level is under control.

Learning how to better cope with stress has a dramatic effect on your quality of life: it improves your relationships, helps you make better decisions, and -- most critically for chronic pain patients -- calms your nervous system. The calmer your nervous system, the greater chances that your pain will decrease.

In the upcoming chapters, we will look more closely at the roles that stress, anxiety, and anger play in chronic pain and more detailed ways of reducing stress.

Chapter 5: Anxiety

The ability to deal with anxiety in a healthy way is critical to quality of life. It is even more important for someone in chronic pain. Patients in chronic pain typically have anxiety-related thoughts such as, "What is the source of my pain?", "Why can't anyone figure out the problem?", and "Will there be an end to this misery?" When no answers to these questions emerge, anxiety can escalate dramatically. With the nervous system "fired up," the pain worsens and the capacity to cope diminishes.

The feeling of being trapped further intensifies the pain. To understand this concept, think of anxiety as a "psychological reflex" instead of an emotion. If you were to put your hand close to a red-hot burner on a stove, your level of anxiety would quickly go up and you'd withdraw your hand. You'd exert your ability to control the movement of your body and reflexively protect yourself, thus alleviating your anxiety. This is how we relieve our anxiety, in general: by controlling a given situation in a way that decreases our stress level. If you you're unable to control the situation, you become frustrated and angry. Over time it can turn into rage.

That's what would happen if you were forced to leave your hand close to the burner. Not only would your anxiety level go through the roof, you'd feel trapped, terrified, and angry. It's a good metaphor for chronic pain. The inability to escape a painful sensation in your body has a profound effect on your nervous system. You're unable to react in a way that is deeply programmed into us. Over time, it's enough to destroy your quality of life. Pain relief is one of the human body's very basic needs.

The Creation of Anxiety

To further understand our anxiety and how we can get it under control, it helps to break it down into parts.

To experience anxiety, you must first have an anxiety-producing thought. For example, if you stepped off of a curb and almost got hit by a car, your heart might race and your stomach might clench. Yet nothing touched you. It was the thought that you might get hit that caused the secretion of chemicals that elicited the physical response. This combination of a thought and a physiologic response constitutes an emotion – in this case, anxiety.

In another example, picture yourself lying on a sunny beach in Hawaii, thinking about how glad you are to be on vacation. You feel relaxed because the happy thoughts lead your body to secrete chemicals similar to the drug Valium. Different thoughts can radically change your emotions and physical condition. If you're on the same beach thinking about how your boss has been treating you poorly, how are you going to feel? Probably frustrated and angry. Even though you're on a gorgeous beach, you can't relax. Again, it is the thought, not the circumstances you're in, that determines your emotional state. If you continued to think about your boss over and over, you could become stuck in a negative mindset and become increasingly angry.

This is what happens with chronic pain. Repetitive negative thoughts about your pain—or anything else--produce anxiety, and create neurological "circuits" that are "etched" into our brains.

This process can be stopped, however. It *is* possible to influence your own thoughts. This is the basis of a branch of psychotherapy called cognitive behavioral therapy.

According to cognitive behavioral therapy, it's possible through a series of exercises and counseling to "reprogram" your thinking and improve your mental health. For example, imagine you are in chronic pain and thinking, "My pain is so bad that I can't get out of bed, and there's nothing I can do about it." You can use reprogramming techniques discussed in Chapter 8 (including writing and meditation) to replace those negative thoughts with a new one such as, "There are things I can do to become more functional." The reprogramming process is very different from positive thinking -- you can't outthink your pain. More on this in Chapter 8.

Natural Progression of Anxiety

Another key to handling anxiety is to get it under control before it escalates. Although anxiety starts with a thought that elicits an emotional response, there is a step in between. The mind works in images. A negative thought sparks an image, which then produces an emotional response. The emotional response is actually based on the image, not the thought. Positive thoughts about love, for example, usually evoke positive images that in turn provoke a positive emotional response. A negative thought and related negative image about love -- for example, Roy Orbison's lyric "Love is like a stove; burns you when it's hot" – provoke a negative emotional response ("Love hurts").

If we have the same negative thought over and over, it sparks the same image, intensifying over time. Eventually, the thought and image combine to become a "story." A story is a preoccupation about some aspect of yourself or circumstances of your life that you think is negative. It's often something that causes you to beat yourself up, and that you're convinced can't be changed, such as "I can't communicate well." "I'm a disorganized person." "I'm bad at relationships." Or it can be an event that caused you stress: "The doctor did the wrong surgery."

The stories we develop about ourselves and our lives can be deadly to our mental health. ("Love hurts"). Deadly, because we start to interpret random events in terms of these stories. The story that's in your head at a given moment is your reality, which becomes stronger with repetition over time.

With stories about our chronic pain, the stakes are even higher. This is because often the events that started you on your path to chronic pain are disturbing. Then the rest of your bad luck in life gets blamed on those circumstances, whether it's related or not. One of my chronic pain patients, a 50-year-old man, had been hit head on by drunk driver in a semi-truck. His major injuries had healed but he was still suffering from severe low back pain. Although the accident had occurred five years earlier he talked about it like it had happened yesterday. It had become the central story of his life.

If we don't let go of powerful negative stories, our anxiety gets worse. It naturally progresses from a stage that is relatively easy to cope with to a stage that is extremely difficult to cope with: from discomfort to nervousness, to anxiety, to panic, to fear, and then to terror.

The letting go process isn't easy: although you may be able to intellectually let go of a past negative event, it's very challenging to let it go at a deep emotional level. To do so, it takes specific tools – in my experience, reprogramming techniques are the most effective (see Chapter 8).

Coping Mechanisms

Most of the methods we've been taught for coping with anxiety are ineffective. The most common ones are:

- Suppressing or denying negative thoughts and anxiety—probably the most common
- Avoiding anxiety-producing situation: phobias or reclusiveness

- Avoiding anxiety with rigid/structured thinking: strong opinions about almost anything, including politics, religion, or other people

- Controlling people and circumstances
- Pursuing power to gain more control
- "Masking": behavior meant to distract you from your anxiety, including addictions, work, or hobbies

Some of these strategies work, but most of them fail over the long term. For instance, it's impossible to suppress your anxiety-related negative thoughts. This is illustrated by an experiment Harvard psychologist, Daniel Wegener conducted in 1987. In the experiment, volunteers were asked to read aloud a monologue on any topic. Before starting, they were told not to think about white bears during the monologue, and to hit a clicker every time they had a "white bear thought." They hit the clicker frequently. It quickly became clear that even though they'd been told not to, it was impossible for each individual not to think about white bears. When told to think about white bears during the second half of the experiment, the frequency of these thoughts was much lower.

Unfortunately, the darker your thoughts, the more you will try to suppress them. Not only does this not work, but it also makes the thoughts stronger. The thoughts will remain in your consciousness and evolve into a powerful and destructive neurological circuit. Your suppression efforts also consume a tremendous amount of emotional and intellectual energy that you need for your recovery.

Even if your typical coping mechanisms are successful in quelling your anxiety, they usually affect your close relationships in a negative way. For example, if you are too controlling, you end up pushing away those whose support you need. Certain masking strategies aren't harmful, but if they are anxiety-based, then they're likely to degrade your quality of life. If your hobby is motivated by a need to cover up anxiety rather than the pursuit of a genuine passion, then your anxiety will build.

In Chapters 8, 9, and 10, we will go over the most effective coping methods for anxiety, including reprogramming, meditation/awareness, and stress management.

Summary

The intent of this chapter is for you to consider anxiety from a different perspective. Many people, especially those with chronic pain, are unaware of the effect that anxiety has on their lives. Becoming aware of your anxiety and your typical coping mechanisms is a first step.

Again, anxiety is a normal part of the human experience and essential for survival. The key is to understand how to manage it so that it does not rob us of a deep, rich, and engaged life.

Note

Page 5: “This is illustrated by an experiment… the frequency of these thoughts was much lower.” Wegener, DM, et al. Paradoxical effects of thought suppression. J Pers Soc Psychol 1987; 53: 5-13.

Chapter 6: Anger/Victimhood

When we feel anxious, we respond by trying to control the circumstances that are causing the anxiety. If we can't control these circumstances, we become angry. This is what happens when you're in chronic pain. Your life has been completely disrupted and you don't know if the pain will ever stop. It may be hard to go to work or even get out of bed. You feel like you've lost control of the ability to influence your own situation, which would make anyone angry. As with anxiety, though, it's crucial to understand your anger and process it in a healthy way. Unprocessed anger weakens your mental health and leads to a vicious cycle that will intensify your pain.

Anger is an understandable response to chronic pain. You may find yourself angry for some or all of the following reasons:

- You can't escape the pain—you feel like a victim.
- The medical system has no answer for why you're in pain, nor any definite prescription for improvement.
- Your irritability is making your relationships suffer; instead of being an energy source for your family, you are a drain on them.
- You're on disability leave, but your employer and insurance company impatiently pressure you to return to work.

How can you not be angry? But anger, no matter how justified, will destroy your quality of life.

Victimhood

In my experience, to become angry you must first feel like a victim. The sequence is:

- Circumstance (perceived or real)
- Blame
- Victim
- Frustration/Anger

Let's look at how it unfolds. First, you blame a person or circumstance for disrupting your sense of well-being. This blame automatically puts you in the role of a victim. Feeling like a victim makes you frustrated and angry.

The blame-victim-anger sequence can start with either a perceived wrong or an actual wrong. In the first case, your perception -- especially when distorted by chronic pain -- can mislead you. Your mind creates a story about the event, but there is a good chance that it wasn't a "real wrong." Examples include being cut off in traffic or being inadvertently left off a party list. You feel victimized by the act, even if it was random. Nonetheless, whatever thoughts or imagery exist in your mind is your current reality and you are angry about it.

In the second case, you have been genuinely wronged. Someone robbed you. You had surgery that ended up with a severe complication. A driver ran a red light and totaled your car. Here, you are a victim in the truest sense.

Whether the victim role is just perceived or actual, the anger response will be about the same. Each is equally destructive to your mental health. The difference is that when you are actually a victim it is much harder to let it go.

None of us has complete freedom of action. We are limited by basic human needs (eating, sleeping); money; time; physical attributes and conditions (appearance, intelligence, abilities); and opportunities. It is how you relate to your limitations, including chronic pain that determines whether they make you feel like a victim.

There seem to be some people who resist playing the victim even under extreme circumstances. For example, consider the story of Nelson Mandela. Unjustly imprisoned for twenty-five years, he forgave his captors and went on to become a gracious statesman. Helen Keller, blind and deaf, became a celebrated author, political activist and lecturer.

Choosing to Remain a Victim

Being a victim is one of the deepest rooted and powerful of human behavioral patterns, one that is dramatically reinforced in the presence of chronic pain. Consider the advantages:

- Others expect less of you
- You expect less of yourself
- You have a feeling of power, which masks the feeling of anxiety
- It gives you a sense of entitlement
- You can manipulate those around you

The workers' compensation system often leads a chronic pain sufferer to embrace victimhood. It is real victimhood in the truest sense. In this scenario, you are usually treated terribly and have very little control of the circumstances. The only control you have is to remain in the victim role. If you are angry with your employer, you can really stick it to them with the cost of your medical care. Why get better? No one really seems to care. However, choosing victimhood instead of attempting to get better doesn't really work. Your employer will survive. Your claims examiner will go to work tomorrow. There is not one person you are really going to permanently harm. Yet you have allowed chronic anger to erode your quality of life.

Part of being able to emerge from the victim role is understanding its power and resisting it.

Validation

Another common aspect of playing the victim role is the need to be validated. If there's no identifiable source of pain on a test, patients feel that no one believes their pain is real. They become understandably obsessive about the possibility that something serious has been missed. They often push hard for surgery even if the chances of success are slim, just to feel validated. A scar on one's back is strong evidence of suffering.

The patients who need to be validated are my most difficult cases. They are so wrapped up in being "right" that it's difficult to reach them. Sadly, their all-consuming preoccupation has usually made their lives -- and those close to them -- miserable.

Perfectionism—The Ultimate Victim Role
Perfectionism is an additional – perhaps less examined -- way that people fall into the victim role. Many hold perfection as the standard that must be reached in order to be successful. However, since perfectionism is unattainable, you'll suffer endless anxiety about not reaching it. You may label yourself a "failure" and look for someone or something to blame. Passionate anger about the injustice of not attaining the perfection you deserve fills or covers up the gap between perfection and reality. You become a victim of being "less than perfect."

In the context of chronic pain, it's particularly important not to expect a return to some perfect ideal. You may not be as active or productive as you were before the pain started, but this shouldn't be a concern. Instead, simply focus on improvement -- becoming more functional -- one day at a time.

Victimized by Pain
Being a victim of chronic pain is a different level of victimhood. Not only do you feel wronged, but you are also experiencing an often excruciating physical sensation. The inability to escape pain, as discussed in Chapter 4: Anxiety, elicits an intense feeling of victimization.

To understand this concept, consider that each of your body's senses is designed to protect the nervous system. If you see a threatening object, you get out of the way and feel safe. If you smell leaking gas, you get out of the house and feel relief. If you touch a hot stove, you withdraw your hand and avoid a worse burn. But with chronic pain, you can't take any action to separate yourself from the pain. You have no control. There's nothing you can do to feel safe, or relieved, or lucky for limiting the pain, and this leads to severe anxiety, then anger and even rage.

One Final Word About Anger

The best you can do with anger is to recognize when it is interfering with your quality of life. The paradox of holding onto anger is that whoever or whatever caused your anger has complete control over you. Why are you allowing that person or circumstance to have that kind of power?

There is a famous quote by Oscar Wilde, "The most annoying thing you can do to your enemies is to forgive them."

If you are a victim of chronic pain, and you're angry, the best gift you can give yourself is to learn how to process it, let go and truly move on.

Chapter 7: Anxiety and Anger

In the two previous chapters we discussed the roles that anxiety and anger play in chronic pain. Now let's look at the connections between the two. Anxiety and anger are so closely intertwined that they can't be treated alone. Understanding this interaction is essential to calming your nervous system.

Anxiety and anger are both connected to the survival instinct. Anxiety makes us feel vulnerable and helpless. The survival instinct leads us to mask this feeling with anger, which makes us feel powerful and purposeful instead of helpless.

Anger, however, is not an antidote for anxiety. In addition to masking anxiety, anger also reinforces it. When you're angry, a barrage of irrational thoughts follows. Anger is the turbocharger that gets your negative circuits really spinning. So at the same time that anger covers up the feeling of anxiety it is strengthening these anxiety – producing neurological circuits. It's a deadly cycle.

The interaction between anxiety and anger makes treatment challenging. To focus on dealing with your anxiety, you're being asked to give up your anger and victimhood. Without anger to mask your sense of helplessness, however, it's hard to confront your anxiety. Raw anxiety is a very unpleasant feeling. It's what all living creatures have been programmed to avoid. That may be why many people don't confront their anxiety until it's so extreme that it can no longer be contained by either functional or dysfunctional means.

For years I didn't recognize my anger at all until my personal circumstances got so bad that I came face to face with it. Anger was one of my definitive patterns. When I hit my core anger, it was like an oil gusher. It did not feel good or cathartic in the least. It felt dirty, noxious, and despicable. At that point I'd had success in dealing with my anxiety, but not my anger. My unrecognized anger was an incredible drain on my energy level. It was only by becoming aware of my anger and victimhood and addressing it that my life could change. I sometimes fall back into that role, but now I have the tools to quickly come out of it. It has been sobering to realize how much of my life I spent in that mindset. Now I feel much more free.

It's not uncommon for people to deny their anger issues. In fact, the ability to hide your anger from yourself is astounding. I often have patients who insist that life is otherwise great except for their chronic pain. Anger keeps emerging in comments like, "the doctor did the wrong operation" or "how could I have undergone so many operations that haven't worked." The emotional tension is clear to me, but they really can't see it. The elephant in the room is that their chronic pain is not compartmentalized. It resonates through their lives as a disability accompanied by anxiety, anger, and general unhappiness.

Remember that the anger associated with chronic pain is the result of being a "real" victim of very real pain. It's extremely difficult to let it go. It's crucial, though, to acknowledge the condition and come to terms with it in order to move forward with your recovery. Anxiety's symptoms are more readily apparent and more commonly treated and yet it's necessary to treat *both* emotions. Even if you're able to decrease your anxiety independently, if you're still angry, the anger will magnify whatever anxiety is left.

In dealing with your anxiety and anger, it's best to treat your anxiety first. If you start with anger instead, the level of anxiety you uncover may seem unbearable. Once

your anxiety is at a reasonable level, you can move on to acknowledging and addressing your anger and frustrations.

As you progress in learning and using the methods that are the most suited to your needs, the relationship between anger and anxiety will become clearer. Truly engaging in the process is difficult but extremely rewarding. It will transform your life.

Chapter 8: Reprogramming

Take a moment to think about the stresses of everyday life, and your related thoughts. "I'm exhausted." "This traffic is awful." "There's not enough time in my day." Then notice how much your life is affected by these thoughts and their repetition. They certainly don't lift you up. Add in a situation where there's a crisis and your feelings are incredibly magnified. Chronic pain is a crisis state.

In earlier chapters we talked about how, when you're in chronic pain, repetitive negative thoughts course through your brain and nervous system on a continuous loop. This is a mental health issue that you might think would be best treated by traditional psychology. But while a psychological approach can be helpful in some cases, simply analyzing your particular problem has a tendency to merely reinforce it. With chronic pain it's much more effective to think of your problem as a "programming" issue. With programming, you can take charge of the way your brain processes new information.

To understand how programming works, first consider that it starts in the initial ten to twelve years of life when our brains absorb everything in our environment. Negative behaviors and attitudes from our parents, friends, teachers, advertising, etc. seep into our consciousness. We also adopt labels, some of them negative, for almost every component of our lives, including ourselves. Once the negative labels are there, they evolve to become our "stories."

You also have a story about chronic pain, which differs from your other stories in that it's associated with a physical sensation. This association makes the story particularly intense. The sensation sparks negative thinking, which reminds you of your pain, which brings you back to your negative thoughts, and so on, creating a new neurological pathway that is reinforced with repetition.

As we covered previously, it's not helpful to cope with repetitive negative thoughts by suffering, suppressing them, or masking them with obsessive behavior. To really break the cycle, you have to reprogram your thoughts. In my experience with thousands of patients, it's the only method that works.

Our brains are complex computers that are programmable. To effectively take part in the reprogramming process, it's critical to understand that we can control it. First, you have to become familiar with all the programs that are running in your brain. This involves breaking down the defenses that are keeping your story about chronic pain beneath the surface.

There are three phases to breaking down your defenses: 1) increasing awareness of the thought or pattern of thoughts that incites your pain; 2) detaching from the thought; and 3) burning a pathway of new and different thoughts.

To become more aware of your thoughts, you have to identify the actual stressor. This may seem obvious: "My son got his girlfriend pregnant. That is what's causing my stress." However, it's more complicated than that. By stressor, I'm referring to the specific aspect of the situation that's causing you to feel upset. Your son did not physically harm you. And it shouldn't be a surprise that teenagers engage in sexual activity. Has he upset your image of the perfect family? For some cultures this situation wouldn't be a problem. The bottom line is that you are working from your *own* frame of reference.

It isn't a matter of being right or wrong, but rather realizing that if you are feeling stressed about a situation, it's critical to step back and look at it more closely.

The simplest way to increase awareness of why you are stressed is to describe in writing both the situation and exactly how it makes you feel. Or you can use meditation, or talk to a counselor, confidant, etc. Doing so will allow you to separate your reaction from the event. Remember, there's the situation that might be upsetting, there's your reaction, and there's you. By separating the components you can consider things more clearly.

Note, engaging in the writing process has a tendency to cause anxiety. By acknowledging your thoughts and feelings, you may be tapping into some deep-seated issues. However only by going through the process can you move forward with your recovery and come out on the other side.

The next step in the process is to detach from your negative thoughts. By detaching and learning not to respond to them, they will eventually lose a lot of their power.

As with increasing awareness, one of the best ways to detach is by writing. Start by writing down the effect the negative thought is having on your quality of life. For example, if you are upset that your son got his girlfriend pregnant, consider how your state of mind will affect your family's interaction. Thinking about the effects will likely help you decide to not remain in that frame of mind.

Detachment via meditation involves watching thoughts come in and out of your mind and learning not to respond to them. You observe the thoughts as a separate entity without reacting.

A third way to detach is to envision a negative thought and connect it to an unpleasant physical sensation, a method originated in an 8-day experience called the Hoffman Process.

The final step in reprogramming, etching a new pathway, creates circuits in your brain that are more functional and appropriate to a given situation. For instance, a father with a teenage son with a pregnant girlfriend would say, "This situation is challenging but I love my son and will support him whatever he decides to do. I will not let this negatively affect our relationship and family dynamic." This process is much different than positive thinking, a common method employed to suppress negative thoughts.

I often use this metaphor with my patients: Picture your brain sitting on a table with billions of pathways etched into it, many of them very strong. Imagine trying to suppress all of this activity. You can't cover it with a "blanket" of positive thinking and expect to change it in any life-altering way.

Now picture a second brain that's almost a new model. You can engrave new pathways into it that are more functional, but it takes repetition and commitment. This process is much more proactive than simply analyzing the old brain. As you create your new reality, the new brain will become more active and the old brain will begin to atrophy. Now picture a brain in twelve to eighteen months that is vibrant, creative, and in charge. You no longer have to fight with your old neurological pathways.

By fully engaging in the reprogramming process, your anxiety/anger/pain will no longer be running your life. You can employ the tools on an ongoing basis, as needed, to remain in charge of your wellness and maintain your ability to live your life fully.

Mainstream psychology and psychiatry are currently the most common ways to deal with mental health issues, including those associated with chronic pain. However, I think that we should undergo a major paradigm shift in conceptualizing mental health. For treating something like chronic pain, which I believe is not unlike an obsessive disorder, reprogramming is much more useful.

Chapter 9: Awareness

By now we've established that anxiety and anger are major aspects of the chronic pain experience, but awareness of your surroundings is another element we've yet to explore: Anxiety and anger cloud your awareness of what's going on around you and limit your ability to interact with others. In this state, your mind is full of racing thoughts and vivid imagery and it's hard to focus on anything but your pain. This can make it challenging for friends, family, coworkers – anyone – to connect with you. If you're touchy and constantly on edge, it's exhausting for others to be in your presence. Having a good support system is an important part of your recovery from chronic pain because positive relationships have a calming effect. That's why it's critical to become more aware of your thoughts, emotions, words, actions, and reactions. What you are not aware of can and will control you. Understanding how anxiety and anger narrow your awareness and affect your relationships will help you to keep those external channels open. You can't eliminate anxiety and anger completely, but awareness will help you prevent them from running your life.

Meditation

Meditation strengthens awareness. In meditation, you use various methods to connect fully with the present moment. One technique is to focus only on your breath, becoming aware of as many aspects of your breathing as you can. Various distracting thoughts will enter your mind. You watch them enter your consciousness and then watch them leave. The goal is to not to ignore these thoughts, but to learn not to react to them. This is the process of detachment. After the momentary distraction, you pull yourself back to your breathing as quickly as possible.

When you meditate, you don't slow down or control your racing thoughts. Instead, you "de-energize" them and so that they have less control over you. As you develop the ability to stay in the present moment these thoughts become less relevant and decrease—often dramatically. The key is to not try and edit, fix, or control the thoughts; this will only strengthen them.

Awareness

I look at awareness from four different perspectives:

- Environmental awareness
- Emotional awareness
- Judgment/Storytelling
- Ingrained Patterns

Environmental Awareness

Environmental awareness is using meditation to be fully aware of your senses as you go about your day. I've found that engaging in environmental awareness makes me more attuned to each of three other types of awareness.

Being aware of your senses grounds you in your environment and has a calming effect on your nervous system. It also makes you more sensitive to different emotions that you're feeling. If you're not plugged into your own environment, you can be pushed around by your emotions and not realize how they're negatively affecting your day.

I personally practice "active meditation," a process that has enabled me to be a calmer person and more effective in my job. Active meditation is different from the most well known type of meditation, where you typically go some place peaceful and quiet. In active meditation, you focus on your senses as you go about your day. In the morning, I spend the first couple of hours paying attention to sounds, smells, and sensations. I feel the water on my back in the shower. I smell the coffee brewing. By the time I'm at work and starting surgery, I am fully focused on what's right in front of me.

You can also choose to tune in to just one of the senses. When I do this, I focus mostly on sound. By actively listening to the sounds around me, I am pulled right into the present moment and feel more at ease.

Suppose you were talking to someone and anxious about what they might be thinking about you. Imagine you then tried listening more carefully to their tone of voice and background sounds. If you did this, your brain would focus more on the sounds, and shift away from your feelings of anxiety. This is not suppression of thoughts, but rather "redirection." If you try to suppress the negative thoughts they just become stronger and you become much less aware.

The Hurricane

There's a metaphor for the effects of active meditation that I call "the eye of the hurricane." Thinking of it has helped me to increase my awareness and remain in a peaceful state of mind. In a hurricane, the winds are strongest at the periphery but the eye is quiet. In my mind, the whirling winds represent my repetitive racing thoughts. If I try to slow down or ignore the thoughts, I use up a lot of energy and am unsuccessful. But if I become aware of my senses, I can pull myself into the peaceful center of the storm and watch the thoughts race. This allows me much more energy to experience and enjoy my day.

The same metaphor works for any situations that arise throughout the day. Most of our lives have uncontrollable circumstances that whirl around us. Yet we spend a lot of time and energy trying to control them. It takes a lot of effort to try to stop a hurricane; you're not going to win. If you can again pull yourself into the center where's it calm and deal with one issue at a time, you'll find more internal strength. By becoming fully aware and centered, you can be at peace.

Emotional Awareness

In the presence of chronic pain, connecting with your emotions is particularly critical. If your emotions are out of control they will inflame your pain. Ideally, we would all be aware of our emotional states at any given moment, but there are several obstacles impeding emotional awareness. First, we don't start from a neutral position, but rather live in our own frame of reference. If, for instance, you were raised in an anxiety-ridden abusive household, anxiety is your normal emotional state. Until your anxiety spins out of control, it's hard for you to be aware of how much it drives your behavior. Second, none of us likes to experience negative emotions. So we tend automatically to deny or suppress such emotions rather than coming to terms with them. Third, many of us find distractions to avoid really becoming aware of what is difficult.

It takes courage to identify your negative emotions. This is particularly true if you're feeling like a victim. "Victim" has a lot of negative connotations. Yet it's a universal part of the human experience.

In addition to active meditation (see above), the best way to connect with your true emotional state is to practice some form of self-discovery. The writing exercises suggested in this book (see Chapters 8 and 10) are remarkably effective in connecting you to what you're really thinking and feeling. Once you get in touch with what's going on in your mind, it's a very powerful journey. You can also connect with your emotions via self-help books, counseling, meditation, seminars, retreats, etc.

Most of us spend a lot of emotional energy trying to look good to people around us. We also spend a lot effort looking good to ourselves. Embarking on a journey of truly connecting with your emotions is an act of humility. Most people just don't want to do something so difficult and unpleasant. However, it's also extremely rewarding. It helped me to recover from my own chronic pain.

Remember from Chapter 4: Stress Management that as long as the drain of anxiety and anger is open you will be constantly "bailing out" your boat. Plugging that drain results in a dramatic increase in the energy you need to create and live your life. Becoming aware that you are anxious or angry is the first step.

Judgment/Storytelling

A third level of awareness revolves around judgment and storytelling, which can ramp up your emotions in any given situation. On this level, you create a "story" or judgment, about yourself, another person, or a situation. These judgments tend to be criticisms that are rough and inflexible.

We can categorize our judgments into ten "errors in thinking" outlined by David Burns in his book *Feeling Good*. When we make these errors, we create "stories" out of circumstances that are often or usually non-events.

For example, imagine someone at work walked by you and didn't acknowledge you. You might think they're upset with you about a situation that occurred the day before. The error in thinking would be "mind reading." You really can't read other people's minds -- it's possible that that person had just received some bad news and wasn't engaging with anyone. But you don't really know. If you make assumptions, you're wasting a lot of emotional energy.

Then there is the error of "labeling." For example, a frequently late spouse becomes "inconsiderate." A forgetful teenager becomes "irresponsible." In the act of labeling, you're overlooking others' good qualities, limiting your capacity to enjoy being with them.

Then there are the labels we have for ourselves: you make a mistake at work and call yourself "stupid." In addition to labeling, this error in thinking is "should" thinking. If a lover breaks up with you, then you're "unlovable." Rehashing these critical judgments in our minds turns them into deeply embedded stories. Such stories are much harder to move on from than single judgments. Once a judgment sets into a story, you tend to lose all perspective. Over time, faulty thinking can become your reality.

If you understand more clearly when your awareness is being distorted by a particular mindset, it's easier to restructure your thinking. Recognizing your errors

in thinking puts you more in touch with your emotional state and helps you to avoid unnecessary anxiety and frustration. It's a vital part of retaining your peace of mind.

Ingrained Patterns

The behaviors we develop over a lifetime of exposure to our environment are what I call ingrained patterns. They stem from the fact that our brain is somewhat hard wired during our formative years. For any given person, certain situations will elicit a fairly predictable response that's based on their family upbringing. We don't think about these behaviors, it's just what we do.

These patterns are generally much more obvious to our family members and close friends than they are to ourselves. As with emotional awareness, the best way to recognize and deal with our ingrained patterns is through self-discovery. It's not an easy process, but doing so will lead to greater awareness and greater ease with you.

<u>Unawareness</u>

As discussed, we all look at life from our own frame of reference. This makes it difficult to become aware of our own "unawareness." However, considering things from a different perspective is much more interesting than continually imposing your point of view on everyone around you.

Certain behaviors and attitudes can clue us in to our "unawareness" on a day-to-day basis. There are cues that may mean we're out of touch with how we're feeling. Some examples:

- Having a rigid opinion about almost anything: religion, politics, someone's character, etc.

- Being told you are stubborn or "not listening"
- Interrupting someone to offer an opinion before you've heard theirs in total

- Insisting on being right
- Thinking about something besides what you are doing
- Judging yourself or others negatively or positively
- Feeling anxious or angry (once these feelings have been recognized and acknowledged in your life)

This list is infinite. If you notice more than one of these, it's probably time to take a step back and connect to your emotions so that you can respond appropriately to a given person or situation. This is the essence of awareness.

Final Thought

I'd like to leave you with one final idea regarding awareness: It is the antithesis of positive thinking. If a situation is bad, it is bad. If your pain is there, it's there, and it's interfering with your quality of your life. Deluding yourself that things are OK is usually detrimental to your mental health. In the awareness model you become fully aware of the symptoms, the emotions, and the stories in your head. You don't try to fix or change any

of it, you just don't let your emotions control your actions. You then have the ability to engage in the tools to reprogram your nervous system.

Chapter 10: Solving Stress: the Homework

At this point in the DOCC program you and your doctor should have worked out your sleep issues and adjusted your medication. You've also set goals for rehabilitation. The next phase is stress management, which we've discussed in earlier chapters. Stress management calms your nervous system and gets you ready for successful treatment in physical therapy. To review, the most important stress reduction techniques are reprogramming, meditation, and awareness. Implementing them can improve your life dramatically over time. In this chapter I present these techniques in a set of "homework" exercises to help you practice your new coping skills on an ongoing basis.

Homework Part 1: Anxiety

<u>Writing: Step One</u>
As discussed in Chapter 8, writing is an extremely effective way to process anxiety. Start by simply writing down a negative thought. The idea of this exercise is to heighten your awareness of the thought so that you can then better process it. It's helpful to express yourself and reflect. The overall goal is to:

- create a new different neurological pathway;
- establish a "space" between you and the thought; and
- slow down the circuits spinning in your brain.

After writing down the negative thought, throw the piece of paper away. This is not to "get rid of the thoughts," as they'll recur. Rather, it represents the fact that the thought is not your identity. You can write down any bizarre, unspeakable, and unacceptable thing in your mind, and it is just a thought.

Many of my patients are hesitant to write down dark thoughts because they think it makes them a bad person. But it does not mean you're "evil" – quite the opposite. The stronger your morals, the more likely you are to place judgment on your own dark thoughts. There's no need to suppress your dark thoughts -- they have nothing to do with who you are. You are not your thoughts.

Remember from the Harvard "white bear" experiment (see Chapter 5) that the more you suppress your thoughts the stronger they will become. In trying to deny dark thoughts, you're only strengthening them and giving them power. It's also a tremendous drain on the energy you need to live a satisfying life.

<u>Writing: Step two</u>
After you've developed the habit of writing down your negative thoughts on a daily basis and throwing them away, I recommend consulting the book, *Feeling Good* by David Burns. It's a volume of hugely effective cognitive therapy techniques that I've used with most of my patients.

Remember, there are three parts to reprogramming your nervous system (see Chapter 8). First, you must become aware of your negative pattern of thinking. Next, you detach from the negative thought or pattern of thoughts. Finally, you engage in a specific reprogramming method.

One of the most useful reprogramming techniques is Burns's "three column" method. In the first column you write your negative thought, which he calls an "ANT." This stands for "automatic negative thought." Writing it down makes you aware of your problematic thinking. In the second column you write the error in thinking that the thought represents. (Recall this concept from Chapter 9). The errors include "'should' thinking," magnifying the negative, minimizing the positive, labeling, "catastrophizing," etc. By recognizing the error in thinking you now have a chance to re-structure your thoughts. Restructuring is not "positive thinking;" instead, it's what I call connected and engaged thinking. In the third column you write the more rational thought; this is the re-programming step.

For example, imagine that your son flunked a test. Your first response might be, "He is lazy." That goes in the first column. In the second column you'd recognize that your thought is "labeling." In the third column you might write, "My son just flunked a test. There are several possible explanations. Is he being bullied at school? Could he be depressed? I'm going to try to find out what is going on."

The writing technique takes discipline. And the act of writing itself is a must. If you attempt to do the three-column technique in your head, it may make your thoughts spin even faster. In my experience, it takes about three to four weeks of ten to twenty minutes of writing per day to notice any shift in mood and thinking. For a lasting reduction of stress, it takes about twelve to eighteen months. When change occurs, however, it's profound.

Homework Part 2: Anger and Victimhood

We examined how victimhood and anger go hand in hand in Chapter 6. Here, we'll look more closely at how to deal with them together.

Getting in touch with your anger and victimhood takes a number of steps. First, clarify your feelings by identifying the source. Then, acknowledge that you're blaming that person or circumstance for making you angry. Determine whether you're a true victim, or if your feelings are based on your own perception (for examples, see Chapter 6).

Next, try to understand how you may be disguising your victim role to yourself and to others. Common disguises include insisting on being right, feeling sorry for yourself, and pretending to be cool and calm. These disguises lead you to avoid confronting the true sources of your anxiety, victimhood, and anger. Note when you're acting this way and write it down so that you become more aware of your cover-up strategies.

Once you understand the intensity of your anger and how often you play the victim, it's easier to choose not to be a victim anymore. If you're consistently honest with yourself about when you're embracing victimhood and the sense of helplessness that goes with it, you're more likely to escape it by using the tools we've discussed here.

Writing helps you to process your anger without damaging your close relationships. You can't improve a relationship or rationally solve a problem when you're angry. An alternate reality snaps into your brain and you're unable to see the situation clearly. You can do significant damage, even if you try to apologize later. Instead of expressing your anger to the person you're mad at – which never resolves the problem –

step back and decide to deal with it later. Then, as soon as you can, go through the process of writing down your angry thoughts. You can write random words, sentences, stories, feelings, and actions. Anything. Don't stop until you have calmed down.

Less Effective Ways of Reducing Anger

Positive Thinking

We are a culture of positive thinkers. We've been taught to "think on the bright side" and "pretend it's not bothering you." However, you can't positively think yourself out of a noxious physical sensation such as chronic pain. Suppressing your anger by trying to think positively will only cause it to become stronger.

Extreme Belief Systems

I have sometimes seen patients try to suppress their anger by adhering to an extreme belief system, such as religion, politics, or nationalism. It's as if they hope to crowd out the emotions aroused by chronic pain by embracing an emotionally charged passion for something else. However, passionate assertion of extreme beliefs – which often includes intolerance for those who don't agree with you -- is actually thinly disguised anger. I have never seen anyone improve his or her life, function, or chronic pain by seeking something else to be even angrier about.

Homework Part 3: Awareness

The next step of your homework is to more fully engage in the awareness process, as discussed in Chapter 9. Awareness is not a substitute for daily writing. Rather, it's a tool that you can use to reduce your stress and keep yourself grounded in the present moment.

Practicing "active meditation" (Chapter 9) throughout the day will help you to focus on whatever you're doing. It also makes you more aware of your emotions and how they're affecting your day. The more you practice these methods, the better you'll become at implementing them.

Note, in my experience, it's best to deal with your anxiety and anger before fully engaging in active meditation. Meditation can be extremely effective, but if you're anxious and angry, your meditation techniques will only mask these feelings instead of actually calming your nervous system.

Homework Part 4: A New Life

Once you've developed good reprogramming methods and awareness/meditation skills, you should start to feel less anxious and more in control. I have seen thousands of my patients use these stress management techniques to become more calm, more functional, and better able to cope with their chronic pain. When you're able to more fully engage in life, you should have the energy to make major life changes. These methods saved my life.

Visualization

One way to help create a more rewarding life is through visualization. The following method will provide a basic idea of what's involved.

If you're in chronic pain, you may've forgotten what it's like to live your life with deep joy and excitement. To get back in touch with these feelings, find a quiet place and think back to the time in your life when you where the happiest. Try to remember every detail. Then compare it to your present life and note the differences. If you can see what you want to change – visualize what you want to reach, then it becomes easier for you to develop a plan for getting there. Repeat the visualizations often enough that they become the focus of your direction in life.

There are many other visualization techniques. I suggest researching them and finding one that is right for you.

Hoffman Process

The Hoffman process is an intense eight-day program that has been pivotal in my ongoing efforts to live a fully engaged life, free of chronic pain.

According to the Hoffman theory, a child instinctively mimics his parents' behavior in order to receive love, care, and attention. It is a basic survival skill. Hoffman's process teaches how to recognize these patterns, disengage from them, and create more functional pathways, much like the reprogramming techniques covered above and in Chapter 8. Hoffman tools allow you to see yourself separately from your upbringing and begin to choose your life path based on your own values.

If the Hoffman process is available to you, I recommend taking it – many have found it to be a profound and life-altering experience.

Homework Summary

As you try out the homework exercises and become more familiar with them, figure out the set of tools that works best for you and use them on a regular basis. Otherwise you'll quickly slip back into your habitual patterns of behavior. Mark this chapter and the goal-setting section of Chapter 3 as references that you can turn to at any time.

Some of these stress management concepts are significantly different from the usual ways we have been taught to deal with adversity. For example, we're not commonly taught to write down our negative thoughts. It may be difficult to imagine incorporating these practices into your routine. Once you've engaged in them, however, you'll experience dramatic changes. Your suffering will diminish and you can live a much more satisfying life.

Chapter 11: Rehabilitation

When I see a patient with low back pain, I always ask if they've had physical therapy, and then I ask what kind. Frequently it's been limited to some ultrasound, heat, ice, and light massage. Vital aspects of the process have been overlooked. In some cases, there's been no evaluation of lifestyle, environment, and other factors that affect spinal health. In other cases, the therapist has taught the patient nothing about the anatomy or function of the spine. My next step is to send these patients to a therapy group that does cover all of the bases. Where a soft tissue, or non-structural, injury is concerned, comprehensive physical therapy is crucial.

The quality of your physical therapy plays a key role in your recovery from chronic back pain. Many patients have inadequate physical therapy services and conclude that therapy has "failed" when they haven't really given it a chance. They become frustrated at the lack of improvement and opt for surgery when it may be unnecessary.

This chapter will equip you to evaluate the quality of the therapy you're receiving, right from the start. If you don't have confidence in your therapist, it's important to seek out a different one. Your physician may be able to help with another recommendation. If he or she seems unconcerned, don't be afraid to look for another doctor as well.

Stress Management and Physical Therapy

Stress management goes hand in hand with effective physical therapy. Before you start physical therapy, it's critical that you a) are fully engaged in stress management and b) have experienced a significant decrease in your stress level. Vigorous manipulation by your therapist will increase your pain, sometimes dramatically. Therapy must be aggressive in order to help heal soft tissues (muscles, ligaments, and tendons). If you have a fired-up nervous system, manipulation of your muscles may be so prohibitively painful that it creates a setback in your recovery. Stress management calms your nervous system so that you can handle therapy with the least amount of pain possible.

Desensitizing the Soft Tissues

Injury makes the soft tissues in your lower back highly sensitive. The goal of physical therapy is to desensitize them. This also helps to relax the nervous system.

When you have a back injury, it's natural to become anxious about it and to try and protect the injured area by using it less. This makes the tissues stiff so that movement exacerbates your pain, especially if your muscle or ligament is stretched too quickly or with too much force. This leads you to use the injured area even less, leaving it stiffer and even more prone to cause pain. The cycle can run indefinitely.

Physical therapy eases pain in two ways. First, the therapist stretches the soft tissues as far as possible before the pain fibers surrounding the soft tissues are stimulated. Then, to decrease sensitivity of the nervous system, the therapist uses massage to stimulate the pain fibers at a tolerable level. Typically, this hurts, but there's no way

around it. Gradually, however, the pain will diminish with repetitive stretching and controlled stimulation.

The Basic Components

Education

To get the most out of your physical therapy, it's important to become fully aware of *all* physical aspects of your spinal care. A given round of physical therapy may solve a specific episode of back pain, but it's by understanding the full context of your problem that will keep you from having the same injury again.

Education about your spinal care should include an overview of spinal anatomy by your therapist. There are also many resources you can consult on your own – books, websites, etc. By becoming comfortable with the technical language you can communicate with your therapist more clearly.

The second step is to understand how specific movements such as bending and lifting can potentially strain and injure the soft tissues that support the spine as well as the discs inside your vertebrae. By understanding the principles of how your back works, you can develop new habits that help you to avoid injury. It's much more effective than trying to memorize a list of what you can and cannot do.

Finally, you need to identify and communicate with your therapist about which aspects of your lifestyle are potentially irritating to your spine. Be as specific as possible. Working with your therapist, you can develop specific strategies for safely performing the related activities.

Assessment

On your first visit to physical therapy, your therapist should perform an extensive assessment of your:

- Posture
- Spine flexibility
- Soft tissue tenderness
- Hip, knee, and ankle flexibility
- Tolerance for pain

A thorough assessment will help your therapist pinpoint any imbalances in your muscles or ligaments. With back pain, there's often too much focus on the spine and the real, indirect cause of the pain – in another part of the body -- is missed. Imbalances are frequent and must be recognized in order to initiate a treatment plan specific to that area.

Long-term Conditioning Program

It's critical to become physically fit to relieve your chronic pain in either the short or long term. First, incorporate what you learned from your therapist (and your own research)

about posture and body mechanics into your daily activities. This will prevent you from re-irritating tissues that you've finally persuaded to calm down.

Next, focus on exercises to strengthen your core, or "trunk" muscles, which are the main support for your spine. Your abdomen muscles provide about 40% of the support. The stronger these muscles are, the better your spine health.

You should be working out at the gym doing cardio, weights, and resistance training from three to five hours per week, minimum. Some limit their workout to cardio alone, but weights and resistance training are a must in order to build up and retain your strength. This is especially important for people over age 45. After 45, you lose about one percent of your muscle mass every year. But with weight training, you can prevent it.

Many patients tell me that they don't have time to work out, but if your life has been torn apart by pain, then it's worth the effort to improve it.

Summary

One result of being proactive about stress reduction is that you can better engage in physical therapy. The core of the DOCC program is calming the central nervous system with stress management. You should pay equal attention, however, to the process of physical therapy. Become an active participant in your physical therapy by asking the right questions and setting up your own long-term plan.

Reducing stress will also give you more mental energy to commit to exercising. This will help you to recover more quickly and prevent the recurrence of injury. Your quality of life depends on it.

Chapter 12: Spine Surgery—State of the Union

Some aspects of chronic low back pain remain a mystery, but there are many things that we *do* know. This chapter highlights the contrast between the kind of spinal care we as a surgical culture should be practicing, given our knowledge, and what's actually being done. Based on what's been covered in earlier chapters, we know that surgery for non-specific (aka non-structural) low back pain usually doesn't work (see Chapter Two). (Non-specific pain usually stems from an injury to the muscles and ligaments surround the spine.) With this kind of pain, the exact diagnosis is known only about 15% of the time. Nonetheless, hundreds of thousands of surgeries are performed annually on these patients, with mostly negative results. My goal here is provide you with enough information so you can make a better shared decision with your doctor about surgery.

What Do We Know?

The number of spinal fusions performed in this country has skyrocketed in recent years largely due to advances in surgical technology. Around 1995 there were about 100,000 fusions performed annually. By 2001, it had grown to about 200,000 per year, and by 2007 the number had ballooned to more than 500,000. A large percentage of these were performed for non-specific low back pain.

Unfortunately, one commonly cited reason for doing a fusion is misguided. Many patients have been told that their degenerated discs warrant a fusion. However, disc degeneration is merely a normal part of aging. Multiple studies have shown that there is very little--if any--correlation between degenerated discs and low back pain.

We also know that in some cases, a spinal fusion can lead to other major structural spinal problems. Thirty to forty percent of patients experience a breakdown in their spine around the fusion within ten years. In addition, it's been shown that repeat back surgeries (which are quite common) do poorly.

Stress factors such as history of abuse, depression, and involvement in the worker's compensation system are known to be a better predictor of surgical outcome than your actual anatomical problem. However, psychosocial stressors are often not taken into account by surgeons performing fusions. Studies have also shown that surgeons estimate their patient's stress level correctly only 25-45% of the time. In the presence of chronic pain almost everyone has a significant degree of frustration that needs to be taken into account.

In contrast to the fusion, it's been proven that structured rehabilitation, as in the DOCC program, is highly effective for patients with non-specific low back pain (LBP). One study showed that structured rehab for low-stress patients with non-specific LBP was successful 76% of the time.

What Are We Doing?

Patients are commonly referred to surgery for non-specific LBP because non-operative care has "failed." Usually this means that there's been no decrease in pain after a series of haphazard treatments. The trouble with this scenario is that while surgeons are often the ones making the call re: failure, they typically have little training in non-operative care. For instance, they might not recognize that a succession of random treatments is essentially *non*-treatment.

Many major spine centers are aggressive in the number of fusions they perform for non-specific LBP. Residents and fellows specializing in spine care come out of training viewing the fusion as one of their main tools. But they have not witnessed the long-term results of these operations.

When I came out of my own training, I spent almost eight years diligently performing fusions for non-specific LBP. I felt bad if I could not find a reason to perform surgery. I stopped doing fusions for non-structural injuries after I saw that it doesn't usually work and the subsequent structural problems can be monumental. I now feel that the potential downside is bigger and more predictable than the possible benefits.

Patients with non-specific LBP usually don't understand this possible downside of a failed back surgery. They think that surgery will "fix" their pain, and indeed, they may experience some relief for six months afterward. However by the two-year follow-up point, the pain relief is usually only around 25% compared to their pre-operative pain. There is typically only a marginal increase in function and around a 20% decrease in depression. That means they've endured all the extreme stress of surgery – pain, lengthy recovery, and time out of work – for minimal improvement. In fact, often it makes things worse -- the disappointment of a failed surgery exacerbates the pain. What's more, if there's a breakdown around the fusion, it can be debilitating. A significant part of my practice is spent trying to salvage these situations.

A Flawed System

The intent of this chapter is not to condemn a given individual surgeon or groups of surgeons for performing spinal fusions. When I first started practicing, spine fusion technology was improving and I never considered that a fusion would be ineffective. I had no concept of how much my patients suffered after they had a failed fusion. The problem lies in our medical system and surgical training.

Insurances, including Medicare, pay for procedures but they won't pay for coordinated care. You can't fault physicians for doing what the system motivates them to do. If the medical establishment provides an incentive for a given type of care, that's what will become available. In the history of commerce, no matter what the area, it's always been this way.

For example, although mental health is a significant part of chronic pain, the current insurance system does not adequately cover even simple psychological interventions. Many plans cover only a fraction of the cost if there's any coverage at all. Consider this – low coverage or no coverage -- in comparison to the reimbursement for a spine injection, which is often over $1,000. The benefit of a cortisone injection in non-specific back pain is negligible over time.

Going Forward

Significant changes need to be made to our national spinal care system to provide patients with better care. Medical schools should educate their students about chronic pain and its related issues. Surgeons should be more accountable for the long-term outcomes of fusions. They should also help patients to understand the downside of a failed procedure – often, when I explain the unpredictability of surgery, patients opt not to go through with it.

With structured rehabilitation such as the DOCC program, there is no downside. Good sleep, stress reduction, and the best physical therapy will improve your situation no matter what your individual situation. It's the best path to a smooth and long-lasting recovery.

Notes

Page 1. "With this kind of pain…5% of the time." Nachemson, A. Advances in low-back pain. Clinical Orthopedics and Clinical Research 1985; 200: 266-278.

Page 2. "Studies have also shown that surgeons estimate……25-40% of the time." Grevitt, M., et al. Do First Impressions Count? A subjective and psychological assessment of spinal patients. Eur. Spine J. 1998; 7:223.

Page 2. "One study showed…successful 76% of the time." Brox, JI, Sorensen,R, Friis A, et al. Randomized clinical trial of lumbar-instrumented fusion and cognitive intervention and exercises in patients with chronic low back pain and disc degeneration. Spine 2003;28:1913-21.

Chapter 13: Do You Really Want (or Need) Surgery?

Many people are skeptical about spine surgery, especially if they know someone who's had multiple procedures with little to no success. However, if done right, surgery can also be seemingly miraculous in relieving back pain. To decide whether you need surgery, you should be aware of the principles that have a major influence on the outcome. For example, based on your health profile and background, you as a patient will fall into general categories that determine whether you're a good candidate for surgery. In this chapter we'll examine how to categorize yourself. Remember, opting to get surgery is *your* decision alone – your surgeon is only making a recommendation.

Conservative Care

A primary factor in considering surgery is whether you've had enough "conservative care" (aka non-operative care). This is an important term in the medical establishment because "failure of conservative care" is the reason most commonly cited for performing a spinal fusion. It means that the patient's non-operative care – usually physical therapy and injections – has been unsuccessful in relieving the patient's back pain. The conclusion is, then, that a fusion is necessary. In spite of the frequent use of "conservative care," however, there's no widely accepted industry standard. As a result, many patients don't receive good non-operative care before taking the drastic measure of surgery.

Here is the medical industry's rough consensus of adequate conservative care for patients who've had persistent low back pain for more than three to six months:

- Six to twelve physical therapy visits
- One to three cortisone injections
- An evaluation by a psychologist who specializes in dealing with pain (this is required by many surgeons but not all)

This de facto standard is problematic since it overlooks the nervous system component of pain entirely. Here is my personal standard of conservative care, which I practice as part of the DOCC program:

- Full night's sleep for three months
- Effective stress management
- Aggressive physical therapy for at least six months, along with a concurrent physical conditioning program
- Short-term medication for insomnia, pain, and anxiety, if necessary
- Specific goals outlined right from the start
- Education about chronic pain, rehab, and surgery

Based on the above criteria, most of my patients with non-specific (non-structural) low back pain will see that they haven't had enough non-operative care yet to take the surgery route. Note -- even if these criteria are met, surgery should only be considered if there is an identifiable structural problem.

The Surgical Selection Process

Your Injury

Other than your level of conservative care, there are two variables that affect the decision to undergo spine surgery—the source of the pain and your current ability to deal with stress.

Defining the source of your pain, as discussed in Chapter 3, is critical. Is it a structural injury, such as a ruptured disc or pinched nerve, that's clearly identified on a diagnostic test (with symptoms that match the known symptoms of the diagnosis)? Or is it a soft tissue, non-structural problem, such as a strained muscle or ligament connected to the spine (which does not show up on a diagnostic test)?

Work with your physician to figure out whether your pain is structural or non-structural. If I see a patient with a severe structural problem, I often perform surgery quickly before starting him or her on the DOCC program. Surgery can work well for a clearly identifiable issue. However, most structural problems are relatively mild and can be treated by doing the DOCC program initially: calming the nervous system and rehabilitating the soft tissues. Often symptoms can be decreased to the point where the potential benefit of surgery is no longer worth the risk.

As we've established earlier in the book, surgery does *not* make sense if your problem is non-specific (aka non-structural). In these cases, I always recommend doing the DOCC program alone, without surgery.

Keep in mind that there is some controversy over the diagnosis of lower back pain – specifically, doctors have different definitions of structural and non-structural issues. For example, many physicians believe that a positive response in a test called a discogram means that there's a structural problem. In the discogram, you're given an injection and a physician observes how much pain the injection causes based on your reaction. If the injection is painful, the test is considered positive – i.e., your disc is damaged.

I spent many years performing fusions for lower back pain based on positive discograms. Eventually, though, I stopped using the discogram. In my opinion, the discogram is way too subjective to be reliable – people have different reactions to pain, and doctors' individual perceptions vary as well. I do not think a positive discogram means that you have a structural injury requiring surgery.

Your Stress Level

The second issue to consider before opting for surgery is whether you're under a significant amount of stress -- either related to your pain or due to normal life stresses (or both). It has been shown in hundreds of articles that your surgical outcome will be compromised if you're stressed out and not coping well.

It's important to not leave the assessment of your stress levels and coping skills to your doctor alone. You should take an active part in it. Physicians can only surmise your internal stresses from their relatively brief interaction with you in their office. Time is limited in a busy clinic and surgeons, in particular, aren't trained to evaluate stress. You can make your own assessment by engaging in the following:

- Evaluation by a psychologist who specializes in chronic pain issues

- Diagnostic testing (Dozens of tests are available, such as the Beck Depression Inventory online. David Burns's books contain self-assessment tests.)
- Your own honest evaluation

Be honest with yourself about whether you're handling stress well or if you feel stretched beyond your capacity to cope. If you're not sleeping well, frustrated, and feeling anxious all the time, you're under significant stress. Surgery is probably not the best path, at least for the time being.

Four Different Categories

Considered together, your anatomical issue and stress level can be combined into four separate patient categories with four different levels of surgical predictability. In the first category, you have good coping skills and an identifiable anatomic problem. Positive surgical results are predictable and surgery is recommended. In the second scenario, you have an identified problem but your coping skills are poor. Here, surgery is often recommended but you would greatly benefit from additional stress management support before, during, and after the surgery.

The third scenario is that you don't have an identifiable source for your chronic low back pain. If you're the type of person who handles stress well, your ability to rehabilitate your spine over an extended period of time will be great. Patients in this group usually don't ask for or want surgery.

In the final situation there is no clear source of pain and you're experiencing extreme life stresses in addition to the stress of chronic pain. In this condition, you're more prone to opt to undergo a fusion. However, the surgical results for this scenario are consistently poor. In my experience, a high percentage of spinal fusions are being performed on this group.

Switching Categories

Unfortunately, I often see chronic pain patients who start off in one patient category and--due to unnecessary surgery--end up in another. For example, suppose a patient with a high stress level (and poor coping skills) with a non-structural injury has a fusion. If the procedure doesn't go well, or if it's has been done unnecessarily (neither uncommon scenarios) the patient will likely emerge with even more pain than before. An unsuccessful surgery is an inherently stressful situation, and so now the patient's stress level goes up and they're less able to cope with the pain. Then, suppose the fusion breaks down around the spine within a couple years. This not only creates more stress, but also leaves the patient with a *structural* injury, which may require yet more surgery, leading to more stress. It's a downward cycle that fuels chronic pain. The ripple effect on patients' lives and families can be devastating. This is yet another reason why it's vital to understand the risks of surgery before deciding whether to go through with it. The downside of surgery can change your whole life.

One Final Word About Surgery

When deciding whether to proceed with surgery, I caution you not to do it because "there's nothing else that can be done." If it turns out that surgery was a bad idea, unfortunately it may've caused irreversible damage. I have learned the hard way that getting into a bad business deal is much worse than missing a good one. Another analogy would be a basketball player who "throws up a prayer." In basketball, there's no harm done if the player misses the shot. With your spinal health, however, a failed, desperate move can have severe consequences.

Breaking down the pain experience into its component parts allows you to make a specific, informed decision. It's a major life step – don't cut any corners.

Chapter 14: The Need to Believe

Throughout the book I have stressed my belief that surgery for non-structural low back pain usually doesn't work. ("non-structural" refers to an injury to the soft tissues – usually muscles or ligaments -- that support the spine.) And yet, hundreds of thousands of patients receive fusions for non-structural low back pain annually. Why are there so many of these operations? First, patients are in so much pain that they want to believe surgery can help them, so they overlook the risks. At this point, they've been given little to no direction by the medical establishment and left with no hope. Any chance of a way out of their predicament seems worth it, no matter what the possible downside. Secondly, there's pressure from patients and referring physicians. Surgeons often feel obligated to "do something" since they are the "final stop." Finally, much of the medical community believes that the surgery is warranted. They think they have the research to back it up: several studies show that fusions can work for non-structural low back pain. In my opinion, though, these studies are less than reliable, especially given the risks associated with fusions.

Worth the Risk?

One of my concerns with patients who are considering surgery for low back pain is that they're not being given a full picture of the risks involved. When a patient is offered a spinal fusion, it's typically implied to him or her that there's a 70 to 80% chance it will be a success. In other words, there's a good chance they'll emerge almost pain-free. However, there's little consistent evidence to support that success rate.

Even if the success rate were 70%, would surgery be worth the risk? Many patients say yes – they're in so much pain; they feel they can't turn it down. They desperately want to think it will work. In my experience, though, most patients and many surgeons don't really comprehend how bad the downside of a failed spine surgery can be. This is one of the core reasons that I am writing this book.

I've had a few patients say that even if the success rate is only 10% they still want the operation. If I point out that the chance of failure is 90%, though, they think about it a little differently.

If surgery doesn't go well, it can lead to more procedures and more pain. If none of the subsequent procedures work, it can be disastrous. The "disaster factor" has to be fully understood before making the decision to undergo a fusion.

One Patient's Story

Gordon was a young 25 year-old steel worker who ruptured a disc in his lower back, which caused sciatica. He had a discectomy for the sciatica but was still experiencing low back pain so severe that he couldn't return to work. His doctors couldn't locate the source of his pain so I would consider it non-structural. After two years of physical therapy, he was still in pain and extremely frustrated, understandably. He elected to undergo a fusion.

This first fusion was the start of a long and painful two decades for Gordon. There were so many complications that by the time he saw me at age 48, he'd undergone nineteen operations and was on high dose narcotics. His fusion now extended from his neck to his pelvis. He'd never returned to work.

I was able to perform a series of operations that restored Gordon's posture and greatly improved his quality of life. The improvement lasted for only about a year, though. A serious wound infection required that his spinal screws and rods be removed and now his spine is bent back over. He'll need an even bigger operation to restore his posture. Gordon is now up to 22 surgeries in 24 years and counting.

The tragedy with Gordon is that the fusion that started all his problems was likely unnecessary. Chances are that his extreme frustration sensitized his nervous system and led to much of his initial pain. Almost every patient I see who has undergone multiple failed back surgeries had the original surgery performed to reduce pain that had no identifiable source, much like Gordon's low back pain. When a major invasive procedure is done for a vague diagnosis, it doesn't take a highly trained medical person to figure out that the potential downside can far outweigh the benefit. Even one unnecessary surgery can set you on a path that changes your life irrevocably.

Why Is Surgery Performed for Low Back Pain?

At this point you may be asking yourself how this situation came about. Why are there so many spinal fusions performed for low back pain?

There is research supporting the idea that fusions are effective for decreasing non-specific low back pain. However, I think there's a major flaw in most of them: they fail to follow patients for more than two years. Often problems arise after the two-year mark, such as a breakdown of the spine around the fusion. It's been shown that breakdowns occur in 30-40% of fusions within ten years. Another glitch: most studies define a successful outcome as a 25% improvement for pain and function. My bet is that if you are getting a spinal fusion, you are planning on becoming almost pain free, not just 25% better. Lastly, none of the studies compared surgery to carefully planned structured rehab.

Dr. Peter Fritzell's study is the one I hear most often quoted in support of using the fusion for degenerated discs in the lower back. As discussed in Chapter 13, disc degeneration is one of the most common reasons cited for performing a fusion. However, it's also a normal part of aging and not, in my experience, a valid reason for doing the procedure.

In the study, there were 222 patients in the surgical group and 72 in the non-surgical group. (The surgical group was larger because they were using the study to compare three different types of surgical procedures.)

When I reviewed the information, I noticed a problem right away. There was not enough care taken in the diagnosis process. In the study, the decision to perform a fusion was made in part by feel: the surgeon pushed on each patient's spine to find the specific spinal segment that produced a painful response. However, no X-rays were taken during this pushing maneuver to confirm and document the surgeon's finding. An X-ray can prevent the most common complication in spine surgery: operating on the wrong segment. Performing such a large surgical intervention (the fusion) without X-ray confirmation is, in my mind, highly questionable.

Another problem was that the care for the non-operative group had no structure. Since the patients in the study had been in chronic pain for an average of eight years, one

wouldn't expect much improvement with unstructured rehab. Essentially, the same treatments that had already failed were continued and there was very little improvement.

In the surgical group, there was a fairly impressive decrease in pain during the initial six months after surgery. However, at the two year follow-up the pain had significantly increased. The final overall reduction in pain was about 30%. The improvement in function was 25%. Depression decreased about 20%.

The patients in the surgical group had about double the improvement in almost all parameters measured in comparison with the non-surgical group. Based on these results, researchers concluded that the data supported the use of a fusion for low back pain. However, I question the results – the statistics are skewed because of the "non-treatment" for the non-operative group. As discussed, random treatments for chronic pain are simply not effective in the long-term. I am surprised that the non-surgical group had any improvement at all as usually untreated chronic pain worsens with time.

Incidentally, the study was largely funded by one of the spinal implant manufacturers.

One interesting note: the study's overall complication rate of 24% (50 out of 211 surgeries) reveals the serious risks of surgery. The major complications included deep wound infection, blood clots, and pneumonia. Eight percent (16 out of 211) required an additional unintended trip back to the operating room. Surgery should not be taken lightly.

A Final Word

Part of the tragedy of chronic pain is that once you have failed back surgery, it's actually harder to obtain help. The surgeons who performed the surgery are not trained or comfortable in dealing with chronic pain. Other surgeons are reluctant to get involved in managing another surgeon's failures. The non-surgeons do the best they can to improve your quality of life but they often take on a "survival" mentality for chronic pain patients, not a proactive one.

When you've been in pain for a long time, you go to a dark place. I call it the "abyss." If a surgeon offers you a way out of it with surgery, how can you not take him or her up on the offer? Pain puts you in a vulnerable position. You do want to believe in surgery.

Since many parties involved view surgery as the definitive answer, my patients usually become extremely upset when their last hope is taken away. I understand the frustration. It is as if you have finally reached the mountaintop and you were climbing the wrong mountain.

It's much better, though, to develop your own resources for recovery instead of looking to surgery as the only answer. You'll be more open to employing these resources once you understand all the variables that brought you down into the abyss. The DOCC program evolved from my own struggle with chronic pain as well as my observations of what's helped my patients regain control of their lives. I am continually inspired by their determination and efforts and successes.

Note:
Page 4. "Dr. Peter Fritzell's study…..most common reasons cited for performing a fusion." Fritzell P, Hagg O, Jonsson D, et al. Cost-effectiveness of lumbar fusion and nonsurgical treatment for chronic low back pain in the Swedish Lumbar Spine Study: a multicenter, randomized, controlled trial from the Swedish Lumbar Spine Study Group. Spine 2004; 29:421-34; discussion Z3.