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Back in Control
A Spine Surgeon's Roadmap Out of Chronic Pain
Overview of condensed version

I. Introduction

- a. There are three parts to the pain experience to consider: 1) A potential structural problem 2) The soft tissues (always present with or without a structural problem 3) The central nervous system where the pain impulses are interpreted.
- b. Your body is not a machine
 - a. Machines do not have pain fibers, nervous system, emotions, memories, etc. Nothing in the mechanical world approximates the pain experience
 - b. Surgeons, patients, society are focused on a mechanical solution
 - i. Endless pursuit
 - ii. As back pain often spontaneously improves, the practitioner caring for you at the time of improvement can take credit for your improvement
 - iii. Patients understandably vulnerable to "solutions"
 - c. Traditional medical thinking has not consistently addressed the role of the mind in the perception of pain
- c. The Birth of DOCC (Defined Organized Comprehensive Care)
 - a. 1985-1993 I was an aggressive surgeon often performing fusions for LBP
 - i. Seattle had nine times the surgical rate per capita as New England during this period. I was zealous and felt frustrated if I could not find a reason to perform surgery for persistent low back pain.
 - ii. I had no concept of the three above-mentioned factors involved in chronic LBP.
 - iii. I spent a half a day a week with the rehab physicians
 1. Many patients did well without surgery
 2. Carefully selected surgical patients had more consistent results.
 - iv. 1993 a study published by Gary Franklin who is a friend of mine and the medical director of the Worker's comp in the state of WA showed that the return to work rate was 15% one year after a spine fusion for low back pain. It was only 22% at two years.
 1. These were significantly poorer results than workers who had not undergone surgery.
 - v. I began to see patients whose spines were breaking down around prior fusions. Their predicament usually was worse than before any surgery.
 1. I quit doing fusions for low back pain in 1993.
 - b. 1999 moved from a major spine referral practice to a small spine surgery practice in Sun Valley, ID.
 - i. I had to deal with every aspect of spine care from acute problems to patients with severe chronic pain. In my Seattle referral practice I seldom saw patients with acute pain.
 - ii. I was able to implement what I had learned from the rehab physicians.
 - iii. Had excellent physical therapists
 - iv. Would spend time educating patients
 - c. In 2000 I read a book, "The Promise of Sleep", an autobiography of William Dement, M.D. He was the founder of modern sleep medicine. He pointed out that less than 5% of physicians dealt with sleep issues.

from a bone spur. Surgery to remove the spur would reliably relieve the leg pain but not the back pain. If the back pain is the over-riding issue, many patients elect to not undergo surgery.

2. **Central Nervous system**—A “fired up” nervous system will perceive pain impulses more intensely
 - a. 2004 multi-center functional MRI brain study
 - i. Patients with more than 12 months of chronic pain had five areas of the brain light up for a given pain stimulus versus just one in volunteers without pain. This was consistent in every person with chronic pain.
 - b. Central Nervous system variables
 - i. Sleep
 - ii. Stress
 - iii. Medication management
 - iv. Goal setting
 - v. Education
3. **Soft tissues**
 - a. Most chronic LBP originates from the soft tissues—not a structural problem
 - i. Even a structural problem usually has a soft tissue component
 - b. Stretching and strengthening hallmarks of the treatment of the soft tissues
 - c. Must first “calm down” the nervous system otherwise the pain impulses from manipulating inflamed soft tissues will be exaggerated in the brain.

II. My Personal Experience

- a. I have personally traveled every step of path into and out of chronic pain
 - a. 1990 – 1995 began to experience a significant burnout
 - i. Uncontrollable anxiety and panic attacks.
 1. OK by 1994-1996
 - b. 1996-2003—Extreme burnout
 - i. Descended into a situation of relentless anxiety and resultant depression
 1. Combination of usual work stresses and a marked increase in personal stresses
 - ii. Also developed a marked increase in a chronic painful peripheral neuropathy in my feet
- b. Victim Role: in 2002 I began to have a sense of how much of a victim role was in. I was not only severely depressed; the worst part of the ordeal was that I felt sorry for myself about being depressed.
 - a. In 2003 I came face to face with 50 years of suppressed anger.

- i. This was rather humbling in that my self-image was that of being” calm and cool” regardless of how difficult the situation. I truly had no concept that I had any issues with anger.
 - ii. I finally realized that the real answer to my problem was that there was no one simple answer. I was searching for a magic “fix” that would solve all my problems. I finally realized that it just doesn’t work that way.
 - iii. The anxiety/depression finally was broken as I became aware of and processed my victim role.
 - Anger really drives anxiety-producing thoughts.
 - iv. I owe a lot to David Burns and his brilliant book, “Feeling Good”. It was because of my commitment to following his suggestions that I not only made it through the whole ordeal but also have thrived.
 - b. I inadvertently discovered the tools that allowed me to pull myself out of the “abyss”
 - i. I have been able to understand more clearly the principles involved and been able to teach them to my patients.
 - ii. As difficult a journey as it has been for me it has turned out to be the greatest gift I could have ever dreamed of. I feel grateful and privileged to be able to pass these tools to my patients and peers.

III. The Path to Chronic Pain

a. Four sets of variables in the development of chronic pain 1) the source of the pain—soft tissue and/or structural 2) sensitization of the nervous system 3) memorization of the pain pathways 4) modifiers-poor sleep, anxiety, and frustration.

a. Source of the pain

a. Possible structural problem

- i. Defined as a clearly identifiable lesion that is the probable cause of the pain.
- ii. The symptoms must match the expected pattern of pain
- iii. Physician’s role is to clearly define if there is structural issue and clearly communicate it to the patients.
 - 1. Then a shared decision-making process must ensue to determine whether the severity of the symptoms warrants the risk of surgical intervention
 - 2. Structural problems rarely spontaneously resolve

b. Soft tissues

- i. All the supporting structures of the spine are rich with pain fibers
 - 1. Rings of the discs, muscle fascia, facet capsules, tendons, etc.
 - 2. With daily activities the irritation of the soft tissues can last indefinitely
- ii. May have both the soft tissues and a structural problem as a source of pain
- iii. There is always a soft tissue component to a structural lesion. If the structural problem is not compelling it is wise to try to decrease the soft tissue component first. The remaining pain may not be enough to warrant surgery.

b. Sensitization of the nervous system

- a. Water torture. This is a crude example but with repetition a simple drop of water eventually is perceived as a “sledge hammer”.
- b. Athletics/performers—with repetition the brain becomes adept at efficiently processing input.
 - i. Baseball—rotation of a curve ball versus a fastball
 - ii. Nick skiing—national-level mogul skiing
 - iii. Concert pianist
- c. Multi-center study done in 2004 showing a much higher brain response in volunteers with chronic pain—see above.
- d. Dennis’s hod carrier story—simple electrical “buzzing” on a wet saw progressed to a painful impulse as the day progressed.
- e. With repetition the nervous system lays down myelin, which “insulates” the nerve pathways. The higher the number of repetitions the thicker the myelin. In chronic pain or anxiety there are infinitely more impulses received by the nervous system than a performer learning a new performance. This process represents a “programming” issue, not a psychological problem. As these circuits become imbedded in the nervous system psychology comes into play as you become worn out trying to fight the ongoing pain and/or anxiety.
- c. Memorization of Neurological circuits—This level is the essence of the whole mental aspect of chronic pain
 - a. Development of deep neurologic circuits with repetition
 - i. Development of “ANTS”—David Burn’s term for “automatic negative thoughts.”
 - 1. He classifies these thoughts into 10 categories of erroneous thinking—in general these thoughts progress with time and repetition. The really become more imbedded in the nervous system when you attempt to suppress them.
 - b. Examples of how the brain memorizes neurologic circuits
 - i. Phantom limb pain
 - 1. About half of patients with pain in a limb will have the pain to the same degree after an amputation.
 - 2. Series of patients with their arms amputated for ill-defined arm pain from reflex sympathetic dystrophy. Otherwise the arms were normal. Only 2 of 28 patients had significant relief of pain.
 - ii. Repetitive thoughts/ obsessive thinking
 - 1. Suffering—repeatedly having anxiety-producing thoughts
 - 2. Suppressing—making a choice to not think the thoughts
 - a. Why don’t we have “APTS”—my term for “automatic positive thoughts”.
 - i. Answer may be in Wegener’s 1987 experiment. There was a dramatic increase in specific thoughts when volunteers were asked to suppress them. We all suppress negative thoughts. We don’t suppress positive thoughts. Something about suppressing thoughts really stimulates the nervous system.
 - 3. Masking—engaging in behavior to avoid the feelings of anxiety and frustration.
 - a. This behavior does not reinforce the neurological circuits. It is just that this strategy does not solve the problems caused by the circuits. Once the masking

activity is over, the repetitive circuits are back in full play.

- d. Modifying factors
 - a. Lack of sleep—affects actual perception of pain as well as coping skills
 - b. Anxiety—in addition to usual daily stresses there is a lot of increased anxiety regarding the future and resolving the chronic pain.
 - c. Anger—as feel trapped by the pain and circumstances the degree of frustration over time becomes intense.
 - i. It is particularly a problem in chronic pain as there does not seem to be a way out of the situation and you lose hope
 - ii. You are also labeled by the medical profession as having a poor prognosis and you feel as if no one can really understand your degree of suffering.
 - 1. Doctors
 - 2. Other health care personnel
 - 3. Friends
 - 4. Employers/ co-workers
 - 5. Family
 - iii. Anger also increases the number and intensity of anxiety-producing thoughts.
 - iv. Destroys basic quality of life.
 - v. Anger is a very powerful feeling. It is a difficult emotion to give up when it is the last defense you have against pain over which you seem to have no control or end-point.

IV. Reversing Chronic Pain Process with DOCC Program

- a. Diagnosis: determine if the source of your pain is structural or non-structural problem or both.
 - a. You must have this question clearly answered in your own mind before you can move forward with the DOCC program. As long as you have the question in your mind that there is something being missed that could be surgically corrected you will be stuck.
 - i. We also do not want to miss a structural problem. Treating a structural problem is what surgeons are best at and enjoy doing.
- b. Calm the central nervous system
 - a. Sleep:
 - i. Sleep hygiene
 - ii. Medications
 - iii. Cognitive behavioral writing at bedtime
 - b. Medications:
 - i. Pain
 - ii. Anxiety
 - iii. Sleep
 - iv. Anti-seizure
 - c. Education
 - i. This whole educational process through the DOCC protocol will give you knowledge and control, which will decrease your anxiety and frustration.
 - d. Goal Setting: three questions
 - i. Where am I?

- ii. Where do I want to go?
 - iii. How am I going to get there, taking into account my current circumstances?
 - 1. Learning organizational skills is a major tool in implementing a plan.
 - e. Stress management
 - i. Huge topic to be covered over several chapters.
 - ii. It is more about “re-programming” of the nervous system; less about psychology
- c. Focused Rehabilitation
 - a. Discussed in detail in a following chapter
 - b. Initial phase of decreasing soft tissue inflammation
 - c. Conditioning is a lifetime commitment

V. Overview of Stress Management

- a. Two aspects to dealing with stress
 - a. Positive side
 - i. Sleep, exercise, hobbies, family, friends, healthy diet, etc.
 - b. Negative side
 - i. Anxiety and Anger
 - 1. As long as the drain of anxiety and anger is wide open you cannot build up enough positives to counter-act the energy losses.
 - a. Similar to crossing a large body of water in a leaking boat.
- b. Managing stress is a learned skill
 - a. There is the stressor and your reaction to the stressful event; and then there is you.
 - i. It is usually the reaction to the event that causes most of your energy drain.
 - ii. Picture the stressful situation on one side of a room and you on the opposite side of the room. Then visualize your “reaction” in the middle of the room. By separating the reaction to the stressor from the actual event and you from your reaction, you now have an ability to choose or modify your reaction.
 - iii. With chronic pain, the pain is bad enough without adding in the additional variable of anger no matter how justified. Picture a day when you are just angry. It is not a great day. When you add the pain back into the equation the day becomes intolerable.

VI. Anxiety

- a. Anxiety basics
 - a. We’re hardwired to avoid anxiety
 - b. Basic survival emotion
 - i. Would it better be considered a “survival reflex” rather than an emotion?
 - c. Engenders a feeling of being vulnerable and helpless.
 - i. Humans will do almost anything to avoid anxiety.
- b. Anxiety coping mechanisms—two basic strategies

- a. Control
 - i. Thoughts
 - 1. Rigid/structured belief systems
 - 2. Suppressing
 - ii. Avoidance of anxiety-provoking situations
 - iii. Controlling people and circumstances
 - iv. Pursuit of power to gain more control
 - v. Behaviors
 - 1. Eating disorders
 - 2. Excessive cleanliness
- b. Masking
 - i. Addictions
 - 1. Cigarettes
 - 2. Substances
 - a. Drugs, alcohol
 - 3. Behaviors
 - a. Work, gambling, eating,
 - b. Pursuit of money, prestige, accomplishments
 - c. “Self-esteem”
- c. Anger
 - i. When you are experiencing the feeling of anger you usually do not feel much or any anxiety. Anger represents a feeling of power.
 - ii. Many people effectively suppress most of their anxiety in life with being chronically frustrated or angry. It is usually disguised in multiple ways.
 - 1. “Being right”
 - 2. Strong opinions
 - 3. Idealism
 - 4. Intolerance
 - 5. Chronically complaining
 - 6. “Underappreciated”
 - 7. Arbitrary
 - 8. Labeling others
 - 9. Perfectionism/ judgmental
 - 10. This list is almost endless—the essence of it though that somehow endlessly feeling victimized suppresses the feeling of anxiety yet at the same time increased the frequency of anxiety-producing racing thoughts
- c. Mechanism of how anxiety is created
 - a. Must first have an anxiety-producing thought
 - b. Chemical reaction in the body as a response to these thoughts
 - i. Combination of a thought and a chemical response yields an emotion
 - ii. This link of a thought with a physical sensation is what makes our thoughts seem real and becomes part of our identity
 - 1. Basis of mental health disorders
 - 2. You are not your thoughts
 - 3. Also the basis of “re-programming”
 - a. The core philosophy of this book in regards to mental health
 - c. Repetitive thoughts and programming
 - i. “Suffering” reinforces these neurologic circuits
 - ii. “Suppressing” is even worse

- iii. “Masking” temporarily works but ineffective in breaking up and creating alternate neurological pathways
 - d. Natural progression of anxiety
 - a. Thoughts
 - b. “Stories”
 - i. Combination of imagery and anxiety-producing thoughts becomes a “story”
 - c. Images
 - d. All become stronger and more vivid with repetition over time
 - i. “Word progression” of anxiety
 - 1. Alert, uncomfortable, nervous, anxious, panic, fear, terror
 - e. Anxiety and chronic pain
 - a. When a basic human need such as air, food, or water is not met, anxiety results. One then behaves in a way to relieve the feeling of anxiety. Not being in pain is a basic human need.

VII. Anger and Being a Victim

- a. Anger results when you experience high levels of anxiety and you have no control regarding changing you or the circumstances causing the anxiety.
 - a. “Genealogy of anger”
 - i. An anxiety-producing circumstance that we cannot control
 - 1. Most of us are taught to control anxiety by controlling the circumstances or ourselves.
 - a. “I would have less anxiety and be happier if I had more money, a better spouse, better looks, less pain, more prestige, etc.”
 - ii. Blame the situation or person
 - iii. Become a “victim”
 - 1. Perceived
 - a. Someone forgets to invite you to a party.
 - b. You are cut off in traffic.
 - c. You are stuck in a traffic jam.
 - 2. Real
 - a. You are assaulted.
 - b. Your child was beat up at school.
 - c. You underwent a failed back surgery and your pain is worse
 - d. The medical profession is not giving you any answers.
 - 3. “Perceived” versus “real”
 - a. Real anger is much harder to process and let go
 - b. Therefore the potential destruction is almost unlimited.
 - c. Chronic pain is “real victimhood”
 - iv. Final result of cascade is anger
 - 1. Regardless of whether your victimhood is perceived or real the end result of anger will erode and destroy the quality of your life.
 - a. The person or situation that you hate or even despise now has complete control of your life. Why do you want to give that kind of control to anyone? Especially to someone you dislike.

- i. “The most annoying thing you can do to your enemies is to forgive them.” Oscar Wilde
- b. Advantages of being a victim:
 - a. Power
 - i. Sense of entitlement
 - b. Manipulation
 - i. Lowered expectations of self and from others
 - ii. Force those who care for you to meet your needs
 - 1. Destroys families when the family is needed for support
 - c. Control
 - d. Revenge
 - i. “Can really stick it to my employer who destroyed my life.”
- c. Victim role reinforced in presence of chronic pain
 - a. Being a victim of pain is a different level of victimhood. Not only do you feel wronged you are experiencing a very unpleasant sensation
 - b. If you look at the situation carefully your whole body’s being is a means for your central nervous system to exist. All of the senses are designed to protect the nervous system or “you”. They can also provide pleasure but their first role is protective.
 - i. Sight—see a threatening object and get out of the way
 - ii. Sound—hear a threatening predator and take avoidance action
 - iii. Taste—taste something spoiled and throw it away
 - iv. Smell—smell leaking gas and get out of the house
 - v. Pain—feel hot or too cold and remove self from touching it. Pain is a very basic elegant protective mechanism.
 - c. The common link with all of the above senses is that when a real threat is perceived it causes anxiety. When you use your innate control to distance yourself from the offending object your anxiety is relieved.
 - d. When the situation is out of your control then your anxiety may accelerate into fear or terror. You also become frustrated, which can progress to anger, rage, or hate.
 - e. With chronic pain you do not have control. You cannot remove yourself from the offending stimulus. No one is giving you answers and in fact you are often accused of faking it and treated badly. What do you think is happening to your emotional state over time?
 - f. The need to be validated, to find the source of the pain, undergo the one procedure that will solve the problem becomes not only an understandable but inevitable obsession.
 - i. Any time a basic need is denied it becomes an obsession. What happens if you are deprived of food and water? The need to not be in pain is a basic human need. It is a survival tool.
- d. Perfectionism makes us a victim b/c it’s unattainable (circumstance or you “less than perfect”)—it is the ultimate insanity
 - a. Surgeon’s terrible triad
 - i. Suppressed anxiety
 - ii. Perfectionism
 - iii. Massive amounts of stress
- e. Sharing my experience with anger

VIII. Anxiety and Anger—“The Highway to Hell”

- a. Anxiety occurs in the presence of a situation where you are or feel vulnerable and powerless
 - a. You then take action to decrease the feeling
- b. Anger represents a feeling of power. The “power” may be real or perceived.
 - a. Anger occurs when you cannot control the situation that is causing you anxiety
 - b. It covers up the **feeling** of anxiety
- c. Anger at the same time is also a **turbocharger** driving your anxiety-producing thoughts to a much stronger and deeper level.
 - a. Even if you do a lot of strong work on dealing with anxiety, the anger will magnify whatever is left. You will not have a handle on your anxiety until you truly face you anger issues.
 - b. Many of my patients in chronic pain completely deny they are angry or that they have “dealt with it.” It is the number one sign (without a close second) that I am not going to be able to help that patient. I don’t know all the reasons this occurs but I have never been successful in this situation.
 - i. People do not like to consider themselves victims. It is an unpleasant word with negative connotations. However it is **universal** part of the human experience. It is the denial of this universal trait that causes so much suffering for the person and those close to him or her.
- d. Gets in the way of your treatment
 - a. You will not be able to really “calm down” your nervous system until you can get a handle on your anger.
 - i. Remember that the anger associated with chronic pain is a result of being a “real” victim of very real pain. It is extremely difficult to let that go.
 - ii. Anger is like a pile driver. It drives your quality of life into oblivion.
 - b. Hard to give up anger b/c then you have to experience the raw anxiety the anger has covered up—it is initially a very hard sell.
- e. Therefore anxiety cannot be treated alone nor can anger.
 - a. Truly giving up being a victim is the “Continental Divide” in the treatment of chronic pain
 - i. It was the turning point in my journey back. I finally acknowledged the victim role and I have not looked back. It happened on Mother’s day 2002. Six weeks earlier I was right on the edge. I just ran across two poems I wrote in April. I had forgotten how close I was to not making it through and how dark the hole was that I was in.
 - b. I get many patients close, they turn around, and head back down into the abyss.
 - i. I have an equation to describe the depths of the abyss. “Abyss = (Anxiety x Anger) time. With chronic pain the intensity of the pain is an additional multiplier.

I have known intellectually how dark a hole your life can go when you are living life controlled by anxiety fueled by anger. It somehow has landed in my brain how consistent an experience it is for my patients in chronic pain. There really not words that can describe that place. I don’t believe there is a psychological measurement tool that currently measures the “abyss.”

There is also data that suggest that a significant factor in patients solving their chronic pain problem is optimism. I did grab onto a ray of hope and a month later I realized that the answer to my problems was that there was not an answer. I was going have to solve my problems

myself. I made a simple decision on Mother's day 2002 that I was not going to be victim anymore. I picked up David Burn's book, "Feeling Good" and re-started my writing process. It inadvertently turned out to be the best thing I could do. It began my journey into the light.

I feel the DOCC protocol may be effective because it does provide a framework to organize your thinking to enable you make your way out of the abyss.

IX. Reprogramming the Nervous System

- a. Think of the central nervous aspect of chronic pain in terms of "programming" instead of "psychology."
 - a. For the first 10-12 years of our life our brains absorb everything in the environment. We start to assimilate that data and develop our own identity during our early teenage years.
 - i. The problem is that for the rest of your life your life experiences are interpreted through that original database. You are consistently accepting or rejecting that database with each new experience. You are not really connected to your surroundings with a completely open mind. Your "reality" is more based on your projection of yourself onto your surroundings. Each time a similar circumstance over time is interpreted by your original database the neurological circuits are reinforced.
 - ii. We also know that if you actively reject your original database the circuits are even more strongly reinforced.
 - iii. As thoughts most often cause chemical changes in your body and physical sensations, these thoughts seem real. People identify with their thoughts. You are not your thoughts.
 - b. We then label others and ourselves around us with thoughts that are repetitive, which become "stories" and then rigid belief systems.
 - a. Your "story" about chronic pain is vivid because is associated with such an intense physical sensation.
 - c. Any time you associate a thought with a physical sensation, you are creating a new neurological pathway and then reinforcing it with repetition.
 - d. To "re-program" your nervous system you have to undergo the same process but on YOUR terms.
 - e. Only way to break story is via reprogramming—Three steps:
 - a. Increase awareness of pattern of thinking: pinpoint the stressor
 - b. Detach from the circuit: writing, meditation, envisioning, categorizing
 - c. Burn a new circuit: writing, meditation, visualization
 - f. There are no alternatives to the re-programming process. Must commit to one of these methods or be stuck in the same neurologic patterns that caused you to get into this mess. There are multiple choices of re-programming tools and there will be many that are suited to you and your situation.
 - g. A major goal of this book is to change your paradigm with regards to mental health. I am attempting to make a strong enough case for re-programming that you pursue it with a vengeance. For those of you reading this book and are not in pain, just use the words "anxiety" or "stress" instead of the word pain.

X. Awareness

- a. When you are angry you cannot clearly see anything around you. Your mind is full of racing thoughts and vivid imagery. How well do you think you are able to listen to your spouse tell you about his or her day?
- b. Clues of unawareness—you must first be aware of your unawareness before you can become aware

Examples of my personal clues:

- Anytime I am anxious or angry
- Having a strong rigid opinion about almost anything; religion, politics, nationalism, someone's character, etc.
- Letting someone know how to run their lives without them asking
- Thinking I am wiser than my children
- Being told I am stubborn or "not listening"
- Interrupting someone to give my opinion before I have completely heard their thoughts
- Being "right"
- Thinking about something else besides what I am currently engaged in
- Acting on impulse
- Judging myself negatively or positively
- Assessing my own "awareness"

This list is infinite. In spite of years of commitment to being fully aware, I am truly aware only a small percent of the day.

- c. Levels of Awareness
 - a. Environmental: active meditation
 - b. Emotional awareness—as your mind quiets down you are able to become much more of your emotional state
 - c. Storytelling/judgment: criticism or praise of others based on a "story"
 - d. Global ingrained patterns: lifelong patterns of behavior
- d. Once you understand these different levels of awareness, you can use them in your re-programming process. Remember the first reprogramming step is to first become aware of the pattern of thinking that is causing you distress. What you are not aware of can and will control you.
- e. Awareness is a state of mind of being fully engaged in the present moment. You can also use awareness as a reprogramming tool.
 - a. You simply commit every day to concentrate on a certain sense to be aware of. I mostly focus on sound. By actively listening as many of the sounds around me, it pulls my nervous system into the moment. I then watch my racing thoughts pull me out of the moment and then refocus on sounds. This is not positive thinking or suppression of thoughts. It just keeps your brain connected to the sensations immediately in front of you. You can choose feel, visual, taste. I used to attempt to focus on everything all of the time. It was less effective.
- f. A common belief system that has a negative effect on your mental health is that with enough effort you can eliminate anxiety and anger. You cannot. It has already been pointed out multiple times that suppression of negative thoughts or emotions reinforces them. The goal of awareness is to just not let these negative emotions run your life.

XI. Solving Stress: Homework

- a. This chapter is intended to be a reference for you to use for your reprogramming process. I am assuming that you are actively working with your doctor to deal with sleep, medication adjustments, and goal setting. This chapter is just about managing stress—the stresses of life and the additional stress of pain.
- b. Phase I—Anxiety
 - i. Write down negative thoughts and throw them away
 - ii. Write in the “three-column” outlined by David Burns in his book, “Feeling Good”
- c. Phase II—Anger/Victim
 - i. Identify and acknowledge your victim role
 - ii. Understand the ways you disguise your victim role to yourself and others
 - iii. Commit to coming out of this role
 - 1. Being in the victim role is the most powerful role in the human experience. You won’t give it up easily.
 - a. I believe that it is the main barrier in engaging in the whole DOCC protocol.
 - iv. Reprogramming
 - 1. Write, write, write, write, write,
 - 2. Anger is basic. Writing is basic. Just work this one through with a pen.
 - v. Acceptance and forgiveness
 - 1. “Forgive for Good” by Fred Luskin, M.D.
 - a. This book is out of Stanford University. Dr. Luskin has conducted several major research studies on the physical and emotional effects of forgiveness. It is an extraordinary book.
- d. Phase III—Awareness
 - i. Practice “active meditation” as much of the day as you can
 - 1. Watch the different levels of awareness come into play
 - 2. As you spend more time in active meditation, the other levels of awareness will become more clear
 - 3. Always bring yourself back to the “environmental awareness”.
 - 4. It sounds simple but extremely difficult to implement
- e. Phase IV—BIOOTW (Blow it out of the water)
 - i. Once you have a developed enough reprogramming skills from the first three phase you can begin to put it all together
 - ii. Make a strong commitment to excellence. Make a decision to enjoy your day regardless of the circumstances. Don’t anyone or anything take that away from you. That would include you.
 - iii. Visualization
 - 1. Common in athletics—the future performance is visualized so many times and with such intensity that neurologic pathways are deeply etched in place.
 - 2. Do a visualization on the happiest time of your life. Don’t just think about it. Try to remember and feel as many small details as possible. This is critical in “waking up” your nervous system to a happier and more functional place.
 - iv. Look at the Hoffman website. They condense years of reprogramming into 8 days. They also take your nervous system to a place in your mind where many dysfunctional neurological pathways were created. It will

clarify your thinking in that you will develop an intense awareness of the patterns your past has programmed into your nervous system.

1. This book would not have been written without me learning the higher-level re-programming tools that are learned through a Hoffman process.

XII. Rehabilitation Principles

- a. Must calm the nervous system before starting rehab
 - a. Soft tissues must be vigorously manipulated
 - b. If your brain is hypersensitive to pain the manipulation of the soft tissues will be intolerable
 - i. Will keep having to stop PT and the tissues will remain stiff and painful
- b. Must be a huge priority in decreasing your pain
 - a. Takes a long-term lifetime commitment stay in shape
 - b. There are not any alternatives
 - c. Should engage in vigorous PT/ conditioning at least six months before remotely considering surgery
 - i. I don't recommend surgery without a structural lesion even if the pain does not improve
 1. Creates severe permanent scarring and success is unpredictable.
- c. Qualities for excellent PT:
 - a. Education
 - i. Should cover anatomy, function, and practical application to activities of daily living
 - b. Assessment
 - i. Spine is the center of your whole musculoskeletal system
 1. Assessment includes careful evaluation of spine tender points as well as mobility of segments
 2. ALL of the surrounding joints need to be evaluated
 - a. I.e. If you hip flexors are tight you will always be a little bent forward. Over time this puts a lot of strain on your back.
 - c. Soft tissue work—manual therapy
 - i. After careful assessment each area of stiffness needs to be mobilized back to normal range of motion
 1. This is a painful process
 - ii. Stretching and strengthening are hallmarks of soft tissue work
 - d. Home conditioning
 - i. You must commit to a lifetime of conditioning. Here's why: Chronic pain leads to a decrease in activity and a decline in your physical condition. As you become more out of shape there is less support for your spine and the pain threshold of your soft tissues is more quickly reached. It is another vicious cycle.
 - ii. Many patients state they don't have the time for exercise. If your pain is consuming your entire life, what could be more important?

- iii. My mantra is that all of my patients must be in a gym doing resistance training 3-5 hours per week—FOR THE REST OF YOUR LIFE.
 - 1. 40% of the spinal support is from your abdominal muscles
 - 2. You lose about 1% of strength per year after age 45. With weight training you don't have to lose anything.
 - 3. Walking, jogging, and swimming are important but don't count
- iv. The commitment to being in great physical shape must be a HUGE priority. If you're more willing to undergo a major spine surgery than to commit to your health you need to ask yourself a lot of questions.
- v. It takes emotional energy to commit to conditioning. That's one of the reasons it's critical to deal with the central nervous system first.
 - 1. However, exercising is also an important factor in improving your mental health.

Just do it!!

XIII. Spine Surgery – State of the Union

a. What do we know?

- a. Exact diagnosis for non-specific low back pain known only 15% of the time
- b. Degenerated disc cited as common reason for fusion, but a natural part of aging.
 - i. Multiple studies have shown little if any correlation of back pain with degenerated discs
- c. Prognosis for returning to work with back pain worsens the longer the time off of work.
 - i. If you're out of work longer than a year, the chance for returning to work is less than 20%
 - ii. After two years it is essentially zero
- d. Patients who are depressed and focused on their lack of function have five times the risk of becoming disabled
- e. If a patient has more than two of five possible types of abuse in their past, the surgical success rate for a low back fusion is less than 15%
 - i. Types of abuse include:
 - 1. Physical, sexual, emotional, neglect, caregiver
- f. Patients on worker's comp do poorly with lumbar fusions for LBP
 - i. WA state, 1986-87
 - 1. Return to work 16% at one year and 32% at two years after surgery
 - 2. Significantly less than the group without surgery
 - a. Spine surgery for LBP significantly decreases the chances of you returning to a productive life working.
- g. Patients in chronic pain become sensitized
 - i. Much higher chance of a lumbar discogram being positive in normal volunteers if they have chronic pain in another part of their body. Over 80% if they have a somatization disorder.
 - 1. A discogram is a procedure where dye is injected directly into an intervertebral disc. If the injection is painful and resembles your usual back pain it is considered a positive test.

- a. It is very subjective and not reliable enough to base the decision to undergo a major spine surgery.
- h. Repeat low back surgery has successfully decreasing results
 - i. Each repeat low back surgery has about half the chance of success as the prior surgery
- i. Psychological profile is a better predictor of success than the anatomic lesion in regards to the success of the surgery.
 - i. This has been well known for over 40 years
 - ii. There are over 1,000 clinical research papers documenting the correlation between anxiety, frustration, and increased pain.
 - iii. To me this is not a psychological. It is a “programming problem” as mentioned earlier.
- j. The real success rate of a spine fusion is only around 20-30% improvement in pain and function two years after the surgery.
 - i. There is an initial improvement for about six months that seems promising but eventually the pain heads towards baseline.
 - ii. In a “perfect” group of patients with a one-level positive discogram at L4-5 or L5-S1, the success rate of a one level fusion was 27% at two-year follow-up.
- k. Structured non-operative care has a better chance of success than a fusion
 - i. A study in 2003 showed a 76% success rate for treating chronic low back pain in a structured non-operative setting
 - ii. Study concludes that structured non-operative care is “not widely available”
- l. Downside of spine surgery more predictable than positive outcomes
 - i. The spine has a high chance of breaking down around a prior fusion. Exact incidence is unknown. Estimated at around 20% within 10 years. What about 15-20 years??
 - 1. This is my practice. I spend a high percentage of my time trying to salvage situations that are severe caused by multiple surgeries that never should have originally been performed.
 - a. I can usually only obtain partial return of function and decreased pain.
 - 2. It is infinitely better to pursue a full structured rehab program before ANY surgery is performed.
 - a. The potential is usually back to full function without pain.
 - ii. These problems caused by aggressive surgery are often are severe and require can require complex surgery to solve them.
- m. Insurance doesn’t pay for coordinated care, including counseling
 - i. Changing this paradigm is a major focus of my efforts.

b. What are we doing?

- a. The data I presented in the previous section is well known. There is little debate about it.
- b. Surgeons in training are not routinely taught about chronic pain
 - i. I personally spent eight years aggressively performing fusions for LBP. It was what I was trained to do.
 - ii. I only learned about the alternatives from the physiatrists after I was out in private practice.

- c. Although surgeons have no background regarding the adequacy of non-operative care, they are often the ones who decide that non-operative has “failed”
 - i. Usual non-operative care is equivalent to “non-care.”
- d. “Failure of conservative care” is the most common reason cited for performing a lumbar fusion for back pain.
- e. Surgeons, non-surgeons, and patients all very focused on finding the “pain generator”.
 - i. Don’t appreciate all of the aspects of the pain experience
 - ii. Surgery works well only for well-defined structural problems that have matching clinical symptoms.
 - 1. Surgery will only relieve that specific structural symptom.
 - 2. Degenerated discs are not “structural” problems
 - a. Normal part of aging process
 - b. Discograms are a subjective tests
- f. Surgeons’ view of chronic pain is often simplistic—way we are trained
 - i. Don’t appreciate how the emotional reactions to chronic pain can create such a deep feeling of hopelessness.
 - ii. Feel that patients don’t really don’t want to go back into the workforce
- g. Surgeons have limited capacity in the clinical setting to assess a given stress level and coping skills.
 - i. Two studies show that when a surgeon’s assessment is measured against a questionnaire they are correct only 25-40% of the time.
 - 1. Number of years in practice is not a factor.
 - a. A first year resident has the same chance of accurately assessing your current stress levels as a veteran surgeon.
 - ii. Lack of understanding about how deadly chronic pain is for the nervous system even if a patient’s coping skills seem intact.
- h. Surgeons are not only poor at assessing psychological risk factors for poor outcomes, they are often not collecting the data
 - i. It is not possible in a simple interview to assess a given patient’s risk for a poor outcome from a mental health perspective
 - ii. Therefore these central nervous system prognostic variables are not being factored into the surgical decision-making process
 - iii. Needs to be assessed on a simple questionnaire
 - 1. Both for the patient’s and surgeon’s perspective
 - iv. The situation of high stress/ poor coping skills needs to be SUCCESSFULLY treated before even considering surgical intervention.
 - 1. Just performing surgery will not solve that set of variables.
- i. Patients are being given the impression that the potential benefits are higher than the actual 25-30% success rate.
 - i. Is the improvement of 25% on a functional scale really what a patient would expect as a reasonable outcome considering the magnitude of the surgery?
 - ii. Surgery is viewed as a “definitive” fix. When I was developing the DOCC project I did not and still do not refuse to do a fusion operation for LBP.
 - 1. It is just when I discuss how unpredictable the outcomes can be patients simply do not want to undergo surgery
 - 2. My impression is that patients expect to be almost pain free with over a 75% chance of reaching that goal.

- iii. Patients don't fully comprehend the downside of a failed operation.
 - 1. The suffering is immense without an end in sight
 - 2. Impact on their life and family is immeasurable
 - 3. I can only partially salvage the situation with more surgery. Often I see irreversible complications from aggressive surgery. I also have complications from major surgery.
 - a. It is just that the potential benefit should significantly outweigh the risks.
- j. Many major spine centers are aggressive in the number of fusions that are performed for non-specific LBP.
 - i. Spine fellows come out of training feeling that it is the right thing to do.
 - 1. I was zealous for over eight years performing fusions for non-specific LBP.
 - 2. We do not see the long-term follow-up during our training
 - ii. There are over 200 spine fellows being trained per year. A significant percent look at this operation as one of their main tools.
 - 1. They are just doing what they are trained to do.
 - 2. I am one of the few who has aggressively been on both sides of this fence. If I could be convinced that the upside of a fusion for low back pain was the better choice than non-operative care, I would still perform the operation.
- k. There is not enough surgeon accountability
 - i. It is almost impossible to obtain routine outcomes on our patients
 - 1. Tedious
 - 2. Expensive
 - 3. Patients often don't comply
 - ii. We can pretty much do what we want without any of the interested parties really knowing what's going on.
 - 1. Patients
 - 2. Surgeons
 - 3. Insurance companies
 - iii. Often patients are discharged from care within three months even if they are doing poorly.
 - 1. Some surgical practices only have assistants do all of the evaluation and care
 - a. Not possible for the surgeon to check his or her decision-making process.
 - iv. I follow my successful surgical patients until they "fire" me because they don't need me anymore.
 - 1. I follow my patients with poor outcomes indefinitely and am able to help many improve with the structured rehab.
 - 2. Some patients do "fire" me because they are not improving with the structured care.
 - a. I will no longer perform elective spine surgery unless it is in the context of a full structured program. The chances of surgical success for my patients are dramatically higher.

c. Where can we go?

- a. Educate physicians about chronic pain and its related issues starting in medical school
- b. Collect all of the psychosocial data
 - i. Easy to do on a questionnaire
 - ii. Must be treated
 - iii. The biggest prognosticator of surgical outcome
- c. Make surgeons more accountable
 - i. To themselves
 - ii. To insurance companies
 - iii. To their patients
- d. Insist that surgeons follow their patients until a successful result or disposition is achieved
 - i. It is common for surgeons to stop following a patient who has a poor outcome. The phrase my patients frequently pass on to me is that the prior surgeon has said, "I have everything I can, you just have to live with the pain."
- e. Clear informed consent
 - i. Clarify the true potential benefit
 - ii. Help patients to comprehend the downside of failure
 - 1. There is a tendency for surgeons to excuse themselves from the final surgical decision if they have outlined all of the catastrophic complications
 - 2. We have a responsibility to just say, "No, this is not a great idea."
 - a. There is no way for a patient to truly understand the downside.
- f. Stop doing fusions in patients who are at high risk for a poor outcome.
 - i. We have a lot of data to support it.
 - ii. We need better data to support what we do.
 - iii. There are effective alternatives without surgery.
- g. DOCC project
 - i. Structured care has been documented to be more effective than surgery
 - ii. No complication rate
 - iii. No downside to aggressively pursuing it
 - iv. If a patient is insistent on pursuing surgery instead of a structured rehab program, it's a red flag both to the patient and the surgeon that surgery has a poor chance of being successful.
 - 1. With the outcome of surgery being so unpredictable, why would you not want to exhaust every possible means before jumping into surgery?
 - 2. You have now taken your spine, which is probably normal for your, age and surgically traumatized it.
 - a. A significant part of my practice is spent trying to salvage these situations.

- a. “Failure of conservative care” is the most commonly cited reason for performing a fusion or artificial disc procedure for chronic low back pain
 - a. There is no consensus on what constitutes an adequate course of conservative care
 - b. Surgery is considered “definitive” care
- b. Current rough definition of adequate conservative care is:
 - a. Persistent low back pain for more than three to six months
 - b. Six to twelve physical therapy visits
 - c. One to three cortisone injections
 - d. Many will insist on an evaluation with a psychologist who specializes in dealing with pain
- c. My observations regarding current standard of non-operative spine care
 - a. Pain is affected by many factors, which have already been discussed. All areas need to be addressed simultaneously to be effective. That is rarely done.
 - b. Treatment is typically geared towards the source of the pain, overlooking the nervous system component.
 - c. The surgeon may not know the physical therapist well so there is a large variation in the intensity and components of physical therapy.
 - d. Only a minority of physicians aggressively deals with sleep issues. That is particularly true of surgeons.
 - e. Essentially current non-operative care is “non-care”
- d. My definition of conservative care
 - a. You should be experiencing a full restful night’s sleep for three months
 - b. Effective stress management tools should be in place and functional. You are able to effectively deal with your stress.
 - i. Any tests you might take regarding frustration, anxiety, or depression should come back to normal.
 - c. Physical therapy should be combined with an aggressive self-directed conditioning program for at least six months. If there is a structural problem, the soft tissue component should still be maximally treated.
 - d. Some structural lesions are compelling enough to require surgery first.
 - i. This is difficult to characterize. I have often performed surgery on extreme structural problems with perfect decompressions and fusions if indicated. Frequently the pain is the same or even worse. The follow-up imaging studies confirm how well the surgery was performed. I do realize now that this is not imaginary pain or that my patients are faking the pain. The central nervous system component is significant. The good news is that the CNS component is treatable but I will not longer perform surgery unless the CNS is included in the plan.
 - e. Medications should be used to effectively treat the symptoms of insomnia, pain, and sometimes anxiety. They should be used on a short-term basis to allow you to maximize your function.
 - f. Have specific goals in place from the very beginning of treatment
 - g. Education—you have to personally become very educated regarding the issues regarding chronic pain, rehab, and outcomes of surgery.
- e. Patient profiles: I, II, A, B
 - a. There are two variables to consider in the defining where your situation fits in regards to chronic pain
 - i. Structural—I represents an identifiable structural problem. II—the source of the pain is not clearly seen on a diagnostic test.

1. Structural is defined as seeing a clearly identifiable anatomic problem that is a probable source of your pain. The symptoms **MUST MATCH** the anatomy.
 - a. Acute fractures
 - b. Nerves being pinched by a bone spur or ruptured disc causing sciatica in a matching distribution of that nerve.
 - c. Unstable spondylolithesis—one vertebrae sliding back and forth on another more than 4 mm.
 - d. Spondylolithesis that causes sciatica matching that level of the spine.
2. Soft tissue is defined as not being an identifiable anatomic problem. It is acknowledged that the supporting tissues around the spine are richly supplied with pain fibers that can be chronically inflamed.
 - a. Examples of “non-structural” sources of pain
 - i. Degenerated discs
 - ii. Arthritis of the spine
 1. The vertebrae do not move like other joints in the body. The presence of arthritis has not been shown to correlate with the presence of neck, thoracic, or low back pain.
 - iii. “Collapsed”, “bone-on-bone” vertebrae.
 1. These vertebrae have almost fused themselves and hardly move at all. It is not logical to think that less movement is going to cause more pain.
 - iv. Old healed fractures
 - v. Bone spurs or ruptured discs “pinching” a nerve without sciatica.
 1. It is only when a spur is pushing hard enough on a given nerve to cause **THAT** nerve to be painful is a bone spur significant.
 - vi. Stable spondylolithesis—the vertebrae may be mal-aligned but there is no movement between the vertebrae when bending backwards and forwards
 - vii. A source of pain identified by a subjective test such as a discogram or facet block are not considered structural
 - viii.
 - ii. A: Strong coping skills and functioning well: B: Easily overwhelmed, doesn’t handle stress well.
- f. How to determine your profile: psychologist, diagnostic testing, your own evaluation
 - a. There is not an exact answer for this one. You can take any number of validated tests to assess your own anxiety, depression, and anger and most will give you a reasonable insight into your state of mind.
 - i. However, you can also be below the threshold of testing positive in these areas and you are the only one who knows how anxious and angry you are about your life including the chronic pain. It is critical that you try to

be completely honest with yourself. It is not uncommon for my chronic pain patients to rate themselves as a zero on anxiety, depression, and irritability. However it's not possible to be zero on these scales. When I mention the person or situation that began the pain journey they almost fly out of the chair with anger. Again, suppressed emotions are particularly deadly.

b. I have a term I have recently have begun to talk to my frustrated patients about. I call their current existence the "abyss". Every time I begin to describe what I call the abyss to them their head begins to vigorously nod in agreement. Here is the formula.

i. $\text{Abyss} = (\text{anxiety} \times \text{anger}) \text{ time}$

1. There is a lot of anxiety around chronic pain. Just a few examples are:

- a. Where is the source?
- b. Why can no one find it?
- c. How long to I have to live like this?
- d. Who is going help me out of this situation?
- e. Am I going to get worse?
 - i. Could I be paralyzed?
 - ii. Will I end up in a wheelchair?

2. As bad as the anxiety can be the frustrations are even worse.

- a. First of all you are in pain. Not being in pain is a basic human need similar to air, food, and water. When a basic human need is not met, frustration and anger ensue.
- b. You are not given any answers or direction.
- c. Friends, family, doctors, employers, etc. don't seem to believe that you are in pain.
 - i. You are then often not treated very well and often very badly.
 - ii. You have a justified sense of injustice.
- d. You get labeled by the medical profession and in some ways are just given palliative care. Sometimes you feel you might as well be in hospice care.
- e. If you are on worker's comp you have lost control of much of your life. Additionally, the person in charge of your life cannot respond in a timely manner.

3. When you multiply anxiety driven by anger by time, the place in your mind can become very dark. When I ask my patients about this place in their mind they rarely can even put it into words. I think that the abyss is a big problem, even if you are able to function reasonably well on the surface. You might even test out normal on tests that measure anxiety and depression. It is just not possible to be subjected to the adversity of chronic pain and associated problems and not be negatively impacted by it.

- a. "Mind over matter" does not work
- b. "Positive thinking" also cannot keep you out of the abyss.

g. Four combinations: IA, IB, IIA, IIB

	Low Risk for Chronic Pain A	High Risk for Chronic Pain B
Structural Lesion I	IA	IB
Non-Structural Lesion II	IIA	IIB

h. Comparisons of different types

- a. IA is the group who are functioning well in regards to stress. They typically have an acute onset of a set of symptoms that exactly matches the anatomic problem.
 - i. If surgery is warranted because of intolerable pain or neurological compromise the results are predictable.
 - ii. Post-op rehab is quite straightforward
- b. IIA is represented by patients who have ongoing pain but there is no identifiable source for the pain. Their stress management skills are intact and they are not overly anxious or depressed.
 - i. The most common example is that of low back pain and an MRI that shows a “bulging or degenerated” disc. As bulging and degenerated discs are a normal occurrence as people age, it is probably not the source of the pain. It is usually considered a myofascial or muscular pain.
 - ii. Surgery is not warranted
 - iii. They are able to deal with the additional stress of pain and diligently undergo the rehab process until the pain resolves
- c. IB is the group who has an identifiable source of pain and not functioning very well in regards to stress. Often it’s the additional stress of dealing with all of the issues around the pain that may cause the patient to decompensate.
 - i. If the structural lesion is causing intolerable symptoms I will often operate more quickly.
 - ii. In addition to the normal spine education and conditioning I always implement the whole structured rehab program. The post-operative

course is often more prolonged but most of the time they eventually do well.

1. This is the group for whom I would historically perform the correct operation and the results would frequently be less optimum than expected. The problem was that I did not recognize how much of a comprehensive rehab program was needed. I often work with this group of patients for 6-24 months after surgery. I also work with a rehab team.
- iii. A significant percent of my practice is patients who had major surgeries on their spines when the source of the pain was not clearly identifiable. Over time a spine can break down around a fusion.
 1. By “breaking down” I mean that the adjacent vertebrae can become excessively mobile. Nerves may become pinched from enlargement of the bones and ligaments at these levels or a disc may rupture. Occasionally the spine will “fall over” and the patient cannot stand up straight.
 2. The adjacent level breakdown often represents a significant structural problem. They are not only dealing with all of their pre-operative stresses but are now dealing with the problems of a failed surgery
- d. IIB is the group who has ongoing pain that may be severe but the source of the pain cannot be clearly identified. In addition to having their coping mechanisms overwhelmed, the frustration of dealing with chronic pain with an unidentifiable source is extremely difficult.
 - i. As there is not an identifiable structural problem, surgery is not a great idea.
 1. It is not that the surgery never works. It just does not work well enough and in a predictable way to warrant the risk.
 - ii. They are also very vulnerable to the idea that if there is any chance of success they will jump on it. However, they usually do not comprehend the downside of a failed operation.
 - iii. This is the group where **only** the structured rehabilitation program is recommended.
 1. With a committed engagement in the process, they often do very well.
 2. My observation is that the biggest obstacle is getting patients to commit.
 - a. Our culture is very focused on finding a quick fix.
 - b. Learning new stress management skills is initially unsettling.
 - i. In many life circumstances people will gravitate toward the misery they are familiar with rather than deal with the uncertainty of change.
 - ii. I have realized a long time ago I cannot tell who will engage versus those who will not. I simply offer the DOCC program to everyone and “let go” only after repeated efforts on my part have failed.
 - iv. It is my belief that the IIB group is where most of the failed back surgeries are occurring.

1. The medical profession has been specialized to the point where many wonderful advances have occurred. However it has also caused a huge amount of fragmentation of your care. That is not going to change anytime soon.
2. It is in your best interest to become as educated as possible regarding all of the variables that effect the perception of pain and become your own advocate.

e. Summary of surgical decision-making process

- i. The surgical decision-making grid for the categories of spine problems looks like this:

	A	B
I	IA Surgery predictable Simple rehab	IB Surgery if indicated DOCC program
II	IIA No Surgery Simple rehab	IIB No surgery DOCC program

XV. I Want to Believe

- a. Studies comparing surgical results – Carragee and Brox
 - a. Studies supporting fusions usually have only two-year or less follow-up
 - b. In one study, success defined as 25% improvement
 - c. Fritzell study, stress levels disregarded
- b. If success rate 10%, they want surgery; if 90% failure, less appealing
- c. The “Catastrophe Index”
 - a. It is bad enough that a given operation does not provide the pain relief that you were seeking, the downstream consequences can be severe.
 - b. You began with a spine fusion on a normal spine for your age. Once you have had the fusion you now have a stiff segment in the middle of a normally mobile set of vertebrae. It is similar to a rock in the middle of a rapidly flowing stream. There is increased flow and force of the water around the rock.
 - i. With your spine there is a concentration of force above and below the fusion. Several things can happen and frequently do.

1. Constriction of the nerves called spinal stenosis. It is similar to the narrow part of an hourglass. There can be a lot of ensuing leg pain and weakness.
 2. The adjacent segment becomes unstable. The joints in the back of the spine break down and there is excessive motion.
 3. There may be loss of curvature to your lower back so you can no longer stand up straight. The term we use is “flatback”.
- ii. You may experience a severe complication. Everyone thinks that it will not happen to him or her. I have seen every one of them happen along with the suffering.
1. Infection
 2. Damaged nerves
 - a. Isolated nerve
 - b. Complete paralysis
 - c. Loss of bowel and bladder function
 - d. Loss of a leg
 - i. Compartment syndrome
 - ii. Arterial emboli
 3. Death
 - a. Fatal blood clot to the lung
 - b. Heart attack/ arrythmia
 - c. Uncontrollable bleeding
 - i. Liver failure
 - ii. Excessive blood loss
 4. Stroke
 5. Blindness
 6. Misplace screws causing pain or nerve damage
 7. I am just listing a few. Note that almost every paper on spine fusions shows a re-operation rate of 15-18% within the first year of surgery.
- c. The bottom line is that you have allowed your normal spine for your age to be surgically traumatized. You now have a structural problem that is frequently severe. This is where I often enter the picture as a “salvage surgeon”. Many operations I perform are prolonged and complicated.
- i. I can often improve the situation and sometimes dramatically. However I **never** can get a spine back to where it was before any surgery was performed.
 1. That is the reason I feel better about directing a given patient down a successful rehab pathway before they have had any spine surgery.