Heal Your Aching Back

What a Harvard Doctor Wants You to Know About Finding Relief & Keeping Your Back Strong

JEFFREY N. KATZ, M.D.
ASSOCIATE PROFESSOR, HARVARD MEDICAL SCHOOL AND CO-DIRECTOR OF THE BRIGHAM SPINE CENTER

WITH GLORIA PARKINSON
Heal Your Aching Back

What a Harvard Doctor Wants You to Know About Finding Relief & Keeping Your Back Strong

JEFFREY N. KATZ, M.D.
ASSOCIATE PROFESSOR, HARVARD MEDICAL SCHOOL,
AND CODIRECTOR OF THE BRIGHAM SPINE CENTER
AND GLORIA PARKINSON
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. McGraw-Hill and its licensors do not warrant or guarantee that the functions contained in the work will meet your requirements or that its operation will be uninterrupted or error free. Neither McGraw-Hill nor its licensors shall be liable to you or anyone else for any inaccuracy, error or omission, regardless of cause, in the work or for any damages resulting therefrom. McGraw-Hill has no responsibility for the content of any information accessed through the work. Under no circumstances shall McGraw-Hill and/or its licensors be liable for any indirect, incidental, special, punitive, consequential or similar damages that result from the use of or inability to use the work, even if any of them has been advised of the possibility of such damages. This limitation of liability shall apply to any claim or cause whatsoever whether such claim or cause arises in contract, tort or otherwise.

DOI: 10.1036/0071467653
Want to learn more?

We hope you enjoy this McGraw-Hill eBook! If you'd like more information about this book, its author, or related books and websites, please click here.
For Susy, Daniel, and Micah—there is no stronger medicine than a home of love.

—Jeff

For Jim, my husband and best friend. I cherish you, my love.

—Gloria
Preface

Acknowledgments

Part I The Perplexities of Back Pain

Chapter 1 Bewildered by Your Back Pain?
  A Bewildering Condition
  Join the Crowd
  My Back's Killing Me
  You're in Charge
  Bewildered No More

Chapter 2 Factors Affecting Who Gets Back Pain
  Your Age
  Your Gender
  Pregnancy and Your Back
  Your Genes
  How You Work and Play
  Your Physical Makeup and Posture
  How You Deal Emotionally with Life's Slings and Arrows
  Other Risk Factors

Part II Understanding Back Pain

Chapter 3 The Workings of Your Back
  The Wonder That Is Your Back
  Your Back Through the Ages
  Your Spine from Top to Bottom
  Enough with the Anatomy!

Chapter 4
Why Your Back Hurts
Sprain-and-Strain Syndromes
Pinched (Compressed) Nerve Syndromes
Degenerative Disk Conditions
Degenerative Spinal Disease
Other Causes of Back Pain
Backache from Other Organs

Chapter 5
Getting a Diagnosis
How Should I Begin My Search?
Visit a Doctor, But Which One?
A Well-Prepared Medical History
The Value of the Physical Examination
When Imaging Tests Are Helpful
Other Diagnostic Procedures

Part III Controlling Your Pain

Chapter 6
Priority Number One: Relieving Your Pain
What Is Pain?
Pain: Out with the Old; In with the New
Classifying Your Pain by Its Duration
How Pain Works
Your Body's Natural Pain Relief Plan
Once More with Feeling: Describe Your Back Pain
Medicating Your Back Pain
Electrical Stimulation Therapies

Chapter 7
Can Complementary Therapies Help Your Aching Back?
Get the Best: Is Your Therapist Qualified?
Spinal Manipulation
Massage
Acupuncture
Mind-Body Therapies
Complementary Exercise Programs
Other Complementary Pain Treatments
Part IV Managing Your Back Condition

Chapter 8
Nonsurgical Treatments for Your Backache
Your Back's Capacity to Heal Itself
Waiting Out Acute Back Pain
Getting Going Again
Sign Up with an Exercise Professional
Principles of Rehabilitative Exercise for Back Pain
Strengthening and Stretching the Muscles of Your Back
Low-Impact Aerobic Exercises for Acute Back Pain

Chapter 9
Is Surgery Right for You?
How Do You Decide?
Do You Meet Surgical Criteria?
Weighing Surgical Risks and Benefits
Surgery for Disk Disease
Surgery for Compression (Osteoporotic) Fractures
Surgery for Lumbar Spinal Stenosis
Spinal Fusion Surgery
Surgery for Other Back Problems
Knowing When You're Ready to Decide

Chapter 10
Preventing a Repeat Episode
Stay Fit
Getting in the Exercise Groove
Watch Your Weight
Kick the Smoking Habit
The Everyday Business of Moving and Sitting

Chapter 11
When Pain Persists
Pain That Takes on a Life of Its Own
Although Gloria Parkinson and I wrote this book together in 2005–6, the story began for me in the spring of 1984, when I was completing my final year of medical school. One March evening I fell hard in an intramural basketball game and developed pain and muscle spasm in my lower back. I had no numbness, tingling, or pain with coughing or sneezing, and the pain did not travel to my legs. But for weeks I was unable to do much except hobble around very slowly because of the pain I felt.

By the time you finish Chapter 4, you'll recognize that I had garden-variety back sprain. And by the end of Chapter 8, you'll know that this problem generally takes care of itself over a period of weeks and can be diagnosed and managed correctly without x-rays or other imaging tests. Further, you'll appreciate that the most effective approach to garden-variety back pain is simply to remain as active as possible within the boundaries of your pain; to maintain your social roles at home, work, or school as best you can; to use simple measures such as heat, cold, acetaminophen, and ibuprofen; and, most important, to let go of your fear. The problem will get better.

I wish I had known these things back in 1984. At the time of my injury, I had completed all but two months of medical school at one of the most prestigious medical institutions in the world. Yet amazingly, I had never met a patient with back pain, nor had I read or heard anything about it in the formal curriculum. I had a vague sense that back pain was a chronic problem that would forever prevent me from doing athletics and limit me at work. As you can imagine, I was quite distressed. I sought care and was directed to a highly regarded rheumatologist (a specialist in arthritis and other musculoskeletal problems) who told me that I should lie flat on my back as often as possible for as long as possible, until the situation got better. I was sent for radiographs of the spine, which were normal. I was referred to an orthopedic surgeon who concluded surgery was not necessary.

I recall vividly spending the Passover Seders (festive dinners) in April 1984 lying on the carpeted floor in my in-laws' home, staring at the shoes of various guests sitting around the dining room table. I tentatively got up for key prayers and to have a bite to eat, but spent most of the evening, as so many others that spring, lying flat on the floor. I felt fearful, especially with a medical internship just a few weeks away. Would I be able to do it? And I felt embarrassed by my disability.

Although my pain persisted, graduation came and I had to choose between continuing the prescribed activity limitation and bed rest or getting on with my work as a medical intern. I'm a pragmatic person and, frankly, had begun to doubt the effectiveness of rest and immobility. So I set off to work as a medical intern in a busy city hospital. I spent that summer on my feet day and
night. By August my back pain was virtually gone.

It comes back every now and then. Like most people with back pain, I have recurrent episodes. Mine typically occur two or three times a year. But I know what to do with these bouts of pain: I continue to walk, work, stretch, and stay busy. And in between bouts I exercise regularly, usually four times each week.

Viewed by today's standards, virtually everything the medical professionals did for me and my back pain in 1984 was wrong, or unnecessary, or both. There was no need for early x-rays or referral to a specialist and a surgeon. The specialist prescribed disability, failed to educate, and failed to reassure. I knew my chosen profession was capable of better.

Over the next decade, I chose to become a rheumatologist. Influenced by my personal experience and awakened awareness of the gaping hole in medical care, I focused my research and clinical interests on regional musculoskeletal pain problems, particularly back pain. I did a rheumatology fellowship at Brigham and Women's Hospital, a teaching hospital affiliated with Harvard Medical School, in Boston. In 1992, shortly after completing my fellowship, I was invited to codirect the Brigham Spine Center, a referral unit for patients with lumbar, thoracic, and cervical spine problems. I've been meeting with patients in the Spine Center every Friday morning for fifteen years. I've heard countless stories from patients with all sorts of back-pain problems. Along the way I have done research on low-back pain, read the growing literature on low-back and neck pain voraciously, and attended many conferences dedicated to back pain. I try to teach what I have learned to many students, residents, and postdoctoral fellows at Brigham and Women's Hospital and Harvard Medical School.

The most important audience, however, is you, the reader. You've picked up this book because you likely have back pain, have had it previously, or have friends or family members who have back pain. My hope is that in reading this book you will become more knowledgeable and less fearful about back pain and its natural history and treatments.

In the upcoming chapters we'll present you with the best information we can find about the epidemiology, natural history, and treatment of back-pain syndromes. These include garden-variety back pain as well as herniated-disk syndromes, spinal stenosis, spondylolisthesis, and other conditions affecting the lumbar and cervical spine. There isn't a quick fix for back pain. First you have to understand the nuances of your back condition. Only then can you consider your management options. With this in mind, Gloria and I have organized this book in four parts. **Part I** looks at the big picture of back pain, including who is more likely to be a back-pain sufferer. **Part II** provides you with an understanding of your back: why it might hurt and the challenges of getting a specific diagnosis.
Part III describes the cornerstone of back-pain management—traditional and nontraditional approaches to pain control. After all, until you get pain relief, you can't begin to consider your other treatment options. Only after this exhaustive foundation work do we embark on Part IV, which discusses the management of your back condition, including the all-important role of exercise in rehabilitation and the prevention of recurrences; and when to consider surgery for your back problem. In other words, the advice in this book builds logically on your understanding of the complexities of your situation. Put another way: first understand; then act.

When I first became a back-pain patient in 1984, there was little research on back pain. The seminal article showing that two days of bed rest was preferable to seven had not yet been published. In the last two decades there have been thousands of articles on back pain. Our goal is to present you this body of evidence, sprinkled with lessons I've learned in my own practice, particularly in areas where the literature is thinnest. Above all, my aim is for you to feel confident that you will be able to cope calmly and intelligently with an episode of back pain should you have one.
As you read in the Preface, I owe my interest in low-back pain, ironically, to some very fine physicians who treated me for this problem more than twenty years ago and did mostly everything "wrong." Of course they did the best they could; and their treatment was state of the art at the time. But it seemed apparent to me then, and is completely clear to me now, that the medical profession's understanding and management of low-back pain was primitive at the time I was completing my medical training.

As it came time for me to choose my specialty and specific areas of interest, I found myself fascinated with the simple musculoskeletal problems that we all have to confront many times in our lives. I'm talking about back pain, neck pain, and other regional pain problems involving the shoulders, hands and wrists, hips, knees, ankles, and feet. Some of these syndromes have specific terms such as bursitis and tendonitis; others have a confusing array of names. The common denominator is that these problems are painful, disabling, costly, highly prevalent—and woefully understudied. These musculoskeletal problems have been my passion since I started seeing patients as a rheumatologist in 1987 at Brigham and Women's Hospital. Musculoskeletal problems have also been the focus of my clinical research.

I cannot possibly thank all the people who helped position me to write this book, or who helped in its writing and production. But several individuals stand out. The first is Dr. Stephen J. Lipson, an exceptional orthopedic spine surgeon and an exceptional human being whom I met in 1987 when I arrived at Brigham and Women's. Steve is about the best doctor I have ever known. His intimate, encyclopedic knowledge of spinal disorders and the human condition, and his generosity with patients and colleagues remain ideals to which I aspire daily. Steve's passionate interest in chronic low-back pain in the middle-aged and elderly ignited my own lifelong engagement in these areas. His courageous struggle to carry on with his work despite his own chronic illness has been a special inspiration to me.

Gloria and I have tried to share with the reader the best evidence available in the diagnosis and management of low-back pain. I cannot possibly acknowledge all of the many dedicated scholars who helped to develop the modern basis of spine care. But I would like to thank three individuals—Drs. John Frymoyer, Richard Deyo, and James Weinstein—each giants in the field, who reached out to me to help me launch my own research and clinical career. As they would modestly point out, their contributions were made possible by their own mentors and may become obsolete by the insights of their students. Fair enough. Still, it's hard for me to imagine three more dedicated, insightful mentors and scholars than John, Rick, and Jim, and I celebrate them here.

The Brigham and Women's Hospital is a rich environment in which to mature as a scholar and
clinician. Over the course of two decades, my own development as a "back-pain expert" has been nurtured by countless conversations with clinical colleagues dedicated to spine care including Drs. Simon Helfgott, Zacharia Isaac, John Carrino, Greg Brick, and many others. Back in 1992, my department chair, Dr. K. Frank Austen, invited me to codirect the Brigham Spine Center. This has been a wonderfully rich opportunity for which I am extremely grateful. I also thank Drs. Matthew Liang, Michael Brenner, and Thomas Thornhill, who supported my vision of developing research and clinical expertise in back pain and other regional musculoskeletal disorders.

Medicine is described aridly in texts but lived richly in the clinic, one patient at a time. Over the last nineteen years I have had the privilege of working with thousands of patients who suffer from low-back pain. Some I saw just once for a self-limited problem; others I have seen for more than a decade. Each patient has taught me something different and special, and I thank them all. And since patients are the best teachers, at various times throughout the book Gloria and I use patient vignettes to illustrate points. These vignettes are composites, based on patients I have seen in my practice over the years. Although the names have been changed, the problems and solutions described are real.

This book was the inspiration of Dr. Anthony Komaroff, Director of Harvard Health Publications. In 2005 Tony asked me if I thought there was anything new to say about low-back pain and whether I'd like to be the one to say it. This was a wonderful offer and I hope the book lives up to Tony's own high standards of scholarly and clinical excellence. The other wonderful gift from Tony was his pairing me with Gloria Parkinson. As the reader of this book will soon appreciate, Gloria is an exceptionally talented writer. Permit me to tell you that she is also dedicated, kind, witty, and wonderfully good company. Gloria and I enjoyed writing this book together and hope that the reader has fun reading it.

Finally, Gloria and I thank the editorial staff of Harvard Health Publications, especially Raquel Schott for her immense patience as Gloria and I worked through our iterative process in the creation of this book.
Part I
The Perplexities of Back Pain
Chapter 1
Bewildered by Your Back Pain?

You've most likely opened this book because your back hurts. Maybe you've had back pain for a matter of weeks; maybe you're a longtime sufferer; or maybe you're wondering about surgery. Another possibility is that you previously had a bout of back pain and made a full recovery. Then suddenly, for no apparent reason, you wake in the morning, prepared to spring into your day, and you're in agony. If you recognize yourself in any of these scenarios, this book is for you.

Whether you're having recurring bouts of back pain or you're one of those unfortunate people who have endured persistent back pain for more than six months, chances are you've already made the rounds of doctors and may even have heard several different opinions about how to treat your back problem. In addition, well-meaning family members and friends may have proffered all sorts of helpful suggestions. Unfortunately, these suggestions may have been confusingly contradictory. One person may have told you to stay in bed, while another advised against staying in bed. Someone may have told you to exercise your way back to a pain-free life, the "no pain, no gain" approach to your situation. Somebody else, on the other hand, might have recommended doing absolutely nothing physical until you feel better and thereafter doing next to nothing—to guard against a relapse. You may also have heard a wide range of advice about surgery, with advocates advising surgery as soon as possible and naysayers warning you that surgery should be your last resort when everything else has failed. Not surprisingly, you come away from these conversations with not only a painful back but also a spinning head! If you've been on the receiving end of such confusing advice, this book is for you.

A Bewildering Condition

If you're feeling bewildered about how to manage your back pain, you're in good company. Many of my patients are similarly confused when they are referred to me, as are the doctors who referred them. Let me share with you a fairly common patient story that illustrates just how frustrating getting a diagnosis and a recommended treatment plan can be. Theresa is a woman in her forties who developed back pain without provocation. With three very active young children to take care of, back pain was not good news. By the time she walked into my office, Theresa was feeling decidedly frazzled. One doctor had told her she had a disk problem; another told her that her disks were fine and the problem was the ligaments in her back. Yet another doctor said there didn't seem to be anything wrong with her back at all—despite the fact that Theresa was in pain. To make matters worse, she'd received a range of different treatment recommendations, from steroid injections to medications to exercises. Needless to say, she was confused and frustrated, with no idea whom she should listen to or what advice she should follow. We'll be returning to Theresa later in the book, but for now know that ultimately Theresa was helped to make decisions that were right for her and that she is now engaged in many of the family and community activities she
If Theresa's experience of going from doctor to doctor and coming away no wiser matches yours, you might think back-pain doctors are not up to snuff. But that's not true. It's important to appreciate that your doctor may well be feeling as frustrated as you. A major stumbling block for doctors and patients alike is that in the United States there have been no recent national guidelines for the diagnosis and treatment of back pain. Although the Agency for Health Care Policy and Research published low-back-pain guidelines in 1992, these have not been updated. And fourteen years is a long time in the history of a medical condition. There has been a lot of new research in that period. Another consideration relates to doctors who specialize in back pain. While specialists can be invaluable, seeing a medical specialist at the start of your back-pain episode is sometimes not as helpful as you might wish. This sounds contrary, but it's a matter of focus. A specialist tends to look for anomalies that explain the problem in terms of his or her specialty. So a doctor who specializes in orthopedics may see an orthopedic abnormality, for example, a slight problem in alignment of the vertebrae, and be convinced the problem is orthopedic in nature. Similarly, a neurologist who specializes in problems of the nervous system may see a nerve problem. This explains some of the diagnostic discrepancies and mixed-message treatment recommendations back-pain sufferers receive.

But whatever the reason, doctors vary markedly in the tests they order and the treatments they recommend for back pain. This has led to diagnostic and treatment inconsistencies and contradictions. Little wonder then that patients, especially those like Theresa who have made the rounds, become bewildered and discouraged.

The good news, however, is that back-pain times "are a changin'." During the past decade or so, researchers have shed invaluable light on the discomforts and diseases of the spine. They've evaluated the pluses and minuses of improved diagnostic approaches for back pain, especially the limitations of computed tomography (CT) and magnetic resonance imaging (MRI) scans. They've monitored the several new or fine-tuned back-treatment options that have become available. The best evidence available today suggests that patients with back pain should remain as active as possible. So back-pain treatments these days attempt [End of Sample]