

The secret of *Low-Back Pain*

Pain in the back — primarily the low back — is a source of great suffering and disability for a large number of Americans. Each year, it accounts for more than 70 million visits to doctors. Low back pain that lasts only a few days is generally caused by injury to the low back muscles. In contrast, injured ligaments in the low back and pelvis can cause pain that lasts for weeks or months or recurs off and on for years. Let's take a look at the structure of the low back in order to understand what gets injured.

Low-Back Structure

Most people aren't clear about where their low back begins and ends. In an average-sized adult, the low back is about six inches long. It is bordered by the bottom of the rib cage, the top of the hip bones, and the upper portion of the sacrum. Functionally speaking, the low back consists of two segments that work together: the five lumbar vertebrae (L1, L2, L3, L4, and L5) and the sacrum (*see Figure 1*).

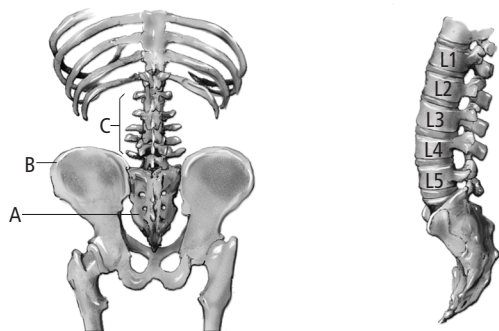


Figure 1. Left, the low back showing the sacrum (A), the ilium (B), and the low-back vertebrae (C). Right, the low-back vertebrae: L1, L2, L3, L4, and L5.

Natural Alignment and Structural Abnormalities

In a normal, healthy spine, the five lumbar vertebrae form a forward (lordotic) curve, so that when you lie supine with your legs straight you can easily slide your hand

under your low back. This natural, shock-absorbing curve is necessary for the health of the low back. A low back without such a curve is out of balance and has less stability. A reverse curve, in which the vertebrae are straight or curved to the back, can make a person more prone to back pain.

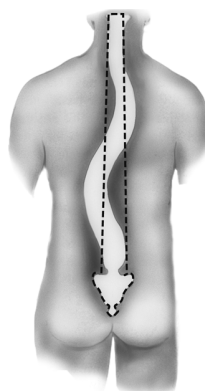


Figure 2. Scoliosis

An exaggerated forward curve, as well as an extreme upper back curve (kyphosis), places excess stress on the lower back. Scoliosis, an exaggerated sideways S curve of the spine (*Figure 2*), is sometimes cited as a cause of back pain, but this is seldom true. Extreme scoliosis causes severe pain problems and often requires surgery, but the common variety rarely causes problems in the low back. Low-back pain is no more common in individuals with slight scoliosis than it is in those without it.

Discs

The phrase “slipped disc” is a popular misnomer. Spinal discs almost never slip, but they do crack and chip, and they may bulge and ooze out to place painful pressure on spinal nerves. Each disc is filled with a squishy substance and acts as a shock absorber, hydraulically cushioning the movement of the spinal bones.

The lumbar discs are the thickest, probably because they absorb the most weight. They are roughly the diameter of a half dollar and are thicker in front than in back, conforming to the shape of the natural forward curve (*see Figure 3A*).

In a normal standing position, the lumbar discs are constantly pushed in a forward direction. Therefore, if a disc is injured, it is more likely to protrude to the front, which causes little or no pain, than to the back and side, where the nerves exit and a protrusion would cause more damage (*see Figure 3B*).

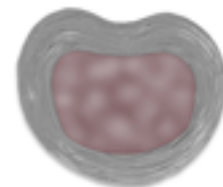


Figure 3A. Intervertebral disc

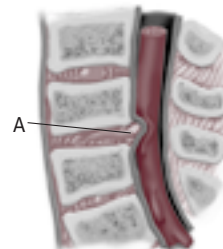


Figure 3B. A disc protrusion (A) can press on a nerve and cause pain.

Continued on page two

The Secret of Low Back Pain

Continued from page one

Nerves

Discs and nerves are close neighbors (see Figure 4). There's not much room for the nerves in the low back to come through their openings in the spine, so any narrowing of their space can be problematic. The nerves that exit beneath the fourth and fifth lumbar vertebrae are the ones most frequently affected by disc problems. If the rim of a disc breaks and part of it presses against a nerve, this can cause numbness and weakness and/or pain in the back, hip, leg, and/or foot. However, disc pressure on nerves accounts for only 2 to 5 percent of all back pain.

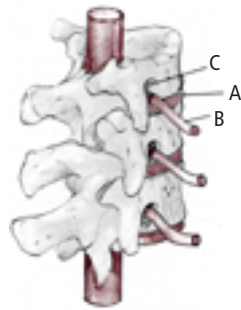


Figure 4. Spinal nerve exits, showing the disc (A), spinal nerve (B), and exit holes (C)

Low Back Ligaments

Other potential sources of aches and pains in the low back are strained ligaments. Several sets of ligaments help to hold the lower vertebrae together and keep the spine stable. They embrace the discs and help to hold them in place. The three most commonly injured ligaments in the low back are the supraspinous (A), interspinous (B) and iliolumbar (F) ligaments (see Figure 5).

The supraspinous and interspinous ligaments connect the spinous processes (the bony protuberances that you feel if you place your hand on your lower spine). The iliolumbar ligament connects the fifth low-back vertebra to the pelvis to the top of the hip bone. These ligaments

cause the majority of back pain that becomes chronic — pain that comes and goes with the amount of activity or sitting a person does.

Sacral Ligaments

In my experience, the main culprits causing low-back pain are not the structures in the low back proper, but those directly adjacent: the sacroiliac ligaments. The sacrum, a triangular bone at the base of the spine, is wedged in between the iliac (hip) bones; the sacroiliac ligaments attach those structures to one another (see Figure 5, E). These massive, criss-crossing ligaments can be strained in many ways and in dozens of places.

Muscles

The erector spinae, quadratus lumborum, and psoas muscles are the major muscles that control movement in the low back and pelvis (see Figure 6). The erector spinae group consists of hundreds of small muscles that run vertically from vertebra to vertebra, on either side of the spine. The quadratus lumborum attaches the back of the hip bone (called the iliac crest) to the twelfth rib and to the little bony protuberances at the sides of several lumbar vertebrae (L1, L2, L3, and sometimes L4). The psoas runs from the front of the low-back vertebrae,

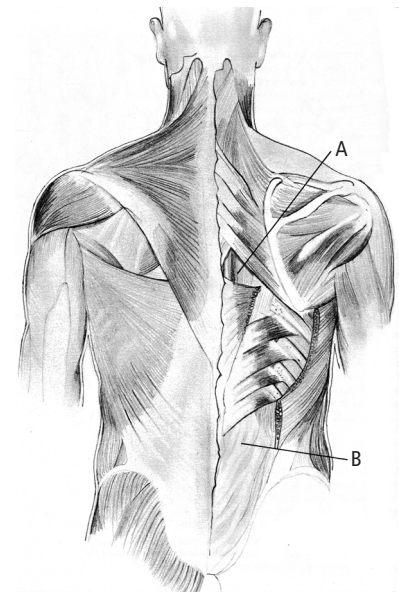


Figure 6. Back muscles — erector spinae (A) and quadratus lumborum (B)

about three inches behind your navel, through the pelvis to the inside of the upper thigh.

Any of these muscles may become strained, irritated, and painful, or they may pull the spine out of alignment and indirectly cause an ache in the low back. In addition, when a disc or ligament is damaged, these muscles frequently go into spasm (involuntary contraction). This contraction is a protective mechanism that serves to prevent movement that might increase the pain or cause further injury. Back pain purely due to muscle strain is usually of short duration. Muscles heal quickly and are helped by many forms of treatment.

Many massage and bodywork practitioners are skilled at techniques such as friction therapy and myofascial release that reduce and eliminate adhesive scar tissue which may be causing back pain. The first step is finding out what is causing your pain, and the second step is getting treatment to address the problem and improve your capacity to heal.

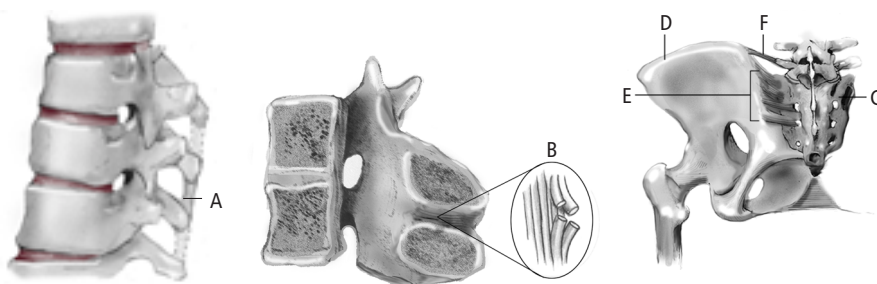


Figure 5. Left, supraspinous ligament (A). Middle, interspinous ligament (B). Right, the sacrum (C), the hip bone, or ilium (D), the sacroiliac ligaments (E), and the iliolumbar ligament (F).

Authored by Ben Benjamin, Ph.D.

Strategic *Influence*

For my entire adult life I have wanted to have some influence in making the world a better place — a lofty goal that comes down to doing something socially useful that affects the lives of others and the society at large. I have moved slowly in that direction since my early twenties with my private practice, then my school, the Muscular Therapy Institute, my WorkLifeCoaching practice, my teaching, and the books and articles that I've written.

Over the last few years, I have begun or completed a number of projects that I hope will have an increasing influence on the spirit and quality of life of those who are touched by them: I have published the most important book of my career, *The Ethics of Touch*, with my co-author Cherie Sohnen-Moe; started Mobius Executive Leadership, a company dedicated to developing healthy leaders, with my business partner Amy Elizabeth Fox; bought a large, permanent building in Watertown for my school to move to; and immersed myself in learning to teach an exciting communication system called SAVI®. I want to tell you a little bit about each of these adventures.

The Ethics of Touch

Since it was first published, this book has received positive reviews from 50 publications. As a textbook on how to create an ethical and honest therapeutic relationship, it is making its way into the hands of thousands of students in the hands-on healthcare field. Currently, it is a required text in more than 270 schools throughout the United States and is recommended in 690 schools. New schools are added to this number every month. Here is one of our reviews:

MESSAGE MAGAZINE MARCH/APRIL 2004, REVIEWED BY DON SCHWARTZ

At first glance, The Ethics of Touch may not seem like a book best described as monumental, but in fact, many decades of dedicated practice, study, thought and care by the two authors and 15 contributors have gone into the realization of a work of critical importance to the entire field of skilled and nurturing touch.

This book is a must-read for anyone who touches for money or barter. Although written for health-care professionals, much of the information is vital to those who touch or are touched as a lifestyle choice.

The authors' approach to their subject is thorough, comprehensive and exhaustive. I found their summaries of transference, counter-transference and defense mechanisms to be the best and easiest to understand I've read to date. Likewise, their exploration and edification of boundaries, emotions, sexuality and intimacy empower the reader to receive, utilize and further explore information about these vital areas on her or his own. An entire chapter is devoted to "dual relationships," which refers to "the overlapping of professional and social roles and interactions between two people."

Reflecting the authors' dedication to excellence, this paperback book is designed perfectly. The pages are large, the type is a pleasure to read, and the text is enhanced with exercises, examples and extended quotations. The wide margins contain references to key points in other parts of the book, critical ideas and short quotations from the likes of Mahatma Gandhi, Groucho Marx and Norman Schwarzkopf. My favorite quote, by Thomas B. Macaulay, cuts to the core: "The measure of a man's character is what he would do if he knew he never would be found out."

The book is well-indexed and annotated. The authors have generously included three appendices: forms; specialized protocols; and codes of ethics from 13 organizations and practices.

It is my fervent hope that all those responsible for training touch practitioners in any context whatsoever will require the reading and comprehension of this book for all of their students.

Whether the reader is a neophyte to the somatics field or a seasoned veteran, The Ethics of Touch is bound to facilitate progressive change in a practitioner's process and content of ethical decision-making.

The widespread understanding and utilization of the information in this instant classic is an absolutely necessary step for the profession to take in order to gain a wider and deeper public acceptance of the value touch practitioners bring to our individual and collective lives.

MTI Moves to Watertown

After a year and a half of searching for a new home for my school, the Muscular Therapy Institute, I found an ideal building in Watertown. It took six months of zoning hearings and 18 months of renovation, but now it is finished. This was one of the most intense projects I have ever undertaken.

After this experience I decided to sell the school to a company called Cortiva to leave more time for my private practice and my other interests.

Cortiva has bought some of the best massage therapy schools in the country to create a national network of the highest quality. I now work for them part-time as the Vice President of Strategic Development.

SAVI® Communication

I have just completed seven years of study and training in an exquisite communication system known as SAVI®. SAVI® x-rays human communications, enabling us to understand what made an interaction or meeting go smoothly or fail. Imagine succeeding at most of your communications, both personal and professional, and understanding exactly what's gone wrong when you don't. The SAVI® method appeals to the right brain and the left brain and is as exciting to learn as it is useful in practice. I am certified to teach SAVI®, and last year I presented six workshops on this topic. In the coming years I hope to teach SAVI® in many more places around the country and the world.

Continued on page four

Ben E. Benjamin, Ph.D.

617-576-0555

Muscular Therapy/Sportsmedicine Services

175 Richdale Avenue, #106 • Cambridge, MA 02140

E-mail: bb@mtti.com



PRIVATE PRACTICE

While my recent endeavors in teaching communication skills have been very rewarding, I also remain firmly committed to my private practice. Working with individuals one on one, helping them to heal from pain and injuries, is deeply satisfying to me. There is no better feeling than hearing a client say, "I feel like I've gotten my life back." On my web site, www.benbenjamin.net, I periodically post stories that clients have shared with me about their experiences. Here are excerpts from three recent stories:

"I had serious problems with my left shoulder for almost a year. I was getting to the point of asking myself, 'Am I just going to have to live with this for the rest of my life?' After a few months of working with Ben, I feel 90% better. He's the only person who's been able to help me."

"I first saw Dr. Ben Benjamin at a time of desperation. A few months earlier, I had taken a leave of absence from medical school due to severe pain in my body and general poor health. As a student, I initially worried about the cost of being treated by Ben. After our initial meeting, however, I knew this money was well-spent. As I head back to medical school, I am deeply grateful to Ben for helping me regain my health."

"Freedom from pain is just one of the numerous benefits I've gained from working with Ben. Through his coaching, he's helped me to take better care of myself in many other areas of my life. I've started to feel very supported in almost every realm. It's hard to think of any area in which he hasn't helped me."

Mobius Executive Leadership

One of the most exciting new developments in my life over the past year has been the official launch of Mobius Executive Leadership. I co-founded this company in 2004 with Amy Elizabeth Fox, a nationally known communications trainer who shares my interest in helping individuals and organizations to develop more effective, constructive, and collaborative ways of working. Since then, Mobius has been expanding at a rapid pace. Our courses have received high praise in a variety of industries, and we expect business to increase exponentially over the next few years.

Mobius offers a wide range of services to organizations of all sizes, including corporate training, organization building, leadership programs, and coaching. Currently the most active area of the company is corporate training (specifically, negotiation, conflict resolution, and SAVI® communication). To lead these programs, we've assembled an exceptional group of consultants and coaches. Many of our Senior Consultants serve as Lecturers at Harvard Law School, Stanford Law School, Columbia Law School, and other law schools teaching negotiation, business ethics, and conflict resolution. All have at least a decade of experience in the field.

I believe strongly that training in communication and leadership skills can make a dramatic difference in any organization. Certainly, this has been my experience in the fields of massage therapy, education, and business coaching. I am grateful for this new opportunity to have a positive impact on a large scale. The Mobius team does work that has the ability to transform the way individuals and entire companies do business — fostering open dialogue, greater clarity, understanding, and creative, constructive approaches to conflict. To learn more about Mobius, please visit us at www.mobiusleadership.com.