

Back to Basics

By Lisa Marshall

We all know the phrases “Oh, my aching back” and “What a pain in the neck.” They’ve been uttered so often over the years, they’ve become ingrained as lighthearted clichés. But for the increasing number of Americans whose chronic spinal problems cause them to lose sleep, miss work, or sacrifice their favorite sports and hobbies, back pain is no joke.

“I had to stop walking. I had to stop using the treadmill at the gym. My wife and I used to love to travel and go on walking tours, and I couldn’t do that anymore,” says Jack Funk, 69, of the omnipresent back ache and debilitating leg spasms he suffered for years. “It really affected my life.”

Studies show that as many as two-thirds of adults will suffer chronic or recurring back pain at some point, making it second only to the cold as the most common reason for visiting a doctor. Back pain accounts for a staggering \$75 billion annually in medical expenses, lost productivity, and disability claims and constitutes the No. 1 reason for inactivity in people under age 45. And according to care providers nationwide, its incidence is on the rise.

“It has been growing steadily over the past 30 years. It’s a huge problem,” says Gerald Silverman, DC, author of *Your Miraculous Back: A Step-by-Step Guide to Relieving Neck and Back Pain* (New Harbinger, 2006).

But despite what many see as a troubling epidemic, there remains a heated debate over just what causes back pain and how to treat it. In more than 85 percent of cases, care providers can find no clear-cut anatomical explanation for the pain, leaving them to speculate about everything from muscle, joint, and disc damage to stress and psychological trauma. When it comes to treatment, back surgery rates continue to soar nationwide, with surgeons in the US performing 40 percent more back operations than in any other developed country. Yet clinicians still argue whether the promise of pain relief outweighs the cost and potential risks associated with surgery (including paralysis and worsening pain), and many of them contend that too many patients turn to drugs or go under the knife before they exhaust other options.

“For chronic low back pain, surgery is seldom a good option,” says Dean Neary, ND, chair of the physical medicine department at Bastyr University, near Seattle. “It may give them some relief, but it often comes at the cost of reducing mobility, which may down the road lead to further complications.”

Faced with the prospect of surgery or prolonged use of pain management drugs, many patients opt for a more holistic approach, making back pain the most frequently stated reason people seek out complementary and alternative therapies.

“To surgically correct something without addressing the underlying cause is missing the boat,” says Neary.

Sitting ducks

So just what underlying causes are driving the soaring rates of back pain in the US? According to many practitioners, our increasingly sedentary lifestyle—centered around long car commutes and long work days slouched in front of the computer—top the list.

Poor posture (such as sitting slumped forward with stomach muscles at rest) can be particularly hard on the back, because it distorts the natural curve in the spine, forcing the low back muscles to do the work intended for the abdominals.

Lack of movement in the spinal joints can also invite inflammation and swelling, which in itself can cause pain. And in the absence of the sensory inputs that come with movement, the gate is left open for pain impulses.

Silverman, who has had a practice in Hauppauge, New York, for 27 years, says the vast majority of back problems result from either muscle sprains or strains, joint injuries brought on by overuse (overdoing it at the gym), or prolonged inactivity. In only a small number of cases does a serious problem such as spinal stenosis (a narrowing of the spinal canal, which puts pressure on the spinal cord) cause the pain. Sometimes genetic, stenosis more commonly occurs with age, as the precarious stack of vertebrae grows uneven, with some moving inward, closing the gap between nerve and bone. Because stenosis can, in severe cases, lead to paralysis, surgery to widen the spinal canal may be warranted, says Silverman, but “it would only be indicated when the symptoms are constant and there is unremitting neurological involvement, such as tingling or weakness or pain in the extremities.”

Over-medicalizing the problem

One of the most common reasons people undergo surgery for back pain—to repair a herniated disc—may be warranted in some severe cases when the disc infringes on the nerve. But that’s not to say that everyone who has a herniated or bulging disc needs surgery—or even suffers pain.

One landmark 1994 study found that 52 percent of adults have bulging discs and never have any trouble with them, and many more have other abnormalities. Only 36 percent have “normal” discs. Such data has led many to believe that disc abnormalities are often mistakenly blamed for pain that may actually originate elsewhere. Yet since the advent of the MRI in the 1980s, which allows doctors to see such disc abnormalities more clearly, the number of surgeries to correct them has risen dramatically. The annual number of spinal-fusion operations alone rose by 77 percent between 1996 and 2001, and observers expect the number of back surgeries overall to rise as new technologies, such as the artificial disc approved by the FDA in 2004, flood the market.

That has Richard Deyo, MD, a professor of medicine and health services at the University of Washington in Seattle, concerned that we are “over-medicalizing” the problem. “MRI scans show something abnormal in nearly everybody whether they have back pain or not. These things can be misleading and have created a new challenge for us,” he says. “We’re taking a more aggressive approach to treatment, and it is not at all clear to me that it is resulting in better outcomes.”

In many cases, research shows, a herniated disc will resolve itself over time, with as many as two-thirds of cases partly or completely healed after six months. On the other hand, according to one study published by Deyo in 2001 in the *New England Journal of Medicine*, “there is no evidence from clinical trials or cohort studies that surgery is effective for patients who have low back pain,” unless they have sciatica, pseudoclaudication, or spondylolisthesis.

One study of spinal stenosis patients found that four years after their operations, about 30 percent of patients still had severe pain and about 10 percent had undergone a second operation. Between January and August 2006, according to press reports, more than 28 lawsuits had been filed against artificial disc-maker DePuy Spine Inc. by patients complaining of worsening pain or other complications after the surgery.

A holistic approach

Those looking beyond conventional medicine for solutions to their back pain typically make the chiropractor, massage therapist, or acupuncturist their first stop. All three approaches have been shown in clinical trials to be more effective than a placebo—and sometimes superior to medical interventions and anti-inflammatory drugs.

By manipulating the vertebrae manually to prompt movement in stiff joints, chiropractors aim to restore mobility to the spine. Pali Cooper, DC, of Marin County, California, adds another nuance to her practice, using a movement-based deep-tissue massage technique aimed at breaking through scar tissue from old injuries. This patented Active Release Technique hinges on the notion that asymmetry often lies at the root of pain. In essence, when scar tissue makes one muscle rigid, another may overcompensate, throwing the body out of balance and causing pain.

A classic example: A runner injures her hip on one side and unknowingly overcompensates with her lower back, causing pain there. In this case, Cooper says, she'd focus her efforts on the hip. "I'm really working on what is causing the problem, not necessarily where they have pain."

At the University of Colorado Center for Integrative Medicine in Denver, roughly 55 percent of the patients who walk in the door for acupuncture come because of chronic pain. About half of them complain of back pain specifically and almost all of them have exhausted all other options. While medical doctors in the adjoining CU Health Sciences Center reacted somewhat skeptically five years ago when the center opened, they now often refer patients to the clinic, says licensed acupuncturist Daisy Dong. "The patients have either reached a plateau, it didn't work at all, or it got worse. Then they come to us and say, 'You are my last resort.'"

Dong says acupuncture works for back pain on many levels. It stimulates the nerve endings, which distracts the brain from the pain and promotes the production of natural painkillers. Studies have also shown that acupuncture increases blood flow, and thus oxygen, to the joints and muscles and that it decreases inflammation and relaxes the patient.

Even in cases where structural problems clearly cause the pain, Dong says she has seen obvious benefits in patients after a 20-minute needling session. "We cannot reverse or correct the structural problem causing it, but we can deal with their pain, and we can also deal with their emotional turmoil," Dong says.

Bastyr naturopath Neary incorporates dietary and lifestyle recommendations and supplements, specifically catering his treatment plan according to each patient. If the patient suffers muscle spasms, he may not be getting enough magnesium and calcium. If it is a matter of joint health, Neary may recommend glucosamine. And if it is a more acute pain caused by inflammation, he may recommend proteolytic enzymes, such as bromelain, which are easily absorbed and have demonstrated anti-inflammatory properties in studies. (See "Enzyme Therapy for Back Pain," below.) Almost always, patients must address underlying lifestyle problems, such as inactivity, excess weight, poor diet, or too much stress. "Back pain is not a disease in and of itself. It's a symptom of something else," Neary says.

The mind/body connection

For Diane Ruenes, the first step toward overcoming a decades-old back problem was getting over the fear that kept her from climbing stairs and picking up her grandchildren. She'd seen her husband go through the agony of traction and bed rest after injuring his back, and she feared she'd end up there too. So she started curtailing her activities. "You are afraid to move because you are afraid the pain is going to get more intense," says Ruenes, an administrative assistant and mother of three.

Her chiropractor, Silverman, calls that instinct "fear avoidance" and believes patients allow it to prolong otherwise benign injuries. "They are afraid of the pain, so they avoid a lot of the activities and exercises they can do to help alleviate the pain."

In reality, he says, too much inactivity typically worsens the problem, making joints rigid and prompting muscles to spasm. His advice: After the acute phase passes, get moving by doing gentle stretching, range of motion, and core strengthening exercises aimed at loosening up the spine and making it less prone to future injury.

For Jack Funk, such advice proved life altering. After years of commuting four hours a day, then sitting at a desk all day, the electrical engineer was devastated when his damaged back began to catch up with him, just in time for retirement. So now he visits the chiropractor when he needs an adjustment, does specific stretching exercises for 10 minutes each morning, exercises regularly, and keeps his weight in check. And his globe-trotting days are back.

Single Leg Raises

(for acute pain in the lower back or upper buttocks; decompresses the large sciatic nerve)

Loop a strap around the ball of your left foot and lie down on your back. Either extend the right foot out completely, pressing your foot into a wall, or keep the right knee bent. Hold the strap lightly in both hands and gently move your left leg toward you. Keep your leg low enough that your lower back doesn't arch. Breathe here for 10 to 15 seconds. Repeat on the right side.

modification: In cases of severe pain, have a friend hold your leg at the ankle and slowly raise it up a few inches. Hold for 10 seconds, release, and change legs.

Knee-to-Chest Stretch

(for moderate pain or aches in the upper buttocks)

Lie flat on your back, bend your left leg, grab onto your knee with both hands, and slowly pull your knee toward your chest. When you begin to feel some moderate pulling in your lower back and upper buttock, stay in that position for 10 to 15 seconds, let go, and slowly straighten your leg. Do this seven to 10 times, each time trying to bring your knee a little closer to your chest. Then repeat the entire exercise on the right side. Never bring both knees toward your chest at the same time.

Ten tips for preventing back problems

- **Stand comfortably:** Keep one foot slightly in front of the other, and keep your knees bent slightly. It takes the pressure off the low back muscles.
- **Sit up straight:** Avoid hunching over with your neck and shoulders forward. It puts stress on the neck muscles. Instead, hold your head upright over your shoulders and maintain a slight arch in your lower back (a small pillow can help). Keep your shoulders in line with your hips, your knees level with your hips, and your feet flat on the floor.
- **Take a break:** Don't sit for extended periods. Instead, get up once an hour to give your back muscles and joints a rest. Inactivity invites inflammation.
- **Use an exercise ball as a chair for part of the day:** It makes sitting less of a sedentary activity and forces the body to maintain its core strength.
- **Sleep smart:** Sleeping on your back puts roughly 55 pounds of pressure on your back muscles. Putting a couple of pillows under your knees can cut that pressure in half. Or, lie on your side with a pillow between your knees.
- **Watch the way you bend and lift:** Bend from the hips, not the waist, and lift with the legs, not the back.
- **Exercise:** Some particularly back-friendly forms of exercise include yoga, which promotes hip flexibility, spine stability, and extension in the lower lumbar regions of the spine, and Pilates, which emphasizes core strengthening.
- **Keep your weight under control:** As few as 10 extra pounds can put unnecessary strain on the joints and muscles, hastening degeneration.
- **Wear supportive shoes:** If your feet aren't healthy, it transfers to your knees, hips, and back.

Skip the high heels.

• **Quit smoking:** Nicotine restricts the flow of blood to the discs that cushion your vertebrae. Sources: Gerry Silverman, DC; Pali Cooper, DC; Dean Neary, ND; North American Spine Association

Enzyme Therapy for Back Pain

For more than 25 years, chiropractor Anthony Cichoke has heralded one secret weapon for both preventing and treating back pain: enzymes.

• What are enzymes? These naturally occurring substances serve to jump-start an array of bodily functions, including the inflammatory and digestive processes.

• How do they work? They break down matter, such as food in the digestive tract (making healing nutrients available to the muscles faster) or proteins responsible for inflammation in the blood stream. If a person is lacking enzymes—often due to poor diet, illness, or advanced age—those processes are hindered, and “you are going to be prone to more pain and slower rehabilitation,” says Cichoke.

• How do i use them? If you have acute pain, take large doses of enzymes in the first days after injury (for some, that means 20 to 30 tablets per day). That should quell discomfort and promote healing by reducing pressure-causing fluid in the blood vessels, promoting better circulation, and ushering waste products out of the body. Take the enzymes on an empty stomach, with water, to hasten their entry into the bloodstream.

• Can they prevent pain? Cichoke believes they can. He says a daily enzyme supplement, along with a diet high in enzyme-rich fruit, vegetables, and sprouted grains, should help. Eating these raw is best since heat destroys enzymes.

• What kind do i use? Basic proteolytic (protein-digesting) enzymes include bromelain (which is derived from pineapple), papain (derived from papaya), and pancreatin (from animal sources).

“For folks who don’t want to take over-the-counter anti-inflammatories,” says Dean Neary, ND, a naturopathic physician from Seattle, “they can be a good option.”