

**Public Lecture by John Chardos, M.D.
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“Low Back Pain”**

**Wednesday, June 15, 2005 at 7:00 p.m. in the Garren Auditorium, Basic Science Building
Sponsored by the Sam & Rose Stein Institute for Research on Aging, UCSD**

Most people have experienced low back pain at one time or another, so it is no surprise that it is one of the most common problems in primary care. Although it is so common, it is not clear how to best treat back pain. With this talk, I hope to empower you with information to better understand back pain and what can be done to manage it.

It is important to first understand what structures are involved in back pain. The spinal column itself consists of many vertebrae, or bones, that are separated by discs. The discs act as shock pads between each vertebra. The lumbar spine consists of five vertebrae that make up the base of the spine and are generally involved with low back pain. The spine supports the body while also protecting the nerves of the spinal column. The nerves exit the spinal column through very small foramina, or holes, between each vertebra. An array of muscle and ligaments connects the vertebrae. There is a delicate balance between the rigid, bony protection and the fluid-like flexibility. It is so complex that it is surprising that we do not have back pain more often.

The actual cause of back pain is usually not clear and the answer can vary from expert to expert. When I see a patient with back pain, I first want to be sure that the pain is actually coming from the back and with the help of “red flags” eliminate the few serious causes. For example, in a patient that appears to have a simultaneous infection, I certainly entertain the possibility of the infection spreading to the back. In someone with a known cancer, like lung, breast or prostate, I also have a high suspicion for the cancer causing the pain. And lastly, if the patient is having leg weakness or problems controlling his/her bowel or bladder, it can be a sign of nerve damage, which is an emergency. Most cases are clarified after a focused history and physical examination although additional imaging (x-ray, CT scan, and/or MRI) is sometimes necessary. It is important to understand that healthy individuals often have “abnormal” imaging. In other words, if we imaged 100 people in their sixties with no pain, the majority of them would have “abnormal” findings. These findings can vary from “severe degeneration” to “herniated discs”. Furthermore, the most common cause of back pain is from injured muscles or ligaments and these are not detected on the imaging. While imaging can be helpful in certain circumstances, it is often a poor window into the cause of pain.

After eliminating catastrophic causes of back pain, the focus of treatment is minimizing pain. In fact, some believe that the faster pain is controlled, the smaller the chance of developing chronic pain. Unfortunately, as with the causes of back pain, the treatment of back pain is also not clear. For example, although physical therapy is readily prescribed, a recent large study calls into question its benefits. Nonetheless, physical therapy may be useful for many patients, and at the very least helps develop an exercise and stretching routine. It is clear that conservative activity is recommended over “bed rest.”

Typical medicinal treatments include a combination of pain medicines, starting with acetaminophen (Tylenol), anti-inflammatories (like ibuprofen or naproxen), and/or muscle relaxants. Each of these has its own risks, with acetaminophen probably being the safest. Anti-inflammatories can cause stomach bleeding, worsen heart conditions,

and worsen kidney performance, but can be very effective in improving pain. Muscle relaxers can be effective, but are risky because they act like sedatives and can increase falls. These medications can be used in combination. It is best to use the smallest possible dose in discussion with your doctor.

When standard medications alone are not enough, an additional narcotic is sometimes needed. There are a number of side effects, including the risk of addiction. The most common side effect I see is constipation, so I recommend starting a stool softener along with the narcotic. Narcotics can also further increase the risk of falling especially when used with a muscle relaxer.

If you have “sciatica”, an anti-nerve medication can sometimes help. These medications usually need to be increased slowly to allow the body to adjust in hopes of avoiding the numerous side effects. Your doctor may prescribe these, since the typical pain medications sometimes do not work as well on nerve pain. Fortunately, most “sciatica” resolves within six weeks.

Other alternative treatments I recommend include massage, acupuncture and chiropractic therapy. The benefits of these are questionable but many of my patients find them to be very helpful. There is currently a study being funded by the National Center for Complementary and Alternative Medicine (NCCAM) looking at usual care versus the patient’s choice of massage, acupuncture or a chiropractic therapy.

Occasionally, back pain develops into chronic back pain and a combination of the above therapies can be used. It is important to realize that chronic pain is usually not completely relieved and the goal is to make it *manageable*. It is difficult to identify the small number of individuals who go on to develop chronic low back pain. Interestingly, good coping skills and a positive attitude seem to be associated with back pain improving sooner and not developing into a chronic problem. A team approach is usually optimal to help in developing coping skills that allow one to tolerate the pain. Pain specialists can also provide steroid injections that can lead to long-term relief for some patients. Relaxation techniques, including yoga, meditation, and Tai Chi, can be particularly effective in managing chronic back pain. Stretching and a home exercise program can be helpful in preventing back pain flare-ups.

I also want to briefly mention surgery. Many people feel that surgery is a sure bet for fixing their ailing back. Although there is a place for surgery, I strongly recommend trying all conservative measures before pursuing surgical intervention. There are many newer, more appealing surgeries, but studies have not yet shown their benefits. For many patients who undergo surgery, the pain may improve temporarily, as it usually does without surgery, but it often returns later. If there is a compression fracture, early intervention with kyphoplasty or vertebroplasty can be quite successful. This technique stabilizes the crushed bone by injecting a bone-like compound into the vertebra. It can be quite successful at improving back pain and maintaining posture.

In summary, successful treatment of low back pain is different for each person. It is best to stay active. Various medications may help the pain. Alternative treatments may be a nice complement. In a few cases, surgery may be an option. Remember, the key to keeping pain manageable is understanding the problem and maintaining a positive attitude while working with your doctor and health care team.