Non-Surgical Approaches to Chronic Neck and Lower Back Pain

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Introduction

We see many patients who have long standing pain in the general area of their neck and their lower back. These are often very difficult problems to manage when dealing with chronic pain. I think we do a much better job treating patients who have acute pain or brand new spinal problems. In many patients, treatment options for chronic pain around the spine are limited. Even in these cases, my main responsibility as an orthopaedic spine surgeon is to make an accurate diagnosis and make patients aware of their conditions so they can deal with them effectively since, in most of these cases, treatment is strictly non-surgical and never produces cure.

I hope from this article you will gain some insight, education and understanding of what treatment options might exist in your case. This article deals with very general points and topics. The basic information applies to any area of the adult spine. Some aspects may apply to your own clinical situation and many of them may not; this article is intended for very general information and knowledge.

Definitions for Mechanical Spinal Pain

In most cases, chronic neck or back pain is produced by mechanical factors, not “pinched nerves.” That’s why I use the term “mechanical pain.” This is defined as pain felt very close to the neck or very close to the lower back (i.e., close to the middle). The pain may radiate toward a shoulder or toward a hip but, as a general rule, there is no radiation of pain to the arms or legs. This pain is generated by “moving parts” in the spine. Moving parts are things like the small joints that connect the vertebra together or even the disks that connect the vertebra. This type of mechanical pain is not produced by the major spinal nerves or spinal cord. Mechanical pain is produced by microscopic nerves that cannot be seen on a MRI scan, on an X-ray or even during surgery.

Mechanical pain is different from “nerve pain,” which tends to run down an arm or leg and typically does not produce symptoms immediately adjacent to the neck or lower back. Arthritis in the spine is the most common example of mechanical pain.

Most patients with mechanical pain in their spine have arthritis, usually the regular “degenerative” type. Arthritis in the spine is not curable by surgery, if the goal of that surgery was just to relieve arthritic neck or back pain. We can do major joint replacements for arthritis in the knee or hip and essentially “cure” arthritis at those sites. Joint replacements do not exist for the spine. Degenerative disc disease is another condition that produces chronic mechanical pain around the spine, and eventually produces arthritis. Most patients with it do not have surgical solutions for their problem.

A third less common category for mechanical pain is “instability.” Instability in the spine is produced by unusual curvatures that appear on X-ray, or it can be produced by “slippage” or “spondylolisthesis.” (The way an orthopaedic surgeon uses the term “instability” is different from the way chiropractors and therapists use the term “malalignment.”) Don’t be confused that your spine is “unstable” just because someone has said you are “out of alignment.” It may not be so.

My General Approach to Evaluating and Treating Mechanical Pain

1. If nothing else, your office visit with me is a screening process to make an accurate diagnosis and rule out other rare conditions for mechanical pain. For many patients we can come up with a diagnosis but may not have any effective treatment for the chronic mechanical/arthritic pain.

2. Through our initial evaluations hopefully we have ruled out any significant component of nerve involvement just by our physical exam and review of scans. Then, your condition is classified as “mechanical pain” as opposed to some other type of nerve problem or neurological condition.
3. As a general statement, specialized scans such as MRI are best used to evaluate nerve problems. They tend to be fairly unhelpful to me in coming up with new treatments for back pain. Many patients ask for scans and many even demand MRI scans; however, you should know that MRIs tend to be unhelpful for treatment of mechanical pain.

4. Most patients with mechanical pain are not “curable” but hopefully are “manageable.” In other words, many can be given tools to help manage their pain.

5. In most patients with back or neck pain, no surgical option is ever discussed. There are exceptions, such as the more rare cases of true instability.

6. In the evaluation and treatment process, there is a lot of trial and error, trying to come up with things that may work for you. We try to isolate subsets of patients who may respond to certain treatment options. These options may include:
   a. physical therapy
   b. non-narcotic medications
   c. surgical treatment (rare)
   d. Physiatry (“pain clinics”)
   e. “Alternative medicine”

7. Regular aerobic exercise programs and home exercise programs tend to be effective in managing chronic mechanical back pain. Even things such as pool therapy for patients who cannot tolerate regular workouts in a gym may be effective in the long-term management of pain. For most of our mechanical back patients we highly recommend a long-term, self-directed light aerobic exercise program for conditioning, weight loss and a general sense of well-being. The things you can do to make your heart healthy (like regular exercise, weight loss and stopping smoking) also seem to make your back hurt less.

8. “Home remedies” like changing mattresses and pillows, orthotics, heating pads and “back stores” seem to be reasonable options for many people trying to manage their chronic pain at home without medications or surgery. As a spine surgeon, however, I can’t give you any advice on the effectiveness of these products or things you may find on the Internet.

Alternative Medicine

In modern American medicine these “alternative medicine” methods are fairly common. As orthopaedic spine surgeons we do not practice alternative medicine. However, we sometimes refer patients with chronic pain to other healthcare providers who practice these treatment methods. Alternative medicine consists of things such as chiropractic treatment, massage therapists, acupuncture and more formal “pain clinics.”

As a general description, “pain clinics” often try minimally invasive methods to control pain such as local injections, electrical stimulators or pain stimulators. Such clinics are usually involved with complex medication prescribing, especially narcotics. As previously noted, I do not practice “alternative medicine” but see it as an adjunctive treatment, something patients may pursue as a last resort. My own feeling is that a small percentage of patients with chronic spinal pain should end up in “pain clinics.”

Steroid Injections

You hear a lot about patients getting injections of cortisone or steroid into their spine for pain relief. These would be things like epidural steroid injections (ESI) or selective nerve root injections, or facet joint injections. However, for treating mechanical pain problems I find such epidural injections (ESI) to be extremely ineffective. I do not recommend steroid injections just for back or neck pain. Even simple office injections for back pain are ineffective in my opinion and I never do them. We have among MaineGeneral’s medical staff physiatrists and anesthesiologists who may do injections for specific nerve conditions like spinal stenosis or radiculopathy, but not as often for mechanical conditions. Some of the “pain clinics” in Maine do local steroid injections into joints
around the spine for relief of mechanical pain. There is probably a small subset of patients with back pain who will respond to these facet (joint) injections. I perform epidural steroid injections (ESI) on my own patients with new (not chronic) lumbar nerve conditions.

**Obesity**

Body weight problems and obesity are at epidemic levels in Maine and the problem is getting worse. In my own practice most patients with chronic mechanical low back pain are overweight at a much higher percentage than the general population without back pain. (Obesity does not seem to be a risk factor for neck pain but it is for lower or even mid-back problems.) As I have stated, long term commitments to aerobic exercise and weight loss may help control this type of chronic pain. It is in your hands. I do not think excessive weight by itself causes back pain in most cases, but I believe it aggravates the pain of arthritic and other preexisting conditions. It makes existing pain worse and degrades your chances of responding to surgery or physical therapy. Morbid obesity may even disqualify you from any of the treatments we offer.

As another important point, **chronic tobacco use** also has been associated with higher levels of chronic pain around the spine for reasons we do not fully understand and higher rates of failed treatment compared to non-smokers.

**Medications**

My protocols for spinal treatments exclude narcotic medications for treating chronic spinal pain. This also applies to tranquilizers, sedating medications or any mood-altering drug. As a surgeon, I use these medicines very frequently for acute pain management and immediately before and after surgery, but not for chronic spinal pain. Other well-meaning physicians have different feelings about the use of chronic narcotic medications and are more likely to prescribe them. I can only give you my recommendations based on sound clinical evidence in the orthopaedic literature. This applies to all patients; I do not play favorites. If your family physician feels you need long-term pain medications like narcotics, it is certainly a decision between you and your well-meaning physician. It also is a decision that is sometimes made in the “pain clinics” by physiatrists. In these pain clinics the anesthesiologist or the physiatrist often makes decisions to prescribe long-term narcotics or mood-altering medications. I do not interfere in that decision; I just don’t prescribe them myself for non-operative chronic spinal conditions. However, even “pain clinics” are not in the business of providing chronic narcotics as the sole method of treatment. As of 2017, the State of Maine has new, strict laws that limit prescribing of all narcotics.

If you, as a patient with chronic arthritis in his spine, have an acute flare up of arthritis that lasts for several weeks, I have no problem giving you stronger pain medications to cover you for this period. I would not intend the medication to be continued beyond the acute phase, however. We use non-addicting medicines such as arthritis medicines and non-steroidal anti-inflammatory medications, and over-the-counter products. Our protocols direct the use of narcotic medications for acute (newer) spinal problems, usually for no longer than three weeks duration for those drugs. We try to find ways to manage your pain without using medication wherever possible. (Here is another way of thinking about it: chiropractors who manage back and neck pain use no medications at all, and in many cases do so quite effectively.)

**The Role of Surgery**

For those of us who take a fairly conservative approach to surgery on the spine there are a very limited number of patients who benefit from surgical procedures to control mechanical neck or back pain. It really depends on the diagnosis.

In general, these surgical patients have true “spinal instability,” not just regular back or neck pain. Based on our office evaluation I can tell you whether you have a “spinal instability.” In general, we can manage spinal instability with fusion operations. However, these are big surgeries and many patients even with a qualifying diagnosis will not be offered surgery because of medical risk factors, obesity or substance-dependence issues.
In general, patients who have spinal instability and who may benefit from surgery are younger patients (usually less than 50 years old), are close to normal weight, have failed many months of other non-surgical therapies, and have disabling levels of pain. Patients with *multiple* levels of disc disease or arthritis rarely benefit from fusion operations for control of back pain. This is a conservative approach. While there has been an explosion of new spinal technology, it still is not a proven, high-yield surgery for most forms of chronic neck and back pain. The explosion of technology in spinal implants has fueled a rise in spinal surgeries. Of the patients I see, I estimate that fewer than five percent with the common forms of mechanical spinal pain would qualify as reasonable surgery candidates. Most of our surgeries are not for neck and back pain.

**The Role of the Orthopaedic Spine Surgeon**

I am an orthopaedic spine surgeon, specializing in adult spine. My purpose is to find things to “fix.” My general approach has been to advocate and pursue surgical treatments on the spine that I believe are effective, but it really depends on the diagnosis if surgery is appropriate. We perform many spinal surgeries for many different conditions that have proven to be very reliable and very effective. However, for chronic mechanical neck pain and low back pain in most cases, effective surgeries are limited or non-existent. I feel I should be available to evaluate and treat an acute “flare-up” of your chronic pain condition, but my job is usually not to manage your chronic pain long term if surgery is not an option. I think my role is to use pain medication in a limited way and to direct you toward nonsurgical methods such as physical therapy.

Often my role is to direct you to other medical providers who can help you with chronic pain when I cannot, such as referrals to physiatrists, rheumatologists, “pain clinics”or even back to your family physician for long-term medication needs. Some family physicians are perfectly comfortable managing pain medications on a long-term basis. My practice is not set up to manage chronic, non-operative pain nor to manage any medications long-term.

**If we have nothing more to offer you such as physical therapy, injection therapy or surgery, here is a summary of self-help options:**

1. Join a health club such as YMCA or other private fitness centers to begin a long-term, self-directed, light aerobic exercise program that includes an indoor pool exercise program. Physical conditioning and wellness have been associated with reduced pain perceptions on a part of most patients.

2. Hire a personal trainer if you can afford to do so. They generally are very knowledgeable in nutrition and exercise and will customize a program to your needs.

3. If weight loss is a goal, join a reputable commercial weight loss program such as “Weight Watchers.” Professional nutritionists also are available or you may consult your family physician on dietary recommendations. Our MaineGeneral Physiatry department also may have supervised weight loss options. I cannot advise you on bariatric (weight-loss) surgery.

4. Massage therapy can be a useful supplement or alternative for episodic control of back and neck pain.

5. Ultimately, your pain control solution may just boil down to *lifestyle changes* and *activity modification*. In other words, you may have to give up some activities. On occasion people have to consider career change away from physically stressful work or stressful environments. Of course, “lifestyle” also involves giving up unhealthy activities such as poor diet, tobacco or other substances of abuse.

**Conclusion**

While many patients with chronic mechanical spinal pain can be “managed,” few are cured. I think patients who do the best are those who are educated, do some research and even scan the Internet for educational materials about spinal conditions. (Be careful of the Internet, however. There is a lot of advertising and unproven treatments or controversial methods, such as “lasar.”)
Patients who best manage their chronic mechanical back pain also are active and exercise aerobically and who avoid addictive substances such as tobacco, alcohol and narcotics. They are in good health, of normal weight and are free of depression and other emotional problems. By all means, if you suffer from depression/anxiety or other psychiatric conditions, you must get those treated if you have any hope of controlling spinal pain.

As an orthopaedic spinal surgeon, I try to isolate groups of patients with these conditions who may respond to the treatment methods listed above, which are mostly non-surgical. Certainly, there are many patients who do not respond to any of these modalities or treatments presented above. Hopefully, these patients will have some peace of mind that we have ruled out more serious problems such as fracture or nerve damage or even cancers. Others may ultimately select referral to formal pain management centers and physiatry.

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