



# SECOND OPINION

Robert Jay Rowen, MD

Supplement

August 2001

## An Amazing Solution for Osteoarthritis

Chronic pain is one of the most talked about problems in the health arena and osteoarthritis is one of the biggest causes of chronic pain.

According to WebMD, "The pain of osteo-arthritis almost always begins gradually, progressing slowly over many years. People under 40 may have the condition with no symptoms at all. Osteoarthritis is commonly identified by aching pain in one or more joints, stiffness, and loss of mobility. Inflammation may or may not be present. The pain may behave like a roller coaster, with bad spells followed by periods of relative relief. It often worsens after extensive use of the joint and is more likely to occur at night than in the morning. Stiffness tends to follow periods of inactivity, such as sleep or sitting, and can be eased by stretching and exercise. Pain seems to increase in humid weather. As the disease advances, the pain may occur even when the joint is at rest and can keep a sufferer awake at night."

Unfortunately fixing the problem hasn't been nearly as easy as describing it. As is the case with many modalities, modern medicine can explain the problem much better than it can solve it. But osteoarthritis is one condition where modern medicine has missed the boat.

There have been many articles written on chronic pain, although it is rarely mentioned what the main cause of the pain is: the connective tissues of the spine and joints. Yet by addressing the deficiency of connective tissues, the lack of collagen and weakness in ligaments, tendons, and muscles, even people with apparent spinal degeneration (a condition previously thought irreversible) can be cured of their pain!

### The Amazing Non-Surgical Cure

A small number of physicians (presently less than 300) have turned to a non-surgical treatment first developed in the late 1930s that has shown very promising results in the treatment of chronic pain.

The treatment is called prolotherapy, which is also known as nonsurgical ligament reconstruction. The treatment is useful for many different types of musculoskeletal pain, including arthritis, back pain, neck pain, fibromyalgia, sports injuries, unresolved whiplash injuries, carpal tunnel syndrome, partially torn tendons, ligaments and cartilage, degenerated or herniated discs, TMJ, and sciatica.

In prolotherapy, a series of injections, consisting mostly of naturally derived substances such as cod liver oil, sugar, salt, or corn extract are given at the site of the chronic pain—usually where ligaments and tendons attach to the bone. These injections are designed to stimulate the immune system by tricking the body into thinking a new injury has occurred.

The injected substances, as foreign matter, mimic an injury by causing irritation and mild swelling in the painful area. The immune system responds to this "injury" by sending macrophages, cells that remove debris and irritants from the body. After the macrophages carry off the irritants for elimination, the immune system sends in fibroblasts, cells that rebuild connective tissue where damage has occurred. This rebuilding process results in new ligament growth, which can be 40 percent stronger than the original ligament. It also results in the acceleration of re-growth of cartilage tissue! Consequently, the physical structure

door will smash into the jamb and you will see damage (arthritis) of the door and jamb. Modern medicine's answer is to cut away the perimeter of the door so it no longer smashes, creating noise and creaking. Or, in the alternative, coat the door edge with oil to smooth the contact (analogous to an injection of steroids or the use of anti-inflammatory drugs). But the oil damages the finish and surface (cartilage) and the degeneration actually accelerates. Either way, the hinges are still loose, and the door will shortly continue its "degenerative" process, as the hinges continue to loosen. Proliferative therapy is analogous to simply taking a screwdriver and tightening up the hinges, totally resolving the problem!

## **Proliferative Therapy Success Stories**

A 61-year-old dentist was having great difficulty in his work due to severe neck pain. His X-ray showed far advanced degeneration of the cervical vertebrae. Within eight treatments of prolotherapy, even with the severe radiographic degeneration, his pain was at least 80 percent reduced and, at his office, he was functioning normally. He has referred more patients to me than any other patient.

A relatively young 28-year-old woman was referred by her physical therapist for intractable headaches following a whiplash-type injury. Although she found the sessions uncomfortable, she persisted due to the gradual improvement and eventually became headache free. Her physical therapist sent me a note to tell me how amazed she was at the recovered stability of injury.

G.M., a 74-year-old woman, was largely crippled due to severe degeneration of the knees. Her orthopedic surgeon recommended immediate joint replacements. After a series of proliferative therapy sessions, she regained enough function in her knees to delay joint replacement by five years. Since artificial joints have a finite life span and the surgery has considerable risks, successful delay in surgery is extremely valuable.

R.D., a male 42-year-old former professional dancer, came to me with incapacitating lower back pain. His X-rays showed degeneration, but not nearly as severe as what would be expected by his pain. The diagnosis was instability due to injured ligaments. After a series of proliferative therapy sessions, his pain so dramatically resolved that he referred the wife of the new lieutenant governor of Alaska for the same treatment for her terrible back pain. In this latter case, I discovered the source of her pain in root canals, recommended appropriate dental treatment and her pain totally and immediately resolved. This spared her a series of injections, which she was fully prepared to undergo.

D.M. is a 60-year-old male referred by his chiropractor for sacroiliac joint pain and instability and instability at the L5-S1 joint (this is the labeling system doctors use to identify specific points in the spine). This is a very common location of pain. Within eight treatments, he was virtually pain free and returned after three years for a two-session "tune-up." The chiropractor, himself a proliferative therapy patient of mine, was impressed at the new stability in the lower back and its ability for the treated joints to hold their adjustments.

Overall, the improvements I've seen with prolotherapy usually make it the first therapy I try for any case of osteoarthritis. It's safe, easy (though a little painful), and doesn't take very long to administer. To find a doctor who performs prolotherapy, contact International College of Integrative Medicine (8189 Fausset Rd., Fenton, Michigan 43430; 866-464-5226) or ACAM (Box 3427, Laguna Hills, CA 92654; Phone: CA, 949-583-7666; outside CA, 800-532-3688. Send a SASE with \$0.52 postage for free list).

Excellent books I heartily recommend include *Prolo Your Pain Away* and *Prolo Your Arthritis Away*, both by Dr. Ross Hauser, a good friend and colleague. Additionally, *Pain Pain Go Away* by Dr. William Faber, my instructor in the technique, is another good source. You should be able to order all three books through your local bookstore or over the Internet.

supported by this connective tissue becomes stronger and more stable, thereby eliminating or greatly diminishing the pain triggered by the corresponding nerves and muscles.

Harold Wilkinson, MD, professor and former chairman of the Division of Neurosurgery at the University of Massachusetts Medical Center, performed a 16-year prolotherapy study culminating in 1995. In his report, Dr. Wilkinson states that it was noteworthy that "a sizeable portion of people with unresolved chronic pain had more than a year's pain relief with only one prolotherapy injection." While these results were obtained with a single injection, most prolotherapy sessions involve multiple injections given in each session.

The response to treatment varies from individual to individual, and depends upon one's healing ability. Some people may need only a few treatments, while others may need 10 or more. The average number of treatments is four to six for each area treated. The best thing to do is get an evaluation by a trained physician to see if you are an appropriate candidate. Once you begin treatment, your doctor can tell better how you are responding and give you an accurate estimate.

Prolotherapy is effective because it attacks and eliminates the root cause of chronic pain: ligament and tendon relaxation. Ligament relaxation causes joints to loosen. A weak ligament will have difficulty holding a joint in place. The nerve fibers within the weakened ligament are activated and cause local pain. They may also cause a referred pain. The muscles surrounding the loose ligament contract to help stabilize the joint—the reason why people with loose ligaments and chronic pain have tight, painful muscles. Only when the weakened ligaments are strengthened will the local and referred pain patterns, as well as the muscle pain, subside. The same is true for tendon weakness.

Prolotherapy (also known as sclerotherapy and proliferative therapy) is given by a slender needle similar to the hair-like needles of the acupuncturist into the fibro-osseous junction.

This is the area where the tendon or ligament attaches to the bone. The substances used in addition to the ones mentioned, may also include

sodium morrhuate, which comes from cod liver fish oil and a local anesthetic. Repeated studies at the University of Iowa have shown that the areas injected have increased in size by 35-40 percent, thus causing permanent strengthening.

Each treatment session results in more and more tissue being laid down in the needed areas. As a result, the joints continue to become stronger. The patient notes more endurance in that they can do more activities as well as activities they couldn't do before. The main side effect of the treatment is less pain, which is a result of the joint being stabilized. Snapping, clicking, and popping sounds go away. The patients can usually feel the joint becoming stronger with each treatment they receive.

## **The Research of Dr. George Hackett — Father of Prolotherapy**

Although chronic pain has many causes, the vast majority of chronic pain sufferers have loose joints caused by ligament weakness. This is evidenced by George S. Hackett, MD's research study described in the third edition of his book, *Ligament and Tendon Relaxation Treated by Prolotherapy*, published in 1958. The study consisted of 656 patients with ages ranging from 15 to 88 years old.

Twelve years after the prolotherapy treatment was completed, 82 percent of the patients considered themselves cured. Dr. Hackett believed that the cure rate with prolotherapy was over 90 percent due to improvements in the technique over the years.

In 1955, Dr. Hackett analyzed 146 consecutive cases of undiagnosed low-back disability during a two-month period. He found that 94 percent of the patients experienced joint ligament relaxation. In 1956, a similar survey of 124 consecutive cases of undiagnosed low-back disability revealed that 97 percent of patients possessed joint instability from ligament weakness. The sacroiliac ligaments were involved in 75 percent of the low-back ligament laxity cases. The lumbosacral ligaments were involved in 54 percent. He also noted that approximately 50 percent had already undergone

back surgery for a previous diagnosis of a disc problem.

Prolotherapy produced an 80 percent cure rate even though 50 percent of the people treated had undergone back surgery. Obviously, the surgical procedures did not relieve the patients' back pain. Rarely does a disc problem cause disabling back pain. Chronic pain in the lower back is most commonly due to ligament weakness—the reason prolotherapy is so effective.

Prolotherapy works because it causes ligament and tendon growth. Dr. Hackett used Synasol, a sodium salt fatty acid, as a proliferant in his original work. Animals were given between one and three injections of the proliferating solution into the tendon and the fibro-osseous junction. There was no necrosis (dead tissue) noted in any of the specimens. No destruction of nerves, blood vessels, or tendinous bands was noted. Compared to non-injected tendons, tendons treated with prolotherapy showed a 40 percent increase in diameter. The fibro-osseous junction, where the tendon attaches to bone, increased by 30 percent, forming permanent tendon tissue.

Dr. Hackett believed the 40 percent increase in diameter of the tendon represented a doubling of the tendon strength.

## **Double-Blind Human Study Demonstrated Success**

In a study at the Sansum Medica clinic of Santa Barbara, California, led by Robert Klein, MD, and Thomas Dorman, MD, a double-blind human study was conducted on the most difficult cases of continuous low-back pain patients who had suffered for 10 years or longer. They divided 81 patients who had undergone surgery, medications, manipulations/adjustments, exercise, physical therapy, and other treatments, which failed to provide adequate relief for 10 or more years.

One group was given manipulation and a reconstructive solution of dextrose, glycerine, and phenol. The other group was given sham manipulations and normal saline injections. Great

care was taken to ensure that neither the patient nor the physicians knew which solution was injected. Both groups were given a total of six sessions of treatment. The results were tabulated and then the code was broken. It was found that 88 percent of the group injected with the reconstructive solution had moderate to marked improvement. They reported their findings in the prestigious British medical journal *The Lancet* on July 18, 1987.

A more recent study by Klein & Dorman showed increased collagen and increased diameter of ligaments on a biopsy of treated human sacraliliac ligaments.

## **What About Arthritis?**

In acute injuries, the ligaments and tendons become torn. Ligaments function to limit the range of motion that bones can move between each other. Ligaments function to stabilize joints and hold the joint together. Discs and cartilage serve to absorb shock and keep the bones from rubbing against one another. If the ligaments become torn or overstretched, the joint becomes unstable and resultant friction causes the discs or cartilage to become worn down, causing a loss of height.

The disc and cartilage may also become worn down by repeated motion. This loss of height causes further ligament laxity and thus more instability. The friction of the joint is a stress. Bones respond to stress by making more bone. This results in bone spurring, which is the body's attempt to splint or stabilize the unstable joint. Degenerative disease is merely the body's attempt to stabilize joints, as the tendons and ligaments have not been able to heal because of lack of blood supply. If a patient has considerable degenerative arthritis, the loss of disc or cartilage height causes a laxity of the supporting ligaments, which results in joint instability. Reconstruction has been shown to be effective in these conditions causing the lax ligaments to become strengthened, thus stabilizing the joint and allowing for increased function and endurance.

Finally the analogy I give my patients. If the hinges of your bedroom door become loose, the