QUESTIONS AND ANSWERS ABOUT PROLOTHERAPY

THIS INFORMATION MAY DIFFER FROM DR REEDER'S PROLOTHERAPY TECHNIQUES AND TRAINING

WHAT IS PROLOTHERAPY?

Prolotherapy is a little known but highly effective method of treating chronic ligament and tendon weakness. In Prolotherapy, the weakened areas are injected with a proliferant solution that directly stimulates the growth of healthy, strong tissues. The healing process can be expected to take about six weeks after the initial treatment. As the tendons and ligaments grow stronger and more capable of doing their tasks, the pain is alleviated.

CORTISONE INJECTIONS

I've heard of cortisone injections; is this the same thing?
We do not use cortisone with any of our patients. Long term studies have shown that cortisone injections actually weaken tissue, Prolotherapy solutions, called proliferants, cause the ligaments and tendons to be strengthened.

WILL THIS TREATMENT WORK FOR MIGRAINES?

Migraine headaches are often caused by ligament injuries to the neck. This same injury can also be the cause of other symptoms including pain reaching almost any part of the head and neck, visual blurring, dizziness, ringing in the ears, loss of balance, and other symptoms. Symptoms may be caused by ligament injury and other factors. Migraines caused by ligament injury can be effectively treated with Prolotherapy.

WHAT ABOUT "SCIATICA" PAIN?

The most common cause of pain radiating down the legs is not "sciatica" or sciatic nerve injury, but a weakness or injury to the ligaments that support the pelvic joint. This radiating or "referred" pain can be effectively treated by Prolotherapy.

HOW MANY TREATMENTS WILL I NEED?

The number of treatments varies with each patient. Many of our patients have reported partial or complete relief of pain after only one session. Patients with a healthy immune system generally require fewer treatments. The average person requires 4 to 6 treatment sessions given at 4 to 6 week intervals.

IS PROLOTHERAPY SAFE?

Prolotherapy is an extremely safe procedure. The risks are far less than taking aspirin or motrin for a lifetime to temporarily alleviate chronic pain. There is, of course, at least a slight risk involved in any medical procedure. In Prolotherapy, the risks and side effects will vary depending on the area being treated, and the doctor will discuss these possibilities fully with the patients during the pre-treatment consultation.

WILL ACC OR INSURANCE COVER THIS?

That depends on the coverage your insurance provides. Most insurance

companies may cover part of your Prolotherapy treatment. The patient is responsible for expenses not covered by health insurance policies. ACC may cover – discuss with the doctor.

WHAT IS PROLOTHERAPY – IN MORE DEPTH

Prolotherapy is a simple, natural technique that stimulates the body to repair the painful area when the natural healing process needs a little assistance. Notice I said "a little assistance". Because often, that's all the body needs, the rest it can take care of on its own. In most cases, commonly prescribed anti-inflammatory medications and more drastic measures like surgery and joint replacement may not help, and often hinder or even prevent the healing process.

The basic mechanism of Prolotherapy is simple. A substance is injected into the affected ligaments or tendons, which leads to local inflammation. The localized inflammation triggers a wound healing cascade, resulting in the deposition of new collagen, the material that ligaments and tendons are made of. New collagen shrinks as it matures. The shrinking collagen tightens the ligament that was injected and makes it stronger. Prolotherapy has the potential of being 100 percent effective at eliminating and chronic pain due to ligament and tendon weakness, but depends upon the technique of the individual Prolotherapist. The most important aspect is injecting enough of the solution into the injured and weakened area. If this is done, the likelihood of success is excellent.

Prolotherapy involves the treatment of two specific kinds of tissue: tendons and ligaments. A tendon attaches a muscle to the bone and involves movement of the joint. A ligament connects two bones and is involved in the stability of the joint. A strain is defined as a stretched or injured tendon; a sprain, a stretched or injured ligament. Once these structures are injured, the immune system is stimulated to repair the injured area. Because ligaments and tendons generally have a poor blood supply, incomplete healing is common after injury. This incomplete healing results in these normally taut, strong bands of fibrous or connective tissue becoming relaxed and weak. The relaxed and inefficient ligament or tendon then becomes the source of chronic pain and weakness.

The greatest stresses to the ligaments and tendons are where they attach to the bone, the fibro-osseous junction. The most sensitive structures that produce pain are the periosteum (covering of the bone) and the ligaments. It is important to note that in the scale of pain sensitivity (which part of the body hurts more when injured), the periosteum ranks first, followed by ligaments, tendons, fascia (the connective tissue that surrounds muscle), and finally muscle. Cartilage contains no sensory nerve endings. If you are told that your cartilage is the cause of your pain, you have been misinformed; the cartilage cannot hurt because they contain no pain sensing nerves. If there is cartilage damage, the ligaments are typically the structures that hurt. Ligaments are weakest where they attach to bone. The periosteum is the most sensitive area to pain and the ligaments second. It is now easy to understand why this area hurts so much. This is where the Prolotherapy injections occur, and thus

eliminate the chronic pain of many conditions including arthritis, mechanical low back pain, degenerative disc disease, cartilage injury, and sports injuries.

Prolotherapy works by exactly the same process that the human body naturally uses to stimulate the body's healing system, a process called inflammation. The technique involves the injection of a proliferant (a mild irritant solution) that causes an inflammatory response which "turns on" the healing process. The growth of new ligament and tendon tissue is then stimulated. The ligaments and tendons produced after Prolotherapy appear much the same as normal tissues, except that they are thicker, stronger, and contain fibers of varying thickness, testifying to the new and ongoing creation of tissue. Yes, you heard me right. The ligament and tendon tissue which forms as a result of Prolotherapy is thicker and stronger than normal tissue, up to 40% stronger in some cases!

In 1983, Y. King Liu performed a study using the knee ligament in rabbits. This study was done in order to quantify the strength of the tissue formed by Prolotherapy. In this study, a proliferant was injected into the femoral and tibial attachments of the medial collateral ligament, the inside knee ligament. The ligaments were given five Prolotherapy treatments and then compared to non-injected ligaments. The results showed that in every case Prolotherapy significantly increased ligamentous mass, thickness, and cross sectional area as well as the ligament strength. In a six-week period, ligament mass increased by 44 percent, ligament thickness by 27 percent, and the ligament bone junction strength by 28 percent. This research was yet another attestation to the effectiveness of Prolotherapy, showing that Prolotherapy actually causes new tissue to grow.
Imagine what it would mean to an athlete to run 40 percent faster, jump 40 percent higher, or be 40 percent stronger? This new growth of stronger, healthier tissue is the normal and desired outcome with Prolotherapy.

THE PROLOTHERAPY CONCEPT

The term Prolotherapy was coined by George S. Hackett, M.D., the "father of Prolotherapy", in 1956. He describes Prolotherapy as follows:

"The treatment consists of the injection of a solution within the relaxed ligament and tendon which will stimulate the production of new fibrous tissue and bone cells that will strengthen the weld of fibrous tissue and bone to stabilize the articulation (where the bone and ligament meet) and permanently eliminate the disability. To the treatment of proliferating new cells, I have applied the name 'Prolotherapy' from the word 'Prolo' (Latin) meaning offspring; 'proliferate' - to produce new cells in rapid succession (Websters Dictionary). My definition of Prolotherapy as applied medically in the treatment of skeletal disability is 'the rehabilitation of an incompetent structure by the generation of new cellular tissue.'"

Dr. Hackett, after 20 years of experience, arrived at the conclusion that injured ligaments were the primary cause of chronic pain. Injured tendons were the second most common cause. He referred to this weakness in the ligaments and tendons as laxity. Prolotherapy involves the injection of

substances that stimulate new tissue growth at the junction between the fibrous tissue (ligaments and tendons) and the bone. Most things break down at a junction site because this is the weakest part of the structure; this is especially true in weight bearing joints. A good example of this is when the leg of a chair is wobbly or loose. This is usually due to a loose connection where the leg attaches to the seat of the chair. By tightening the attachment of the leg to the seat, the chair becomes more stable.

Dr. Hackett used the word "weld," which is a very accurate description of Prolotherapy. Prolotherapy welds the ligaments and tendons to the bone. When welding steel, the welder is applying a very hot probe or flame to melt two pieces of metal together. Two large pieces of metal would require welding many areas all along the long seam. Why do so many spots need to be welded? The reason is to make a stronger connection. If one area weakens in the future due to wear and tear, the others will hold the structure together.

This is the concept behind Prolotherapy. All of the injured tissue must be treated for injuries for chronic pain to be eliminated. Prolotherapy causes the proliferation of new ligament and tendon tissue exactly where the injections are given. It is just like spot welding. It strengthens the exact spot where the weld or injection takes place. The more injections, the stronger the weld.

ARE YOU AN IDEAL CANDIDATE FOR PROLOTHERAPY?

Prolotherapy stimulates the body to repair the painful area. For the patient who has localized areas of pain or the person who has had a recent injury from an accident, Prolotherapy is a very effective treatment to strengthen those specific areas and eliminate the pain. Realize, however, that Prolotherapy starts the growth of new healthy, strong tissue. Your body--your own immune system--grows the tissue. For the person who has terrible digestion, chronic fatigue, irritable bladder; and a host of other chronic nutritional, hormonal, allergic problems, these deficiencies and illnesses should be corrected so the body will be able to respond to Prolotherapy.

THE IDEAL PROLOTHERAPY CANDIDATE HAS THE FOLLOWING:

1. Pain originating from a ligament or tendon
2. Strong immune system
3. Willingness to improve and receive follow-up visits
4. Healthy diet
5. Positive mental outlook

FOR ARTHRITIS AND FIBROMYALGIA

Most people who suffer from arthritis and Fibromyalgia have a portion of their pain or all of their pain from ligament and tendon injury. Most muscle spasms

occur because the underlying ligaments are weakened and the muscles spasm to stabilize the joints, as occurs in Fibromyalgia. The same can be said for arthritis except the body is stabilizing the joints in this condition by overgrowing bone. This overgrowth of bone is called arthritis.

Prolotherapy allows the stabilizing of joints by causing a strengthening of ligaments, thereby eliminating the muscle spasms of Fibromyalgia and the need for the body to overgrow bones occurs in arthritis.

WHEN PROLOTHERAPY DOES NOT WORK

The most common reasons why a person may not attain 100 percent improvement with Prolotherapy are the following:

1. Inadequate (depressed) immune system

2. Nutritional deficiencies

3. Hormonal deficiencies

4. Other factors causing the pain that are not being addressed

5. Correct area being treated but repair not yet complete

6. Wrong area being treated

This last fact is often overlooked. A good example of this relates to patients with lower back pain. All that is typically needed for curing back pain is for the patients to receive Prolotherapy to the lower back at the sacroiliac joints. In a small percentage of the people, the sacroiliac joint remains weakened because the pelvic joint in the front (pubic symphysis) also needs to be treated. The sacroiliac ligaments, in this instance, will only maintain the strength that is attained with Prolotherapy if the pubic symphysis is also treated.