

# PROLO THERAPY

## ***Some Answers to Your Questions***

*"In today's world,  
no one should  
live with pain!"*

***Ross A. Hauser, M.D.***



**CARING MEDICAL**  
**& REHABILITATION SERVICES, S.C.**

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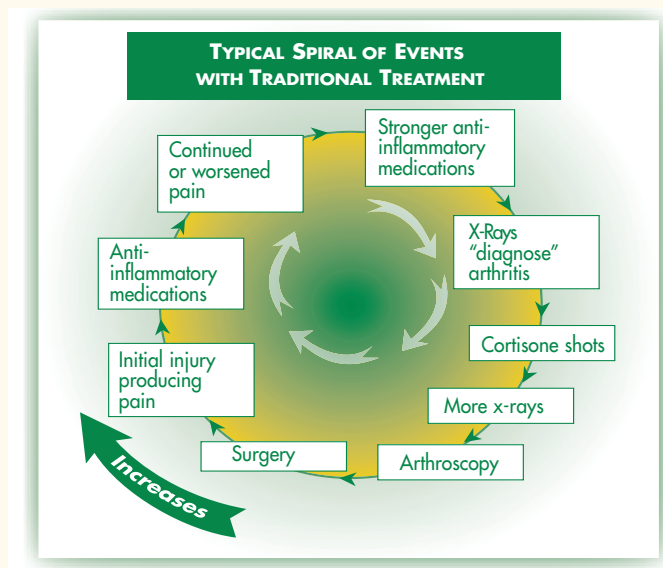
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## PAIN: IT IS NOT AN IBUPROFEN DEFICIENCY

Pain is not, and never will be, an ibuprofen or any other anti-inflammatory medication deficiency. If this is true, why are millions of people taking these medications every day for their chronic pain? Instead of masking the pain with drugs, why not receive a treatment that stimulates the body to **repair the painful area**? Perhaps the reason for this is because the usual course of events in treating chronic pain by traditional physicians, pain clinics, and sports rehabilitation centers is to first treat the pain with non-steroidal anti-inflammatory medications (NSAIDs), then with cortisone shots, eventually progressing to arthroscopy, and when the painful condition persists, some type of surgical procedure. This scenario is all too real for many people! (*See Figure 1.*) The problem with this approach is that all of these traditional treatments weaken the body, increasing the likelihood of future injuries and chronic pain.



**FIGURE 1:** Traditional treatments for pain worsen the condition and actually accelerate the arthritic process.

### **PAIN: AN INDICATION OF A PROBLEM**

Pain, in many respects, is a God-given gift. A gift you say? Yes, pain alerts the body of a problem. Simply put, pain is due to weakness. Pain in the lower back, for example, indicates that some structure in the lower back is weak and needs to be strengthened. This is why suppressing the symptoms of pain with NSAIDs, cortisone shots, or allowing a surgeon to scrape away meniscal or cartilage tissue with an arthroscope is dangerous. If the condition causing the pain is not stopped, the underlying degenerative process will continue. If left unchecked, systemic connective tissue deficiency leading to multiple areas of ligament and tendon relaxation will occur.

### **CHRONIC PAIN: LOOK FOR LIGAMENT AND TENDON RELAXATION**

“Ligament relaxation is a condition in which the strength of the ligament has become impaired so that a stretching of the fibrous strands occurs when the ligament is submitted to normal or less than normal tension.” George S. Hackett, M.D., made this statement 40 years ago and believed chronic pain was simply due to ligament and tendon weakness in and around the joint. Dr. Hackett coined the phrase, “ligament and tendon relaxation,” which is synonymous with ligament and tendon weakness. He later coined the term, “Prolotherapy” and developed the procedure as a treatment for chronic painful conditions.

### **STRAIN VERSUS SPRAIN: WHAT IS THE DIFFERENCE?**

A *strain* is defined as a stretched or injured *tendon*. A *sprain*, on the other hand, is a stretched or injured *ligament*. A tendon attaches a muscle to the bone, whereas a ligament attaches bone to bone. Ligament and tendon injuries often do not heal because these structures have very poor blood supplies. Perhaps even more importantly, their healing is slowed or even stopped by—you guessed

it—NSAIDs, cortisone shots, and more importantly, the **R.I.C.E.** treatment. **Rest, Ice, Compression and Elevation** inhibit healing, whereas the **M.E.A.T.** protocol, consisting of **Movement, Exercise, natural Analgesics** (proteolytic enzymes), and specific **Treatments** like Prolotherapy, stimulates healing. *(See Figure 2.)*

	<b>R.I.C.E.</b>	<b>M.E.A.T.</b>
Immune System Response	Decreased	Increased
Blood Flow to Injured Area	Decreased	Increased
Collagen Formation	Hindered	Encouraged
Range of Joint Motion	Decreased	Increased
Complete Healing	Decreased	Increased
Speed of Recovery	Delayed (Lengthened)	Hastened (Shortened)

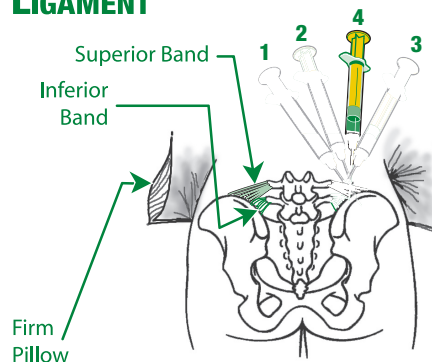
**FIGURE 2:** *The RICE protocol hampers soft tissue healing whereas MEAT encourages healing.*

*Webster’s Third New International Dictionary* defines Prolotherapy as “the rehabilitation of an incompetent structure, such as a ligament or tendon, by the induced proliferation of new cells.” Prolotherapy involves the injection of substances at the sites where ligaments and tendons attach to the bones, thus stimulating the ligaments and tendons to proliferate or grow at the injection sites. This area is called the fibro-osseous junction. “Fibro” means fibrous tissue that forms the ligament or tendon and “osseous” refers to the bone.

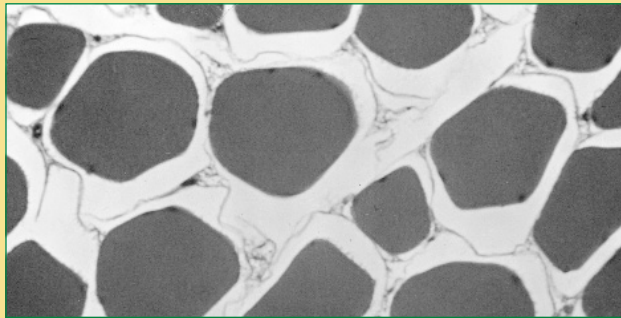
Prolotherapy, therefore, stimulates the body to repair the *exact site* of the painful area. *(See Figure 3.)* Prolotherapy works because it addresses the root cause of chronic pain: ligament and tendon weakness.

## ILIOLUMBAR LIGAMENT

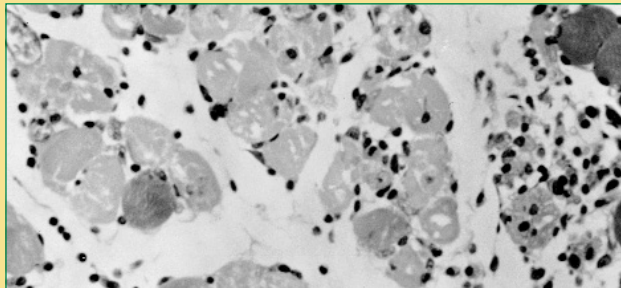
**FIGURE 3:**  
*The exact site of the pain is injected with a Prolotherapy solution.*



## PROLOTHERAPY STIMULATES INFLAMMATION



**NORMAL MUSCLE TISSUE**



### **MUSCLE TISSUE 48 HOURS AFTER PROLOTHERAPY:**

*Injections with 12.5% Dextrose in 0.5% Xylocaine. Notice the massive inflammatory reaction—the basis of Prolotherapy.*

**FIGURE 4: Prolotherapy Stimulates Inflammation**  
*Prolotherapy stimulates the natural healing mechanisms of the body via inflammation.*

Slides prepared by Gale Bordon, M.D., from K. Dean Reeves, M.D. Used with permission.

## PROLO THERAPY STIMULATES THE NORMAL HEALING INFLAMMATORY REACTION

Most people are shocked when they find out that the body heals by inflammation. Yes, God made the body to heal by one way only... inflammation! Inflammation is the process whereby the immune system is activated to help the body restore homeostasis or balance. Prolotherapy injections cause immune cells to arrive at the injury site to repair it. (*Refer back to Figure 4.*)

### THE EFFECTS OF FIVE PROLO THERAPY TREATMENTS TO THE MEDIAL COLLATERAL LIGAMENT

	PROLO THERAPY- INJECTED LIGAMENTS	SALINE-INJECTED LIGAMENTS (CONTROL)	% CHANGE
Ligament Mass (mg)	132.2	89.7	44
Ligament Thickness (mm)	1.01	0.79	27
Ligament Mass (mg/mm)	6.45	4.39	47
Junction Strength (N)	119.1	93.5	28

**FIGURE 5:** Prolotherapy causes a statistically significant increase in ligament mass and strength as well as bone-ligament junction strength.

### PROLO THERAPY VERSUS CORTISONE

	Prolotherapy	Cortisone
Effect on Healing	Enhanced	Inhibited
Effect on Repair	Enhanced	Inhibited
Effect on Collagen Growth	Enhanced	Inhibited
Effect on Tendon Strength	Enhanced	Inhibited
Effect on Ligament Strength	Enhanced	Inhibited
Effect on Cartilage Growth	Enhanced	Inhibited

**FIGURE 6:** Prolotherapy is needed to heal an injury.

Once the injured tissues achieve normal strength, the chronic pain is eliminated. Prolotherapy injections have been shown to significantly increase ligament mass, thickness, and strength. **(See Figure 5.)** Prolotherapy outperforms all other treatments such as NSAIDs, cortisone injections, and surgery. **(See Figure 6.)**

### **PROLO YOUR PAIN AWAY!**

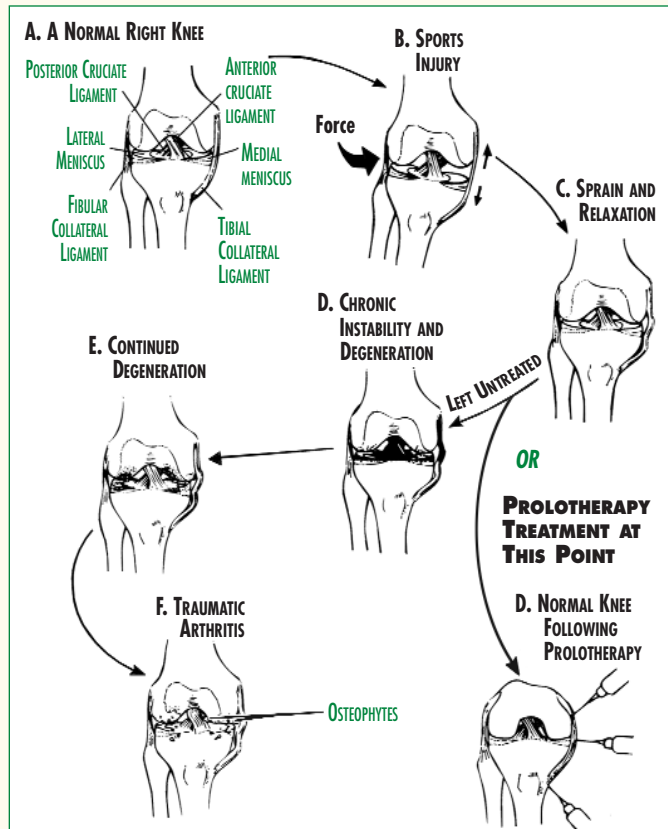
Since pain is caused by injured or weakened connective tissue, i.e. ligaments or tendons, Prolotherapy can cure or substantially alleviate most painful conditions because it strengthens the injured areas.

These are some of the painful conditions that have been treated successfully by Prolotherapy:

Arthritis	Migraines	Sciatica
Back Pain	Myofascial Pain Syndrome	Slipping Rib Syndrome
Bone Spurs	Neck Pain	Spondylolisthesis
Bunions	Osteoporosis	Sports Injuries
Carpel Tunnel	Plantar Fasciitis	Subluxation
Fibromyalgia	Post Surgery Pain	Tendonitis
Herniated Discs	Pregnancy Back Pain	Tennis Elbow
Ligament Sprains	Rotator Cuff Pain	TMJ Syndrome
Loose Joints	RSD Pain	...and a host of others!
Meniscal Tear	Sacroiliac Laxity	

### **PROLO YOUR ARTHRITIS PAIN AWAY!**

Soft tissue injuries to the joints often start the development of degenerative joint conditions. Injury to the ligaments and stabilizing structures of the joint is often the original site of injury. When the ligaments are stretched and weakened, the other structures in the joint, like the meniscus, sustain added pressure. Eventually these structures become fatigued and the cartilage begins to deteriorate. Prolotherapy can stop the degenerative process and eliminate the pain. **(See Figure 7.)** Because Prolotherapy gets at the root cause of the arthritic process it has been used successfully



**FIGURE 7:** Soft tissue injury leads to degenerative arthritis, whereas Prolotherapy halts the process.

### COMMON DEGENERATIVE CONDITIONS TREATED SUCCESSFULLY WITH PROLOTHERAPY

Area	Condition
Knee	Osteoarthritis, Chondromalacia Patellae
Hip	Osteoarthritis, Hip Ligament Sprain
Lower Back	Degenerated Disc, Herniated Disc
Neck	Degenerated Disc, Herniated Disc
Shoulder	Osteoarthritis, Rotator Cuff Tendonitis
Ankle/Feet	Ankle Ligament Sprains, Plantar Fasciitis
Hands/Fingers	Osteoarthritis, Ligament Sprains

**FIGURE 8:** Prolotherapy can stimulate regeneration in all joints of the body.

to treat a myriad of common degenerative conditions. *(See Figure 8.)*

### CONNECTIVE TISSUE HEALING INVOLVES MANY FACTORS

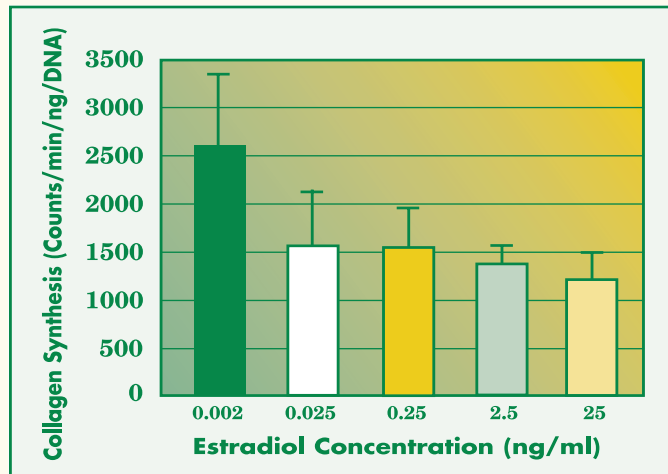
Prolotherapy stimulates the body to repair painful areas. It starts the normal inflammatory healing reaction, but the body's immune system must respond and grow the collagen that is necessary to repair the injured ligaments, tendons, or cartilage. If a person has lost the ability to heal, the response to Prolotherapy will not be optimal. This person is said to have *connective tissue deficiency*, defined as a disorder characterized by a weakening of the connective tissues and a deficiency in the amount, strength, or functioning of the connective tissues leading to a myriad of painful and chronic symptoms. Since there are many factors that affect connective tissue healing, the condition may have many causes. *(See Figure 9.)*

#### FACTORS AFFECTING HEALING OF CONNECTIVE TISSUES

Age	Overall health status
Blood Supply	pH and lactate concentration
Degree of hypoxia (systemic and local)	Pharmacological agents (drugs)
Dietary intake	Psychological influences (placebo effects and psychoneuroimmunological links)
Electrical fields	Severity of injury
Gender	Structural (physical) deformities
Growth factors, cytokines, eicosanoids	Temperature
Hormonal influences	Timing and return to physical activity
Mechanical load forces	Type of injury
Metabolic and cell turnover rates of connective tissue	Type of onset (acute or chronic)
Mobility (local & whole body)	Type of tissue(s) affected
Muscular strength and forces	Underlying disease processes
Nutritional status	

**FIGURE 9:** *Connective tissue deficiency has many causes.*

The cause of the connective tissue deficiency is very often due to the actual traditional treatment the person received, including NSAIDs and cortisone shots. Other common causes include



**FIGURE 10:** *Collagen synthesis is inhibited by increased estradiol levels.*

nutritional factors and hormone deficiencies.

Women are much more likely than men to suffer from the effects of connective tissue deficiency, and thus chronic pain, because of their high estrogen levels, which inhibit collagen synthesis. *(See Figure 10.)* When tested at Caring Medical in Oak Park, Illinois, most people with chronic pain are found to have low levels of hormones, such as Growth Hormone, testosterone, DHEA, and progesterone, all of which are necessary for connective tissue health and healing. For the person with a suspected systemic connective tissue deficiency problem, we recommend a formal evaluation by a doctor who not only does Prolotherapy, but natural medicine as well.



**For answers to questions regarding billing, pricing, insurance, frequency of treatments and more, please go to our site at: [www.caringmedical.com](http://www.caringmedical.com). Click on the "Patient Info" tab.**

Caring Medical & Rehabilitation Services, S.C. is known for its many life changing natural medicine treatments including:

- Biological Aging Measurement
- Bio-Identical Hormone Replacement
- Bio-oxidative Therapies (Oxygen Therapies)
- Chelation Therapy
- Enzyme Replacement Therapy
- Huneke Neural Therapy
- Metabolic Typing
- Mid-Life Medicine
- NeuroCranial Restructuring
- Nutrition and Lifestyle Coaching
- Nutritional/Herbal Regimes
- Photoluminescence
- Prolotherapy
- Photox
- Sports Medicine
- Therapeutic Skin Care Analysis and Treatment
- Ultraviolet Light Therapies

**To read more about Prolotherapy or look up the scientific references used in this brochure, consider reading one of the many books written by Ross Hauser, M.D. and Marion Hauser, M.S., R.D. on Prolotherapy.**

- ***Prolo Your Pain Away! 2nd Edition***
- ***Prolotherapy: An Alternative to Knee Surgery***
- ***Prolo Your Sports Injuries Away!***
- ***Prolo Your Head and Neck Pain Away!***
- ***Prolo Your Arthritis Pain Away!***
- ***Prolo Your Back Pain Away!***
- ***Prolo Your Fibromyalgia Pain Away!***

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