

Prolotherapy (Regenerative Injection Therapy - RIT)

What is Prolotherapy?

"Prolo" is short for proliferation, because the treatment causes the proliferation (growth, formation) of new ligament tissue in areas where it has become weak. It is also known as "Ligament Reconstructive Therapy" or "Sclerotherapy". It is a recognized orthopedic procedure that stimulates the body's natural healing process to strengthen joints weakened where ligaments and tendons are stretched, torn, fragmented, become hypermobile and become painful. Prolotherapy uses a dextrose (sugar water) solution, which is injected into the ligament or tendon where it attaches to the bone. This causes a localized inflammation in these weak areas which then increases the blood supply and flow of nutrients and stimulates the tissue to repair itself.

Prolotherapy has the unique ability to directly address the cause of instability and repair the weakened sites, resulting in permanent stabilization of the joint. When precisely injected into the site of pain or injury, Prolotherapy creates a mild controlled inflammation which stimulates the body to lay down new tendon or ligament fibers, resulting in strengthening of the weakened structure. When the joint becomes strong, the pain will be relieved. Historical review shows that a version of this technique was first used by Hippocrates on soldiers with dislocated, torn shoulder joints. He would stick a hot poker into the joint and it would then miraculously heal normally. Of course, we don't use hot poker today, but the principle is similar in terms of getting the body to repair itself, an innate ability that the body has.

Prolotherapy is helpful for what conditions?

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, chronic tendonitis, partially torn tendons, ligaments and cartilage, degenerated or herniated discs, TMJ and sciatica.

How long will it take to complete a course of treatment?

The response to treatment varies from individual to individual and depends upon one's healing ability. Some people may only need a few treatments while others need 10 or more. The average number of treatments is 4-6 for an 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 better tell how you are responding and give you an accurate estimate.

Prolotherapy Applications

Prolotherapy can be used to relieve a broad spectrum of conditions, including:

- Arthritis
- Backaches
- Carpal Tunnel Syndrome
- Compression fractures
- Knee conditions
- Herniated discs
- Chronic headaches
- Tennis elbow
- Shoulder pain
- Varicose veins
- Temporal mandibular joint dysfunction
- Work related injuries
- Sports related injuries

This is the use of dextrose (purified sugar water) to stimulate your own body's immune system to be drawn to the area of injury so that it can heal itself.

When an area of the body becomes injured, the cells that were traumatized release sugars and fats that call the immune system to the injury. The immune system then rehabilitates and rebuilds the area of the injury. This process lasts for 3-4 weeks, at which point the immune system disperses to take care of the other problems in the body. If the original injury resulted in a stretch or tear of tissue greater than 4-6%, then the first round of natural inflammation that the body mounts will not be enough to fully heal the tissue. During Prolotherapy injection treatment, the immune system is brought to the injury site by the prolotherapy solution.

The healing inflammation that the Prolotherapy creates will last from 3-4 weeks in duration. At this point, the immune system begins to disperse to other parts of the body just as in the very first round of inflammation following an injury. Prolotherapy treatments on ligaments, tendons and joints are done every 3-4 weeks to continue the healing process. It typically takes 4-10 treatments to permanently heal an injured area. Both during and following a Prolotherapy treatment, it is recommended that the patients undergo rehabilitative treatments through a qualified chiropractor or physiotherapist to correct weakness that has set up following the chronic injury.

Prolotherapy Research

Spinal Pain

Journal of Alternative and Complementary Medicine

Hooper RA, Ding M. **Retrospective case series on patients with chronic spinal pain treated with dextrose Prolotherapy.**

J Altern Complement Med. 2004 Aug; 10(4):670-4.

Advanced Spinal Care Centre, Calgary, Alberta, Canada. [Study Abstract](#)

Prolotherapy and Failed Back Syndrome

Pain Physician

Wilkinson HA. **Injection therapy for enthesopathies causing axial spine pain and the "failed back syndrome": a single blinded, randomized and cross-over study.**

Pain Physician. 2005 Apr;8(2):167-73 [Study Abstract](#)

Osteoarthritic Thumb and Finger

Journal of Alternative and Complementary Medicine

Reeves KD, Hassanein K. **Randomized, prospective, placebo-controlled double-blind study of dextrose prolotherapy for osteoarthritic thumb and finger (DIP, PIP and trapeziometacarpal) joints: evidence of clinical efficacy.**

J Altern Complement Med. 2000 Aug;6(4):311-20. [Study Abstract](#)

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Alternative Therapies in Health and Medicine

Reeves KD, Hassanein KM. **Long term effects of dextrose prolotherapy for anterior cruciate ligament laxity.**

Altern Ther Health Med. 2003 May-June;9(3):58-62. [Study Abstract](#)