

## What is Prolotherapy

### Q: What is Prolotherapy?

**A:** Prolotherapy also known as regenerative injection therapy, sclerotherapy, (proliferative therapy), ligament reconstruction therapy, and fibro-osseous injection therapy. It is a recognized orthopedic procedure that stimulates the body's natural healing processes to strengthen joints weakened by traumatic or over-use injury. When the joint's ligaments or tendon attachments are stretched, torn, or fragmented, they become hypermobile and painful. Traditional approaches with surgery and anti-inflammatory drugs often fail to stabilize the joint and relieve this pain permanently. Prolotherapy, with its unique ability to directly address the cause of the instability, can repair the weakened sites and produce new fibrous tissues, resulting in permanent stabilization of the joint.

### Q: How does Prolotherapy work?

**A:** With a precise injection of a mild irritant solution directly on the site of the torn or stretched ligament or tendon, Prolotherapy creates a mild, controlled injury that stimulates the body's natural healing mechanisms to lay down new tissue on the weakened area. The mild inflammatory response that is created by the injection encourages growth of new ligament or tendon fibers, resulting in a tightening of the weakened structure. Additional treatments repeat this process, allowing a gradual buildup of tissue to restore the original strength to the area.

### Q: What is in the solution that is injected?

**A:** The prolotherapy injections contain anesthetic agents (to numb the region) and natural substances which stimulate the healing response. The primary agent is glucose, but each treating physician tailors the selection of substances according to the patients' needs.

### Q: Is the Prolotherapy treatment painful?

**A:** Any pain involving an injection will vary according to the structure to be treated, the choice of solution, and the skill of the physician administering the injection. The treatment may result in mild swelling and stiffness. The mild discomfort passes fairly rapidly and can be reduced with pain relievers such as Tylenol. Anti-inflammatory drugs, such as aspirin and ibuprofen, should not be used for pain relief because their action suppresses the desired inflammatory process produced by the injection.

### Q: Can Prolotherapy help everyone?

**A:** Each patient must be evaluated thoroughly with patient history; physical exam, imaging study, and full laboratory work up before treatment will be administered. If you already have labs and studies completed, please bring them with you to the visit so they will not have to be repeated. With this information, your physician can evaluate your potential success with this therapy. Success depends on factors which include the history of damage to the patient, the patient's overall health and ability to heal, and any underlying nutritional deficiencies that would impede the healing process.

**Q: Who administers Prolotherapy?**

**A:** A Physician trained specifically in cadaver based injection techniques.

**Q: What areas of the body can be treated?**

**A:** This form of therapy can be used to treat different joints; such as knee, hip, ankle, wrist, elbow and shoulder. In addition, the cervical, thoracic and lumbar spine including the sacroiliac joints can also be treated. Prolotherapy is also successful in the treatment of carpal tunnel syndrome and temporal mandibular joint dysfunction

**Q: How often do I need these treatments?**

**A:** The treatments should be administered as determined by your treating physician. Frequency and number of overall treatment will depend on location and severity of injury and your ability to heal. The spine and extremities average 2-6 sessions.

**Q: What's the rate of success in treatment?**

**A:** The anticipated rate of success depends on a number of variables, including the patient's history and ability to heal, and the type of solution used. In patients with low back pain with hypermobility, 85% to 95% of patients treated experience remission of pain with this form of therapy. In comparison, the Journal of Bone and Joint Therapy reports on a 52% improvement in patients treated surgically for disc involvement.

**Q: Is this form of therapy really new?**

**A:** Prolotherapy has been used successfully as early as 500 B.C. when Roman soldiers with shoulder joint dislocations were treated with hot branding irons to help fuse the torn ligaments in the shoulder joint. Advances in medicines greatly improved on this process, and led to the modern techniques of strengthening the fibrous tissue rather than producing scarring to fuse tissues. In 1926, a group of physicians met with great success using injection therapy to treat hernias and hemorrhoids. Earl Gedney, D.O., a well-known Orthopedist, decreased his surgical practice and began to inject joints with these newer injectable medicines in the 1940s and 1950s. Also, in 1950, George Stuart Hackett, M.D., wrote a book on injection therapy. His work is still used today in training physicians. In the years since this early work, techniques and medications have advanced to move from a scarring or fusing effect to a strengthening effect, which restores the weakened joint to its original level of stability, without loss of flexibility and function.

Information compiled from multiple sources including the AAOMED website and The PRinciples of Prolotherapy by Ravin, Cantieri and Pasquarello.