Prolotherapy May Help With the Following Conditions:

- ☐ **Athletic injuries**: ligament and tendon injuries, sprains, strains, tears.
- □ **Overuse injuries:** golfers elbow, tennis elbow, shoulder tendonitis, achilles tendonitis, plantar fasciitis, carpal tunnel.
- ☐ **Low back pain**: musculoskeletal tension, sciatica, arthritis, herniated and degenerative discs.
- ☐ Arthritis pain:

knees, back, neck, shoulders, hip, hands, wrists, feet.

- ☐ **Weak, loose, and unstable joints:** hypermobility, subluxations, nerve impingement.
- ☐ **Whiplash injuries:** neck, upper back, shoulders, low back.
- ☐ Sacroiliac joint disorders
- ☐ Fibromyalgia & Myofascial Pain

What is (PRP) Platelet Rich Plasma?

The preparation of therapeutic doses of growth factors consists of an autologous blood collection (blood from the patient), plasma separation (blood is centrifuged), and application of the plasma rich in growth factors (injecting the plasma into the area.) In other words, a PRP treatment is done just like any other Prolotherapy treatment, except the solution used for injection is plasma enriched with growth factors from your own blood. In our office, patients are generally seen every 4-6 weeks. Typically three to six visits are necessary per area.

PRP has been shown effective for <u>labral tears</u> of <u>the hip</u> and <u>shoulder labrum tears</u>, as well as <u>degenerated meniscus and meniscus tears</u>. The scientific literature is full of reports of soft tissue injuries treated with PRP including <u>tendinopathy</u>, <u>tendinosis</u>, acute and chronic muscle strain, muscle fibrosis, <u>ligament sprains and joint capsular laxity</u>, in addition to various degenerative disorders in your joints. Especially exciting is PRP's use for regenerating cartilage.

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Natural Healing Family Medicine

ProlotherapyNonsurgical Solutions



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Elma Office:

411 N. 3rd St. Suite A2 Elma, WA 98541 Ph: (360)402-4943 Monday & Tuesday



What is Prolotherapy?

Prolotherapy is a therapeutic technique that involves the injection of a solution (dextrose, sodium bicarbonate, and lidocaine) into damaged connective tissue, in and around joints. This helps reduce the disruption of normal tissue due to poor structural alignment & biomechanics, incomplete repair from trauma, or the degenerative changes associated with aging.

How often do I need Treatment?

This is different for each individual, but some people feel their pain resolved after just one treatment. Many require multiple injections every four to six weeks depending on the condition being treated and the patient's response to the treatment.

Prolotherapy can be combined with Massage, Ultrasound, Acupuncture, Physical Therapy, Laser Therapy, Chiropractic treatments, Homeopathy, PRP, ozone, nutritional supplements, and eating an optimal diet to obtain the best results.

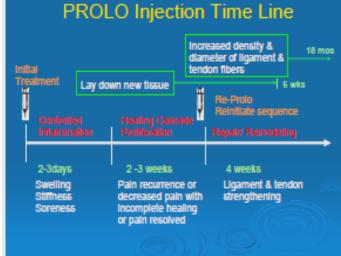
How does Prolotherapy Work?

When the solution is injected into the affected ligaments or tendons it causes a local inflammatory response. This, in turn, triggers the body's natural healing process resulting in the deposition of new collagen, the foundation of ligaments and tendons. This new collagen shrinks as it matures, tightening and strengthening the tissue around the joint that has been injected, thus eliminating chronic pain by getting to the root cause of the situation.

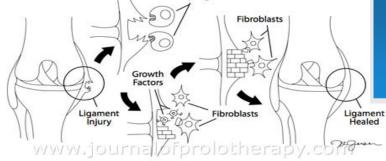
Below is a diagram showing the process of an acute phase reaction in joint repair. This is the same mechanism created with Prolotherapy except specialized for the areas needing repair.

The result is that the treated joint is stronger than the original joint, providing more support and strength, and lowering the potential of future injuries.

Two studies performed by the Department of Orthopedic Surgery at the University of Iowa-one published in the Journal of Orthopedic Research and one published in Connective Tissue Research – Shows that both ligaments and tendons can increase up to 40 percent in strength and size with this therapy.



For more info see FAQs and research: www.naturalhealingfamilymedicine.com



Macrophages

Ligament Injury Stage 1 Stage 2 Stage 3

Inflammation 48 - 72 Hours Proliferation 48 hrs - 6 weeks Remodeling & Maturation 6 weeks - 6+ months