



REGENERATIVE MEDICINE INJECTIONS

With recent additions and changes in regeneration therapies such as Stem Cells and PRP injections, we have made some adjustments in the types of injections we do that we would like you to know about. As you know our body structures are held together by ligaments, tendons, and connective tissue which has been likened to structural glue. When this glue becomes damaged, torn, worn out, or strained, it produces pain. Common locations of pain include the knees, ankles, hips, shoulders, low back, elbows, wrist, and neck. When any ligament or joint has been strained it produces pain. Regenerative medicine administers human tissue products such as tissue allografts, platelet rich plasma (PRP), or dextrose injections (aka Prolotherapy) to repair, reconstruct, or replace worn and damaged tissue to eliminate pain. Tissue products derived from your own blood or umbilical sourced tissues provide additional scaffolding, growth factors, cytokines, exosomes, to promote new growth. We offer three distinct methods for joint and tendon regeneration explained for your benefit below.

Prolotherapy

The longest regenerative therapy in use for the last 50 years is Prolotherapy. Prolotherapy utilizes a mixture of dextrose and an anesthetic, such as procaine or lidocaine, injected at sites of connective tissue damage to stimulate growth factors. Prolotherapy injections induce healing and repair of injured tissue, returning the tissue to its original tensile strength or better. Prolotherapy has offered non-surgical relief for chronic joint pain for over 5 decades. Long before our understanding of Stem Cells, doctors Hemwell and Hackett discovered that dextrose sugar had the ability when injected into damaged joints, ligaments, and tendons, to cause new growth or proliferation of new tissue. The end result after stimulation of healing was greater tensile strength in the ligaments or tendons, and a reduction in localized and referred pain patterns. Many patients having been told they need joint replacements or major surgeries to be out of pain, have been helped by Prolotherapy.

Platelet Rich Plasma (PRP)

The next most common regenerative therapy used for the last 25 years for regeneration of tendons, ligaments, and connective tissue is platelet rich plasma also known as PRP therapy. PRP therapy is concentrated platelets and leukocytes (white blood cells) derived from the patient's own blood. The platelets and leukocytes act as growth factors that stimulate local tissue to repair when injected at sites of acute or chronic injury. Advances in extraction, processing, and concentration have led to safer products and with improved outcomes and less irritation to the surrounding tissue when compared to Prolotherapy.

Tissue Allograft (Stem Cells)

The most recent advancement in regenerative medicine is tissue allografts. Adipose derived tissue and bone marrow extraction are clinically invasive. Wharton's Jelly tissue offers regenerative potential without being clinically invasive. We continue to offer the product line from Predictive Biotech namely WJ Flow™ as a cryopreserved minimally manipulated Wharton's Jelly allograft. WJ Flow™ is processed to maintain the tissue's biological components and consists primarily of epithelial cells, endothelial cells, perivascular cells, cytokines, growth factors, exosomes, and scaffolding proteins. Wharton's jelly is a gelatinous substance in the umbilical cord that provides cushioning to the umbilical artery and veins. The elements and structure of Wharton's jelly consists of 440+ cytokines, chemokines, and growth factors. WJ Flow™ is processed from umbilical cords that were collected from donors with normal pregnancies. WJ Flow™ is regulated by the FDA as a human tissue-based product. Infectious disease testing is performed to minimize potential risks of disease transmission to recipients including HIV and Hepatitis. WJ Flow™ is safe but is contraindicated in patients with a known hypersensitivity to WJ Flow™ or dimethylsulfoxide (DMSO). WJ Flow™ is used to enhance healing properties of multiple tissues including ligaments, tendons, cartilage, and connective tissue in the whole body.

Current Pricing

Even as Prolotherapy appears to take third place to PRP and Stem Cells, it still stands as the first truly anti-aging and regenerative therapy available to the world. A sufficiently treated ligament or tendon of a 60-year-old is difficult to differentiate from that of a 20-year-old. Prolotherapy is likely to be viable for years to come. Even with the advent of many newer and more advanced therapies, Prolotherapy still stands as the most efficient and affordable treatment for chronic pain, and what can be said about PRP can be also said about Prolotherapy. Prolotherapy injections may require between 1-5 sessions in total with each session costing \$330 for a total between \$330-\$1650.

PRP injections which include the patient's own platelets and leukocytes acting as growth factors require between 1-5 injections over time for complete repair of joints and ligaments. Due to the specialized processing done to enhance concentration and safety of the PRP pricing is \$500 per treatment. Due to the fact that individuals may need 1-5 injections over time to heal a specific joint or injury, total expenses could range from \$500-\$2500. When compared to Prolotherapy, PRP is reported to provide greater improvements with less irritation and inflammation.

Tissue Allograft (Stem Cells) cause the most proliferative growth and repairs of all regenerative therapies. Stem Cells on many occasions provide significant recovery and healing in just one injection. Healing is observed over a period of 3-6 months. Pricing for the Wharton's Jelly tissue WJ Flow™ is \$3200 for 1ml, appropriate for a single joint, or \$4,500 for 2ml appropriate for 2 separate joints or areas of pain.

We encourage scheduling a 30 minute consultation for the doctor to review imaging and examine the painful site(s) before scheduling for PRP or Stem Cell treatments to be sure that these are the best choice of therapies. After a comprehensive discussion and exam the doctor may like to order appropriate imaging or labs to support the diagnosis to enhance treatment response. Pricing for the regenerative therapies consultation is \$150 for a thorough 30 minute

visit, one on one with the doctor. We hope these descriptions are helpful in choosing between the varied options for joint regeneration.

Ultrasound Guided Injections

As we continue to improve upon the variety of regenerative therapies we want to take the opportunity to introduce Dr. Casey Seenauth. Besides being a graduate of the Southwest College of Naturopathic Medicine (SCNM) in 2013 Dr. Seenauth completed advanced post-graduate training in spinal injections and interventional pain management while a staff physician at SCNM's Neil Riordan Center for Regenerative Medicine. This training included the use of ultrasound imaging to guide the accurate placement of injections to the site of injury. The doctors of EVND treat acute and chronic conditions with an individualized approach that combines regenerative injection therapy, acupuncture, spinal and fascial manipulation, mind-body medicine, nutrition, homeopathy and botanical medicine. Our patients tell us frequently it was the best decision they ever made, and they are so happy not to have to live with daily pain.

Gratefully,

The EVND Team