

REGENERATIVE INJECTION THERAPY - PROLOTHERAPY - PLATELET RICH PLASMA (PRP) - STEM CELL INJECTIONS

Joint and tendon pain is a common occurrence in everyday life, especially if you have been active, participating in sports, and/or are aging. Movement is vital for health and well-being and it's fun, until it becomes too painful. Many of us here on Kauai are active in ocean sports: surfing, diving, canoe paddling, and more. All of which can lead to overuse injuries, sprain, strains and more severe joint injuries. But joint problems don't have to prevent you from doing the things you love: there are many options for natural pain relief including regenerative injection therapies such as Prolotherapy, Platelet Rich Plasma and Stem Cell injections.

PROLOTHERAPY

Prolotherapy has been used to treat chronic pain for approximately 80 years. The term "Prolotherapy" describes a therapy to stimulate "proliferation" of collagen, the basic substance of all connective tissue. Connective tissue makes up the vital structures that our joints are so divinely constructed of.

Originally discovered in 1939 by James Hackett, MD, Prolotherapy has been studied extensively by Mayo Clinic, the National Institute of Health, and multiple university medical centers around the country and the world. It was endorsed by the former surgeon general C. Everett Koop, and in 2005 the Mayo Clinic recommended it for chronic tendon and ligament pain as a treatment option when physical therapy and exercises failed, and surgery was the only option left, or not possible. Prolotherapy is an injection of concentrated dextrose (sugar water) and other key nutrients to the tendons and ligaments of joints to stimulate healing of chronically injured tissues. There is no cortisone used — the (hypertonic) dextrose stimulates the injected area to grow new collagen, to heal and normalize function, and thereby reducing pain.

Small amounts of Ozone gas is also sometimes used in conjunction with Prolotherapy, thus the term "Prolozone" is sometimes referred to.

PLATELET RICH PLASMA (PRP)

Platelet rich plasma (PRP) is another regenerative therapy which became newsworthy when celebrity athletes such as Tiger Woods, Kobe Bryant and Alex Rodriguez had it done to successfully heal knee, hip and shoulder injuries. Instead of using a dextrose or nutrient solution, PRP uses a concentration of your own platelets and plasma to stimulate healing. When you are injured, platelets normally rush to the area producing growth factors, which stimulate stem cells to regenerate the injured tissues.

If the injury was too much for the body to repair, or the wear and tear has been prolonged, injections of platelets directly to the injured site can give it a second chance at healing, bringing the growth factors, stem cells and nutrients directly where they need to be.

It is especially helpful in tissues where blood flow is limited such as cartilage, tendons and ligaments. For these reasons, PRP is the treatment of choice for injuries to the knee meniscus and the shoulder labrum.

Studies on PRP clearly demonstrate benefit for tennis elbow, proving to be more effective than cortisone at eight weeks. Improvements in pain and function have been shown in golfers elbow, knee and hip arthritis, as well as neck pain. The American Academy of Orthopedic Medicine recommends PRP, stating on their website: "Research studies and clinical practice have shown PRP injections to be very effective at relieving pain and returning patients to their normal lives." Although more than 800 studies have been done on PRP, and it is consistently acknowledged in the research that there are potential benefits with few to no side effects, insurance reimbursement is still lacking.

STEM CELL INJECTIONS

Stem Cells are cells found normally in our bodies that are somewhat immature, and have the ability to grow into more specialized cells when and where needed. The type of Stem Cells used in the growing field of "OrthoBiologics" are "Mesenchymal Stem Cells" .

There are two different sources of Stem Cells for Regenerative Injection Treatment (RIT) : 1) From the Patient's own Bone Marrow and Adipose Tissue (Belly or Torso Fat) , and 2) from Human Amniotic Fluid, Membranes and Placenta. (NO ! NOT from Fetuses!)

Stem Cells are very plentiful in Amniotic/Placental tissues. These tissues are routinely disposed of anyway , in hospital settings, so why not use them to do good?

There are now a handful of Bio Technology Companies that are "harvesting" Placental/Amniotic Tissues in routine Cesarean Section child birth procedures in hospitals all over the United States, and making them available to practitioners of RIT. The FDA strictly regulates these companies for safety. The use of amniotic tissues in healing goes back quite a long way: Amniotic fluids have been used to treat cases of burns and other tissue injuries, with very good results, going back decades.

It is thought that the Mesenchymal (Connective Tissue) Stem Cells and protein growth factors do the “heavy lifting” in Regenerative Injection Therapy , creating the most profound healing of all the three RIT possibilities. Part of the mechanism for Prolotherapy and PRP to work is the migration of a patient’s own growth factors and Stem Cells to the treatment site. The field of “Ortho Biologics” is a fascinating and rapidly growing field in Sports Medicine and Biologic Healing.

Conditions for which Regenerative Injection Therapy (RIT) are effective include:

- Osteoarthritis of the knee, hip, ankle, shoulder, thumb, wrist, TMJ, and spine.
- Tendonitis of the elbow and shoulder, rotator cuff injuries old or new.
- Chronic hip bursitis as well as groin or hamstring injuries.
- Headaches due to neck injuries or neck tightness.
- Chronic sacroiliac pain or instability and spinal pain from injuries or arthritis.

Injection therapies are almost always done in addition to, or after other therapies such as chiropractic, physical therapy, massage and exercise. Often patients have had cortisone shots, epidurals or medications without lasting relief. Conditions which might likely exclude RIT: if your joint pain is due to an autoimmune condition; metal in the injection area; allergy to Prolotherapy’s simple ingredients ; uncontrolled diabetes, or immunosuppression. Patients on Coumadin treatment may require some modifications.

Chronic joint pain is one of the most common reasons for people to stop the physical activities they love , and to bring on a visit to the doctor.

Naturopathic Physician’s philosophy of stimulating the patient’s own healing powers to recover and heal aligns perfectly with Regenerative Injection Therapies. Sometimes our bodies just need a “little help” , of the right kind!