

## **TAKE CONTROL OF YOUR JOINT PAIN!!!**

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BECAUSE JOINT PAIN DOES NOT HAVE TO STOP YOU FROM ENJOYING LIFE!

Joints are these amazing and complex structures that unite your arm to your hand, your thigh to your knee, your ribs to your breastbone, your head to your neck... Joints provide frictionless movement between bony surfaces, cushion and comfortable weight bearing; allowing you to move, to function and to enjoy life!!!

And that is the main thing, to enjoy life! But what to do when joints become so unstable, inflamed, painful and weak that they cannot allow us to perform our normal activities, have fun, feel safe and strong?

Is joint replacement the answer? If the problem has advanced too much, that might be the only option; but if you are not there yet and would like to prevent or delay that route of treatment, let us offer some light regarding natural, safe, and effective possibilities to recover joint stability, grow hyaline cartilage, thicken ligaments and tendons, repair bone surface, diminish chronic inflammation and halt pain.

At Mid Florida Medical Group and Health & Hope Institute, we offer several natural treatments that could really enhance the performance of your joints and delay their painful, debilitating and progressive degeneration and dysfunction.

The reason why some injured tissues repair fast and effectively and others do not, is directly related to the adequate distribution (perfusion) of nutrients and oxygen in to those tissues. It is also crucial to have byproducts (residues and waste material) of metabolism readily removed from the tissues and joint spaces to avoid chronic inflammation and accumulation of lactic acid that causes pain.

### **Regenerative Injection Therapy**

It is a medical procedure that safely and effectively brings sterilized nutrients directly to the areas where are needed.

Chronic inflammation inside the joint does not allow proper delivery of nutrients and removal of waste from the area that is affected. Other reasons for poor joint nutrition are toxicity, diminished integrity of digestive, circulatory and lymphatic systems, emotional conflict, repeated use and physical trauma; the joints and tissues may not receive the nutrients that are needed to grow healthy, to repair any damage and to continue regenerating.

You probably have heard or received injections of steroids (Cortisone) to diminish pain and inflammation quickly. It is advisable not to have more than 3 steroid injections on a joint within a year. They may be effective to quiet the pain for few weeks or a couple of months, but unfortunately, over the long run, Cortisone weakens the immune system (defense mechanism and protection of our bodies) making the body more prone to infections. Cortisone breaks down fat and muscle cells providing the medium for development of an infected abscess. When nerves and blood vessels enter in to contact with steroids and local anesthetics, it may cause scarring, adhesions and damage to these vitals structures.

Repeated use of steroids may cause more damage to the joint, causing thinning and eventual destruction of bone and cartilage contributing to osteoporosis (loss of bone mass), osteoarthritis (lack of protective cushioning and damage of the cartilage due to bone damage and growth of spurs on the contacting bone surfaces) and even osteonecrosis (bone tissue death at site of injection). Steroid injections also cause thinning of the ligaments and tendons increasing fibrosis and lack of elasticity (hardening) and tensile strength of these tissue fibers, promote spontaneous ruptures.

You may check articles like:

Mayoclinic.com: “Cortisone shot risks” and “Long Term Side Effects of Steroid Injections”

Livingstrong.com : “Cortisone shots negative side effects”

Are there any safer alternatives to diminish joint pain and inflammation other than using steroids in injectables and oral presentations?

## **Natural and Regenerative Injection Therapy**

There are several kinds of injections that are very effective, safe and natural and provide longer lasting results without the damaging side effects of the steroid injections. The main three types of Regenerative Injections are: Prolotherapy, Autologous Platelet Rich Plasma (PRP) and Prolozone.

Other injection procedures like Neural Therapy, Homeopathic and Vitamin Injections could be discussed at a later time.

### **Prolotherapy**

Prolotherapy means “proliferative (production, regeneration, growth) therapy”. These injections are administered into the periostium of the bone where the ligaments of a joint attach, to make them thicker and stronger, so that they can increase stability of the joint, improve patient’s level of function and diminish pain.

The injection cocktail is prepared with a mix of dextrose, vitamins, minerals and/or irritants that cause proliferation of tissues. The patient will experience localized and marked inflammation on the sites where the proliferative agents are injected, and usually there is a lot more discomfort for about 3-4 days while the body mounts the proper regeneration and remodeling of ligaments and improvement of contact bony surfaces.

Not everybody may feel encouraged with having to tolerate a sudden increase in pain, restriction of movement, diminished weight bearing and intense localized inflammation for several days, before starting to feel better.

Even though Prolotherapy may cause a great amount of discomfort during the 3 to 4 days following the injection of the proliferative agents that help regenerate a joint’s ligaments; it is an economical and effective way to help improve joint stability, enhance patient’s level of function and delay the degenerative osteo-arthritic process.

## **Autologous Platelet Rich Plasma (PRP)**

PRP is the most modern, safe and effective technology used in USA for Heart Surgery to aid with wound healing, enhance speed of recovery and diminish blood loss and for Orthopedic purposes since 1990's. It is also used to heal wounds and burns faster, to aid in localized hair growth, and to promote facial and skin rejuvenation.

PRP injection help joints regenerate, reducing chronic pain, diminishing inflammation, and dramatically increasing functionality.

The patient's own blood is drawn in to specially prepared vacutainers and placed on a centrifuge to separate the different kinds of cells.

The platelets in the plasma release tissue forming and healing substances known as "Growth Factors". The growth factors are activated with minerals forming a thrombin serum that when injected in to the affected connective tissues and bony surfaces, is going to come in contact with the patient's own stem cells and macrophages and give the signal for progressive and sustained regeneration of cartilage, tendons, muscles, bone and ligaments.

Because the red cells are separated and removed from the blood sample, the platelets become more concentrated, which increases the presence of growth factors by 8 times. Also, because of the separation and removal of the red blood cells, the inflammatory response is more moderate and patient comfort is greatly enhanced. The inflammation produced by injecting one's own plasma is much more controlled, gentle and highly effective, and patient comfort and desire to commit to a complete course of treatment, are greatly improved.

The cost of this advanced technological procedure is higher than other procedures, because of the special kits and medical equipment required to collect the patient's blood, isolate the plasma and activate the growth factors.

The benefits of PRP injections are:

- 1- No risk of Auto-immune reaction or allergic reaction, since it uses and harnesses the power of the patient's own blood.
- 2- Highly effective, gradual and long standing regeneration of connective tissues and articular surfaces it comes in contact with; including ligament, tendon, cartilage, fascia and bone.
- 3- Much more controlled inflammation, much less discomfort and for less period of time, if any (maybe 1 or 2 days of mild discomfort).
- 4- Uses the body's own genetic codes for repair and regeneration, knowing how much tissue to restore, develop and remodel based on every tissue's specific function, tensile or weight bearing demands.

## **Prolozone**

Injections of Oxygen mixed with Ozone (O<sub>3</sub>) into affected articular cavities and connective tissues, for the purpose of regenerating cartilage, diminishing pain, and stopping: ulceration, chronic inflammation and decay of osteoarthritic tissues. One of the most important nutrients required for healing and regeneration is Oxygen.

Ozone is a molecule formed by three atoms of Oxygen. Ozone is an unstable molecule and tends to convert back into Oxygen (O<sub>2</sub>). The body uses Oxygen in molecules of two and when there is an extra available molecule of Oxygen, this “Good Oxidation” is going to wake up and strengthen the cells and cause reactions that supercharge the healing of the tissues it comes in contact with. Ozone injections are excellent to diminish free radical damage and are the most gentle and less costly of the three regenerative injections.

The patient may feel diminished joint pain from the first injections; however, the rate of cartilage growth is slower and not as prominent and sustained, as when utilizing PRP injections.



***An individual patient may need 8 to 12 sessions of Prolozone as compared to 2 to 4 sessions of PRP injections, or 4 to 8 injections of Prolotherapy solution to achieve significant growth of new connective tissue, increased stability and functionality, and diminished pain.***

***A combination of Regenerative Injection procedures, like homeopathic and vitamin injections with prolozone and PRP, may offer the most benefit to the patient.***

### **How to better prepare for Regenerative Injection Therapy?**

1- Athletes who need to recover peak performance within short periods of time and patients who have not responded well to physical therapy, bracing, anti-inflammatory medications, and/or restricted level of activity, are good candidates for Regenerative Injection Therapy.

2- If you have them, please bring your X-ray and MRI films/reports with any diagnostic impressions to evaluate the benefit of these treatment options. Knowing how advanced a

condition is, will help identify the need for a possible surgical repair at some point, due to an extensive tendon or ligament tear, severe erosion of cartilage or a poorly aligned joint.

**3- Regenerative Injection Therapy is not a quick fix, but it is worth going through the process in order to achieve marked improvement of function; gradual, long lasting regeneration of connective tissue, and significant pain relief.**

Depending on the severity of your condition, **additional measures may be suggested during the first days of the regenerative period, like bracing, rest, aquatic exercise, isometric exercise, warm compresses, and high quality nutrition.**

4- With any of these injection therapy procedures, the patient is advised **not to use anti-inflammatory medications at least 5 days before and 5 days after the treatment.** Using anti-inflammatory medications could impair the action of the proliferative (regenerative) foundation needed for tissue repair and re-growth.

5- **It is crucial to drink plenty of water with electrolytes** (essential salts and minerals that carry electrical charges and help in nerve conductivity and muscle contraction) and healthy fluids (like organic - natural fruit juice with low sugar content) for at least 3 hrs before the appointment time and to have a balanced nutrition to have the best outcome from these regenerative injections.

6- **Please make sure you have a small healthy meal with complex carbohydrates and protein (like apple pieces with almonds, tuna or turkey sandwich, whey protein isolate shake), before coming for your scheduled regenerative injection procedure.** In order to prevent hypoglycemia, a sudden drop in blood pressure and/or fainting, please inform your doctor if you have not been able to eat. If that is the case, to protect your safety, your injection procedure may need to be re-scheduled.

**Harness the power of nature to Heal, Repair and Rebuild . . . THE POWER TO HEAL IS WITHIN REACH!!!**