Tendons and ligaments connect muscles to bones, making it possible to do all kinds of physical activities. Overuse or damage to tendons over a long period of time causes the collagen fibers that make up the tendons to form small tears, a condition called Tendinosis. Ligaments are composed of collagen fibers and hold bones together, stabilize joints and control range of motion. Tendons and ligaments have poor blood supply, and they do not easily heal from the damage caused by sprains, strains, and repetitive motion.

More recently there have been studies that support injections of autologous blood into the TMJ in patients with chronic recurrent dislocation as a simple, safe and cost-effective technique. It accelerates the healing process after TMJ surgery as substantiated by clinical and radiographic positive outcomes. Specifically PRP enhances the fibroblastic events involved in tissue healing including chemotaxis, proliferation of cells, proteosynthesis, reparation, extra-cellular matrix deposition, and the remodeling of tissues. Another study found 80% percent had a successful outcome and required no further treatment at their 1-year follow-up. This procedure has proven to be safe, simple, and cost effective for the treatment of chronic recurrent TMJ dislocation. Bottom line here is that PRP helps the healing process.

**What is Platelet-Rich Plasma?**

Platelet Rich Plasma, or PRP is blood plasma with concentrated platelets (the body's repairmen for damaged tissue). The concentrated platelets found in PRP contain huge reservoirs of bioactive proteins, including growth factors that are vital to initiate and accelerate tissue repair and regeneration. These bioactive proteins initiate connective tissue healing, bone regeneration, and repair, promote development of new blood vessels, and stimulate the wound healing process.

**How does PRP Therapy Work?**

To prepare PRP, a small amount of blood is taken from the patient. The blood is then placed in a centrifuge. The centrifuge spins and automatically produces the PRP, which is then injected directly into the center of the injury. Ultrasound guidance is used to monitor the position of the instrument and visualize the injury. The entire process to prepare your blood takes less than 15 minutes and increases the concentration of platelets and growth factors at the site of injury up to 500%.

**I’ve heard of Cortisone Shots; is this the same?**

Studies have shown that cortisone injections may actually weaken tissue. Cortisone shots may provide a quick fix for temporary relief and lessening of inflammation, but the doctor can only do them a few times in any area because of this tissue weakening effect. They do not generally provide long term healing. PRP therapy is healing and strengthening for these tendons, ligaments and joints. Treatment with PRP has strengthened and thickened tendons up to 40%.
What are the Potential Benefits of Treatment?
Patients and doctors can see a significant improvement in symptoms. In TMJ surgery with PRP therapy, tissues that had surgery 1 weeks ago look clinically as if it was 3 weeks ago. This may eliminate the need for more aggressive treatments such as long term medication or surgery, as well as a remarkable return of function and a much shorter recovery time.

How many treatments & How often is this therapy?
While responses to treatment vary, most people will require 3-6 sets of injections. Each set of treatments is spaced approximately 4 weeks apart. There is no limit to the number of treatments you can have, the risks and side effects do not change with the number of injections.

Is PRP right for me?
If you have a tendon, ligament or joint injury and traditional methods have not provided relief, then PRP therapy may be the solution. It is a great adjunct to your TMJ surgery to heal tissue with minimal or no scarring and alleviates further degeneration of the tissues. There will be an initial evaluation with the doctor to see if PRP therapy is right for you. You are restricted from the use of non-steroidal anti-inflammatory medications (NSAIDs) one week prior to the procedure and throughout the course of treatments.

Initially the procedure may cause some localized soreness and discomfort. Most patients only require some extra-strength Tylenol to help with the pain. Ice and heat may be applied to the area as needed. The first week after the procedure, patients will continue their home or physical therapy program, but aggressive physical activity is discouraged.

How soon can I go back to regular physical activities?
This therapy is stimulating the growth and repair of tendons, ligaments, and joint cartilage, which requires time and rehabilitation. Regeneration largely depends on the individual and their age, although good results typically require between one and three treatments at least 2-3 weeks apart.

Does insurance pay for PRP?
With the exception of Medicare, most insurance companies will cover partial reimbursement after pre-authorization if you have out of network coverage. The TMJ Association contacted Dr. John Kusiak, Director of the Molecular and Cellular Neuroscience Program at the National Institute of Dental and Craniofacial Research Institute. Dr. Kusiak provided the following response:

Seems that PRP therapy has been tried for several joints, mostly knees and elbows after sports injuries, etc. Several studies have been done on wound repair, healing after dental extractions (dry socket), or bone regeneration after injury. Results appear mixed at best. PRP doesn’t seem to alleviate pain in affected joints. No trials have been done on PRP and muscle repair/regeneration. My conservative view is that it is too early in the game to suggest that this might be an alternative approach to treating TMJ disorders. Efficacy would also probably depend upon the underlying cause(s) of the TMJD, whether muscle, joint, or disc problem(s); i.e. unlikely benefit if mainly a muscle problem. Noted a recent paper in J Clin Immunol 2010 Apr 28 by A Goebel, Epublished, on the use of immunoglobulin treatment for neuropathic pain, sort of a meta analysis of recent studies. Again, caution on its use for chronic pain conditions, but interesting approach.” Additionally, Dr. Daniel Laskin, the TMJA’s clinical consultant had the following to say:

“Currently, there have been a few studies on the use of PRP in the knee joint for treating degenerative joint disease with some promising results. However, I am not aware of its use in the TMJ. Even in such cases, it would only be beneficial in cartilage healing and the condyle is lined with connective tissue and not directly with cartilage and so the results may be different. Moreover, it would not be helpful in patients with an internal derangement (clicking and locking), which is an anatomic displacement of the disc. The bottom line is that there has to be more studies before any role for PRP injections can be determined. In the interim, I would not advise having this done unless it is part of an approved study and one understands the possible benefits and risks.

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