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Platelet Rich Plasma Injections for Chronic Tendinosis

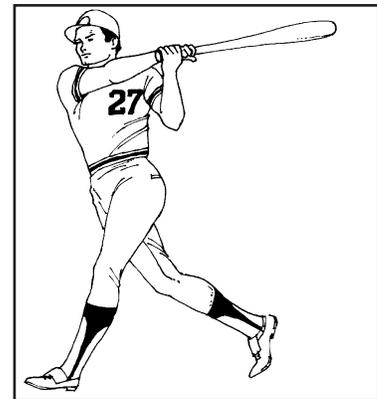
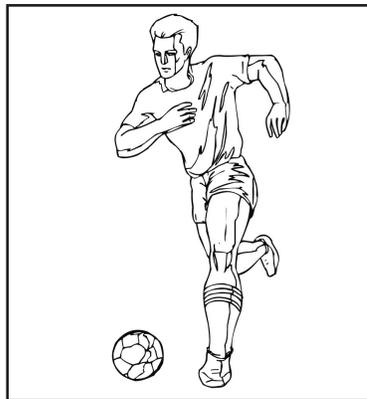
A New Treatment Alternative Now Offered at Hunterdon Orthopedic Institute

Robert C. More, MD

*Clinical Assistant Professor
New Jersey Medical School*

*Orthopedic Consultant
Hunterdon County High Schools*

*Board Certified,
Orthopedic Sports Medicine*

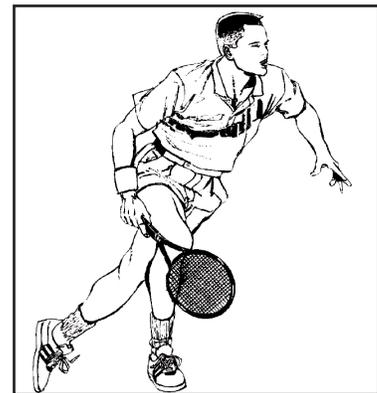
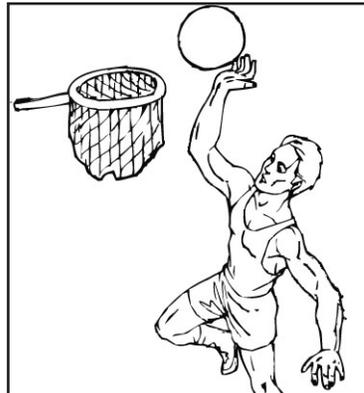


Michael E. Pollack, M.D.

*Sports Medicine and Surgery of the Knee
Department of Orthopedics
Hunterdon Medical Center*

*Orthopedic Consultant
Hunterdon County High Schools*

*Board Certified,
Orthopedic Sports Medicine*



P.M. Collalto, MD.

R.C. More, M.D.

J.E. Decker, M.D.

J.M. Tareco, M.D.

M.E. Pollack, M.D.

P. J. Glassner, M.D.

T.A. St. John, M.D.

Patient Information Series

What is Platelet Rich Plasma (PRP)?

Platelets are small blood cells that are important for blood clotting after an injury. Within platelets are also powerful growth factors, substances which stimulate tissue repair of muscles, tendons, ligaments, and bones. PRP is a blood preparation that contains few red blood cells, but a highly concentrated amount of platelets.

What is Chronic Tendinosis?

Tendons connect muscles to bone and are made up of thousands of individual tendon fibers. Repetitive loads on a tendon from muscular contraction and exercise can cause breakdown of some of the tendon fibers. Tendinosis results from a failure of normal tendon repair, and is characterized by the presence of “scar tissue” around the area of tendon injury, resulting in painful swelling of the tendon.

How is Tendinosis Treated?

The principle treatments include:

- Relative rest - decreasing the loads on the tendon, especially high-velocity loads.
 - Bracing, immobilization devices, and other items to help decrease loads on the tendon (eg. heel cushion for Achilles tendinosis).
 - Ice massage - provides pain relief and stimulates blood flow and healing to the tendon.
 - Muscle/tendon flexibility stretching - a painful tendon is instinctively protected and used less, which allows the muscle/tendon unit to become less flexible. However, a less flexible muscle puts even more loads on the tendon; thus flexibility has to be restored.
 - Low-resistance, high-repetition, slow exercise - this helps blood flow through the tendon and stimulates healing.
 - Steroid injections are generally limited - they can have a long-term detrimental effect on the tendon.
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When Should PRP Be Used To Treat Tendinosis?

- When the usual remedies listed above are not successful, the tendon is not healing, and the painful tendon impairs activities, then PRP should be considered as a treatment.
- The mechanisms of healing have not been fully elucidated, but it is suggested that the high concentration of growth factors in the platelets greatly stimulates the diseased tendon to heal.
- Several articles in scientific journals describe excellent results with PRP injection treatment for chronic lateral elbow tendinosis (tennis elbow), plantar fasciitis, and bone healing.

What Is The Procedure For PRP Injections?

The procedure is performed in the outpatient surgery center.

- 1) First, between 45-60 ml of blood is drawn, depending on how much PRP we will need for your tendon injection.
 - 2) Then, blood is spun down in a centrifuge, and the platelet-rich portion of the blood plasma (ie, the PRP) is collected into a syringe.
 - 3) While the centrifuge process occurs, local anesthetic is injected around the area of the tendon.
 - 4) Next, the PRP will be injected into the tendon. This process only takes a few minutes.
 - 5) The PRP injection will cause some temporary pain in the tendon, especially the first day or two.
 - 6) Once the injection is completed and immobilization is applied if needed, you may leave. Someone should accompany you and take you home.
 - 7) The entire time in the surgery center should be about one hour.
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Minimizing Pain After the PRP Injection

- 1) The local anesthetic that we injected will help for 3-6 hours.
- 2) Ice massage can be used 2-3 times/day (separate handout)
- 3) The tendon will be immobilized as much as possible:
 - Elbow tendons - wrist brace
 - Knee tendons - knee immobilizer
 - Foot tendons - walking boot
- 4) Narcotic pain medication will be prescribed for you to use as needed.
- 5) If pain is mild to moderate, you can try Extra Strength Tylenol every four hours.
- 6) **DO NOT USE** any non-steroid anti-inflammatory drugs (NSAIDs) like Aleve, Advil, Ibuprofen, or Aspirin!

Tendon Recovery After The Injection

- You should limit use of the tendon for 24-48 hours, until the pain from the injection subsides.
- After 24-48 hours, you should slowly increase activity level. You should stretch the tendon 3-4 times/day; we will teach you proper tendon stretching techniques.
- Your follow-up appointment will be two weeks after the injection. At that time we will discuss a strengthening program.
- Gradual return to sports/full activities usually begins at 4-8 weeks.
- Average pain relief from a large published study was as follows: 45% pain relief by four weeks, 60% pain relief by 8 weeks, and 93% pain relief two years after the injection procedure.