

Platelet-Rich Plasma (PRP) for Osteoarthritis and Tendinitis Treatment

PRP therapy is an in-office minor surgical procedure that begins by drawing a small amount of the patient's blood. The blood is then spun in a centrifuge to separate the plasma, platelets and white and red blood cells. The patient's platelets along with some of the plasma are injected back into the body at the site where healing is desired. Platelets are cells in the blood that are mostly known for clotting blood, but platelets also secrete growth factors (including human growth hormone) that are involved in tissue healing. Platelet-rich plasma (PRP) may affect soft tissue healing via growth factors which are released after platelet degranulation. Because of this potential benefit, clinicians inject PRP for the treatment of tendon, ligament, muscle, and cartilage injuries and for early osteoarthritis. The rationale for the widespread use of PRP in the healing process of such varied tissue types resides in the fact that platelets represent an easily accessible reservoir of critical growth factors and other signaling molecules, including leukocyte-

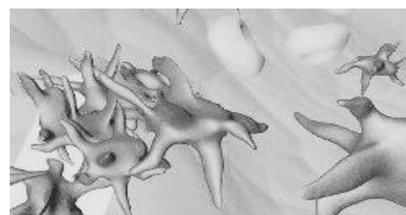


derived catabolic cytokines and fibrinogen, which may govern and regulate tissue-healing processes. This milieu of bioactive molecules contributes to a well-orchestrated tissue-healing response to injury, which proceeds sequentially through the inflammatory, reparative, and remodeling phases of wound healing.

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A study by researchers from the Hospital for Special Surgery, published in the Clinical Journal of Sports Medicine, has shown that platelet-rich plasma holds great promise for treating patients with knee osteoarthritis. The treatment reduced pain, improved function, and in up to 73% of patients, appeared to delay the progression of osteoarthritis, which is a progressive disease.

“You take a person's blood, you spin it down, you concentrate the platelets, and you inject a person's knee with their own platelets in a concentrated form,” said Dr. Halpern. “This then activates growth factors and stem cells to help repair the tissue, if possible, calm osteoarthritic symptoms and decrease inflammation.”



1. Sunitha Raja V, et al. Platelet-rich fibrin: Evolution of a second-generation platelet concentrate. Indian J Dent Res. 2008;19:42–6.
2. Cole BJ, et al. Platelet-rich plasma: Where are we now and where are we going? Sports Health. 2010;2:203–10.