



The American Orthopaedic
Society for Sports Medicine

SPORTS TIP

Treatment of Tendon/ Ligament Disorders with Platelet-Rich Plasma

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What is platelet-rich plasma?

Multiple treatments have been developed to try to speed up the healing rate of tendon injuries with mixed successes. One recent development is the use of platelet-rich plasma (PRP) to stimulate healing. PRP is made by separating out the platelets from the rest of athlete's blood and putting them into a concentrated form. The PRP is then injected around the repair site in acutely, torn surgically repaired tendons or ligaments or injected with a needle into the degenerative tendon in the non-surgically treated overuse conditions. Platelets contain growth factors that stimulate healing, and laboratory studies have shown that PRP may improve tendon and ligament healing.

What are the results of PRP in athletes?

Studies on the use of PRP in athletes have shown mixed results. A few studies on patients with "tennis elbow" and "jumper's knee" have demonstrated some potential benefit from PRP in terms of decreased pain and return to activity while other studies have not shown any benefit for these conditions. Studies on patients undergoing Achilles tendon repair, anterior cruciate ligament reconstruction, and rotator cuff repairs have shown potential for decreased pain levels in the early stages and earlier tendon or ligament healing, but no differences in the long-term outcome.

Is it legal to use PRP in athletes to aid recovery?

In 2009, the World Anti-Doping agency determined that PRP is prohibited when given as an injection into muscle and that injections into tendons to aid in the healing from injury require a declaration of its use that is in compliance with the International Standard for Therapeutic Use Exemptions (TUEs). Similarly, the U.S. Anti-doping Agency issued an "athlete's advisory" in 2009 that a PRP injection is equivalent to an injection of growth factors and that an athlete needs a TUE if a medical professional determines that a PRP injection is necessary. In U.S. professional sports leagues, however, PRP is not addressed in their lists of banned substances.