

PRP is Approved by the FDA

Currently, there are two methods of PRP preparation approved by the U.S. Food and Drug Administration. Both processes involve the collection of whole blood (with the anticoagulant citrate dextrose) that undergoes two stages of centrifugation designed to separate PRP from platelet-poor plasma and red blood cells.

Create PRP in 10-15 Minutes

If a procedure requires 10 cc of PRP, 60 cc of anti-coagulated blood must be drawn and processed. Per manufacturer's instructions for use, a volume of anti-coagulant (ACD-A) is drawn into a 60cc syringe. The skin is prepared in a sterile manner much like that of a blood donor. The blood is gently drawn into the anti-coagulated syringe. Care is taken to not activate the platelets or rupture the RBCs. The specimen is transferred to a sterile, single-use processing device.

A 2-stage centrifugation process is used. The first spin separates the red cells from the PRP where the RBCs are discarded. The second spin concentrates platelets and white cells with the supernatant being the Platelet Poor Plasma (PPP). The PPP is removed and properly labeled. The remaining 7 to 10 cc of plasma is used to re-suspend the concentration of platelets and white cells. This syringe is labeled PRP. This mixture is drawn into separate syringes for their respective treatments. The PRP syringe is then placed in the Adilight-2 LED system to activate the growth factors. After 10 minutes, the PRP can be placed directly into a wound, incision lines for example, or mixed with bone graft material and then placed into a wound bed, or injection into the scalp for male pattern baldness. For additional hemostasis, the PPP and calcium activator may be applied directly to an injury or joint.

What PRP Treats

**Osteoarthritis
Degenerative Knees
Muscle Tears
Tendon Injuries
Ligament Injuries
Joint Pain**

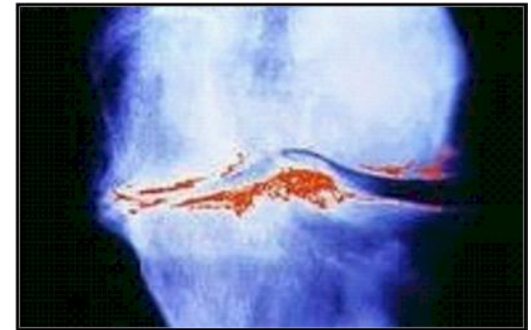
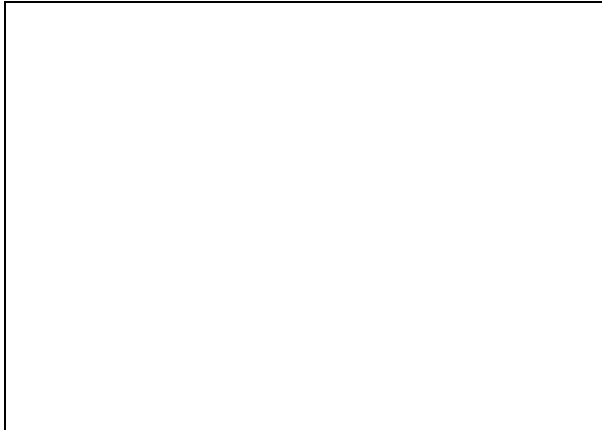
Length of Treatment

The usual course of treatment for knees involves three treatments, one week apart. Other injuries may only require one treatment. Follow standard protocols outlined by your PRP manufacturer.

If you are performing PRP procedures, reduce your patient call backs and complaints by adding Adi-Light 2 to your treatment protocol.

Contact Us

Contact us below to find out more about Adistem technology – and to get started.



ACCELERATED HEALING

Adi-Light 2: PhotoActivation

**THE BENEFICIAL
EFFECTS OF PAINLESS
PHOTOACTIVATED
PLATELET RICH
PLASMA THERAPY**



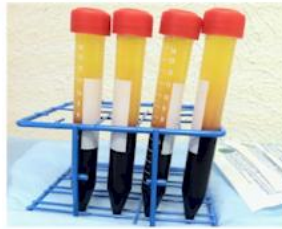
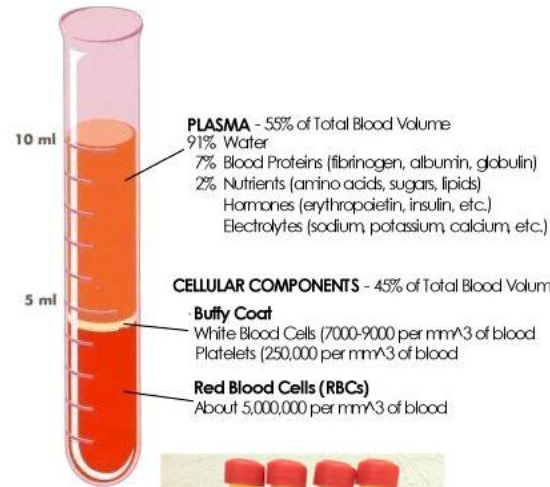
PAINFUL JOINTS

Platelets Contain an Abundance of Growth Factors

These proteins are specifically involved in the regeneration of injured tissue. Studies suggest that platelets contain an abundance of growth factors and cytokines that can affect inflammation, postoperative blood loss, infection, osteogenesis, wound, muscle tear and soft tissue healing.

Research now shows that platelets also release many bioactive proteins responsible for attracting macrophages, mesenchymal stem cells and osteoblasts that not only promote removal of degenerated and necrotic tissue, but also enhance tissue regeneration and healing. Recently, however, there has been an emerging literature on the beneficial effects of Platelet Rich Plasma (PRP) for chronic non-healing tendon injuries including lateral epicondylitis, plantar fasciopathy and cartilage degeneration. Some of these growth factors are listed in the following table:-

Growth Factors in PRP Promote Healing



Platelet Derived	plays a significant role in blood vessel formation (angiogenesis), the growth of blood vessels from already-existing blood vessel tissue. PDGF is a potent mitogen for cells of Mesenchymal origin, including smooth muscle cells and glial cells.
Transforming	a protein that controls proliferation, cellular differentiation, and other functions in most cells. It plays a role in immunity, cancer, heart disease, and diabetes.
Fibroblast	involved in angiogenesis, wound healing, and embryonic development.
Vascular endothelial	a signal protein produced by cells that stimulates vasculogenesis and angiogenesis. It is part of the system that restores the oxygen supply to tissues when blood circulation is inadequate.
Epidermal	results in cellular proliferation, differentiation, and survival.
Interlukin-8	This chemokine is one of the major mediators of the inflammatory response. This chemokine is secreted by several cell types. It functions as a chemo-attractant, and is also a potent angiogenic factor.
Insulin-Like (IGF-1)	one of the most potent natural activators of the AKT signaling pathway, a stimulator of cell growth and proliferation, and a potent inhibitor of programmed cell death.



Adi-Light 2

PhotoActivation Jump Starts the Healing Cascade

Painless PRP is the result of performing a PRP injection with the use of the Adi-Light 2 LED. Through the use of three color spectrums (red, yellow, and green), growth factors are enhanced within the PRP. One factor that is enhanced within 10 minutes of exposure is Interleukin-1RA. IL1RA is a member of the interleukin 1 cytokine family. IL1RA is secreted by various types of cell including immune cells, epithelial cells and adipocytes, and is a natural inhibitor of the pro-inflammatory effect of IL1 β . This protein inhibits the activities of interleukin 1, alpha (IL1A) and interleukin 1 beta (IL1 β) and modulates a variety of interleukin 1 related immune and inflammatory responses.

In other words, the use of the LED photoactivation jump starts the healing cascade. In addition, photoactivated PRP acts as an anti-inflammatory injection. This is called PAINLESS PRP. Patients begin to feel relief of their pain in a couple of days, instead of weeks or months.

How Patients Benefit:

Light Activation of PRP has been shown to:

- Significantly Reduce the Intensity of Pain
- Significantly Reduce the Duration of Pain
- Accelerate Healing