

Principle and Advantages of Platelet Rich Plasma

[Platelet Rich Plasma](#) is the plasma rich in high concentration of platelets obtained by centrifuging the whole blood of animals or people, which can be changed into jelly after adding thrombin, so it is also called platelet rich gel or platelet rich leukocyte gel (PLG). PRP contains a lot of growth factors, such as platelet-derived growth factor (PDGF) and transforming growth factor β (TGF- β)、Insulin like growth factor 1 (IGF-1), etc.

PRP has a broad application prospect in the repair of various kinds of tissue defects, especially bone defects, because of its convenient material, simple preparation and absorbability.

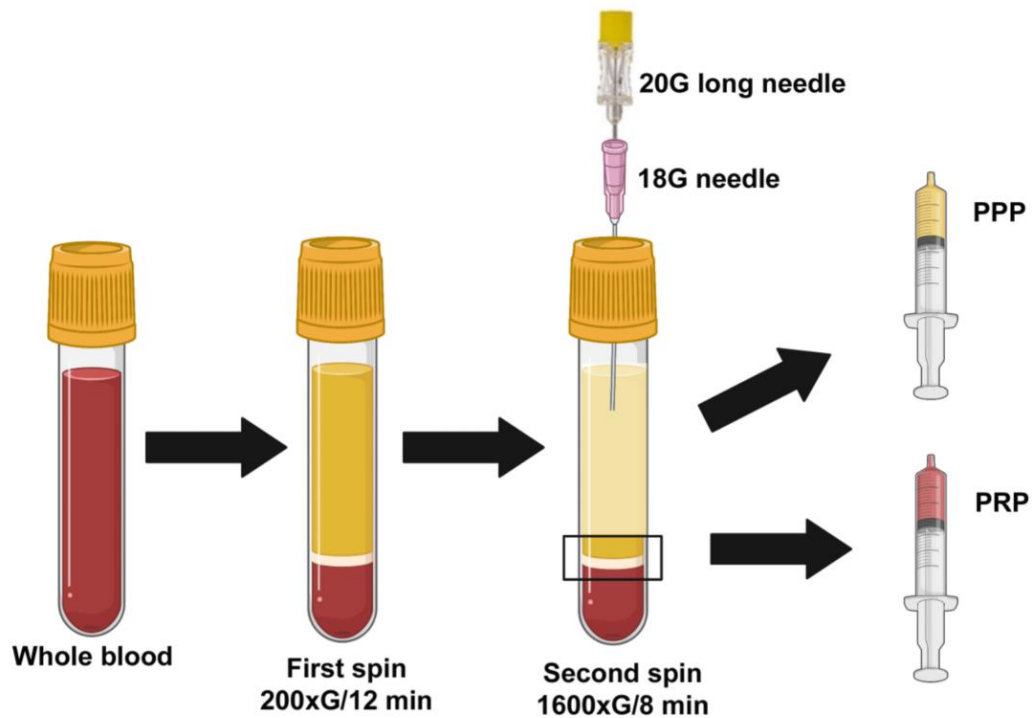
PRP (Platelet Rich Plasma), namely platelet rich plasma, is a kind of platelet concentrate extracted from self blood, that is, self platelet concentrated plasma with high concentration.

Platelets can coagulate blood and release beneficial growth factors to promote damage repair and tissue healing. This is a non surgical treatment technology, which creates a better healing environment by injecting PRP at the injured part, so as to stimulate the injured part to make the tissue heal better and faster.

By injecting growth factors, it can promote tissue regeneration and repair damaged parts. Like fertilizer for crops, only when fertilizer is injected into barren land can crops grow. Cartilage itself has no blood vessels. It is a barren land. The damaged cartilage can be better repaired with growth factors, otherwise it is difficult to reverse the damage.

The action of PRP is completed through the interaction and regulation of growth factors. After the secretion of growth factors, they immediately adhere to the surface of target cell membrane and activate the cell membrane receptor. These membrane receptors induce intrinsic signal proteins and stimulate normal gene sequence expression in cells. Therefore, the growth factors released by PRP do not enter the target cells, which will not change the genetic properties of the target cells, but only accelerate the normal healing process.

In general, existing research and clinical practice believe that platelet rich plasma (PRP) is a safe and effective treatment method for osteoarthritis, cartilage wear and degeneration, meniscus injury and other joint diseases, which can improve local inflammation, participate in the repair and regeneration of intra articular tissues, and slow down the process of joint degeneration.



Advantages of PRP Technology

1. Fundamental solution: PRP therapy uses growth factors in autologous blood to repair and regenerate damaged tissues, which is a fundamental solution to the problem.
2. Treatment safety: PRP is autogenous, without risk of disease transmission and immune rejection; Inflammation regulating factors can control inflammatory reaction and prevent infection.
3. Proven effect: PRP contains a lot of growth factors to accelerate the repair and regeneration of aging tissues, and its therapeutic effect is particularly obvious compared with traditional methods.
4. Convenient and fast: The whole course of PRP treatment is about 1 hour, and daily life can be restored immediately after operation without hospitalization.
5. Visual precise treatment: precise injection treatment under the guidance of musculoskeletal ultrasound to avoid blood vessel and nerve damage, with fast recovery and high safety.
6. A wide range of applications: PRP treatment can be used not only for the repair of damaged tissues, but also for facial medical beauty, hair loss treatment and other fields.

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