Short explanation of platelets and PRP

All blood components are made by the marrow

Blood composition: red blood cells, white blood cells, platelets. These flow through the blood vessels within the plasma.

Red blood cells, white blood cells and platelets all origin from one type of stem cell. These pluripotent stem cells split and grow under influence of some twenty different growth factors within the bone marrow, through various intermittent shapes, into different blood cells with different functions.
What is the function of platelets?

Platelets, or thrombocytes, play an important role in blood clotting. In most cases you start bleeding if you are wounded. The purpose of platelets is to stop the blood from pouring out of the wound. They cause clotting of the blood in order to create a crust and locally accelerate cell growth.

If an infection enters the body it starts to create an enormous amount of platelets. This not only shows the general practitioner that something is wrong, but it also makes you feel more and more ill. In case of a shortage of platelets the chance for spontaneous bleedings is increased. A well-known symptom is spontaneous nosebleeds.

Another example occurs in case of damaging a blood vessel wall. Also in this case the platelets get damaged as soon as they get in contact with the damaged area of the vessel. As a result a complex chain reaction occurs ending with coagulation the blood. Eventually composing a blood clot closing the complete hole in the vessel.

Platelet Rich Plasma

PRP or Platelet Rich Plasma contains precious substances from the whole blood such as growth factors.
PRP treatment: how does it works?

The basic idea behind PRP treatment is to inject your own enriched blood plasma back in order to stimulate cell growth.

The PRP is harvested from the blood by centrifuging. Subsequently the PRP is injected back in the skin, face, tendon, etc. with the aid of a very thin needle. After the treatment the growth factors will be active for about 4 to 8 weeks. PRP-treatment for hair growth, wound recovery, injuries, etc are all similar. The PRP concentration, number of treatments and period between treatments are case dependent.

Why should I measure the platelet concentration in PRP?

- The effect of a treatment will be limited to none if during a PRP treatment to little amount of platelets are injected. ➔ Efficiency

- If too many platelets are injected the chances of (unwanted) clothing increases ➔ Risks

- In case the correct amount of platelets is injected the treatment will have the highest effectivity, and where relevant the longest desired effect ➔ Customer satisfaction

- In order to compensate, for natural person to person variations in the amount of platelets in the whole blood, (150-360 platelets per nl blood for healthy people) by adjusting the centrifuge setting) ➔ Reproducibility