

## Plasma therapy CGF - Concentrated Growth Factors (2nd generation) - an overview of possible applications -

For the production of CGF, only special CGF-tubes are filled with blood and centrifuged. In comparison to other user protocols, here, there follows a targeted focus of the platelets and the CD34 + stem cells. The high-quality borosilicate tubes from Silfradent show a particularly high yield of growth factors.

No other therapy is so versatile and can be used in so many ways. CGF is used in sectors such as dentistry/implantology, orthopedics, ophthalmology, gynecology, ENT, sports medicine, dermatology and many other fields. Similarly, it has become essential in professional sports. CGF contributes to bone formation and stimulates injured tissue to regenerate. Meanwhile, autologous PRP is now available in powder form.

Orthopaedics  
CGF for Epicondylitis lateralis



CGF and A.P.A.G. (solid form)

PRP, which works so fantastically in the medical arena, is becoming increasingly popular in medical aesthetics due to its unique mechanism of action. Since healthy skin does not show any inflammation or injury, a different protocol and application is required.

CGF conduces to the regeneration of the skin and its solid form (APAG/activated plasma albumin gel) is used as a bio-dermal-filler to smooth out wrinkles.

Medical Aesthetics  
atrophic changes in the skin –  
age related (treatments with CGF  
and A.P.A.G.)



Device for producing  
A.P.A.G.



The thrombocyte is the key player to this therapy and is activated by any injury. Wound closure takes place within a short period of time, due to adhesion and aggregation of the thrombocytes. At the beginning of every wound healing, vascular permeability is increased, causing fluid to exude from the vessels and form an oedema, thus easing the proliferative processes.

In this phase, the growth factors of the alpha-granules of the thrombocytes are released and attracted to the tissue (chemotaxis).

It is primarily the fibroblasts that contribute to the healing process (collagen). Growth factors such as TGF- $\beta$ , PDGF, FGF stimulate the fibroblasts to divide and migrate. In the wounded area, new cells and blood vessels are built to compensate the defect. **The CGF-Therapy uses this wound healing process.**

Personalized Cosmetic products can be integrated into the CGF protocol  
Cream and Mask containing autologues Plasma



**Centrifugation** is fundamental to successful CGF therapy. Newer user protocols take the correlation between relative centrifugal force (RCF) and yield of platelets into account.

CGF for Wounds/Burns  
Ulcus cruris - autologous  
membranes  
(endogenous plaster)



### What happens if the centrifugation is too strong?

If the blood sample is centrifuged with an excessively high G-Force (RCF), platelets and plasma proteins can be pushed downwards into the erythrocyte phase. The result will be PPP – platelet poor plasma, plasma poor in thrombocytes. Furthermore, the thrombocytes degranulate prematurely, the erythrocytes are damaged and hemolysis is caused, which, although often not visible to the naked eye, has an unfavorable effect on the plasma composition.

### Fractional centrifugation makes the difference

The latest technology in this field is the MEDIFUGE MF 200, offered by the company Silfradent.

Six different times and speeds, allow the particles to settle in the desired layer.



Medifuge MF 200

### Important:

Only centrifuges certified as medical devices of the Class 2a may be used for the manufacture of PRP. Laboratory centrifuges may not be employed. (compare law regulation).



Alopecia  
Treatments with  
CGF containing  
Melatonin for  
promoting hair  
growth

The production of CGF is safe, but requires uniform application protocols. Self-made protocols are not approved and can be harmful. CGF-Protocols not only secure quality on a constantly high level but also ensure that effectiveness, production methods and additives are reviewed. In addition they afford both the client and therapist safer usage.

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