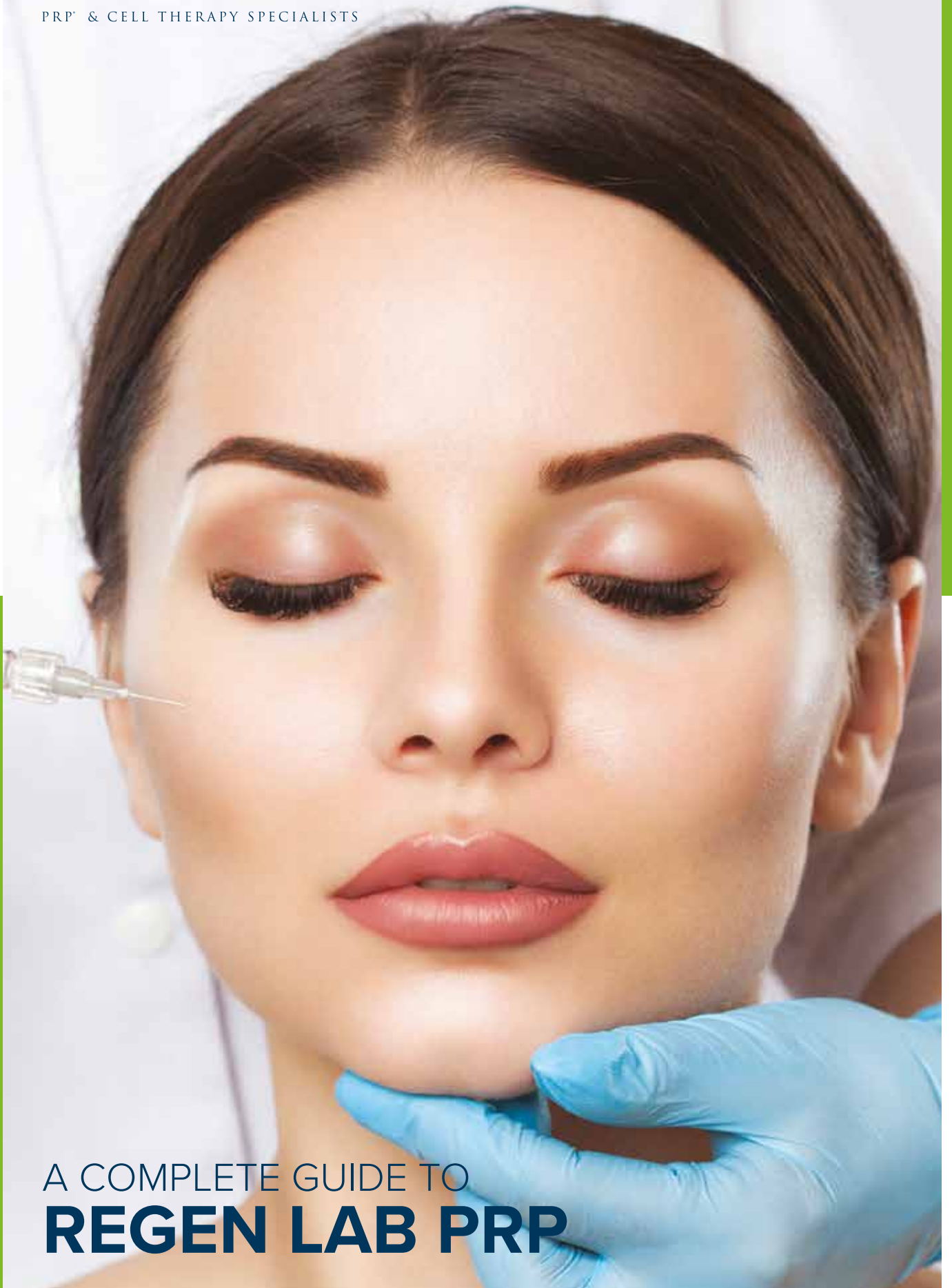


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PRP® & CELL THERAPY SPECIALISTS



A COMPLETE GUIDE TO
REGEN LAB PRP



What is Platelet Rich Plasma?

Platelet Rich Plasma (PRP) is a natural therapy based on harnessing the natural healing powers of your own blood. Autologous PRP has become a highly sought after non surgical procedure for skin rejuvenation and repair based on using your own blood's platelets and plasma to stimulate new cell growth, and to reverse the signs of aging like pigmentation, lines, loose skin and scarring.

RegenACR-C and RegenKits, developed by Regen Lab Switzerland, are world leading approved medical devices intended for the preparation of RegenPRP, a standardised PRP.

Therapeutic Effects

The therapeutic effect of autologous Platelet Rich Plasma is due to mediation of the wound healing reaction, which is initiated by formation of a fibrin clot and the controlled release of the growth factors stored within platelets, in the alpha granules.

Growth Factors

Platelets are responsible for blood clotting but also stimulation of tissue healing, they contain active molecules called growth factors, which allow for an increase in dermal collagen levels as well as in the number and thickness of elastic fibres¹. These growth factors promote the healing of damaged skin, including healing of aged skin. Following the PRP injection, the platelets release these growth factors which trigger the surrounding cells to proliferate and thus repair the damage, as a result, the skin volume increases and the skin becomes firmer, more radiant and rejuvenated.

Platelets in RegenPRP release multiple growth factors and many other molecules in a controlled manner, in

physiological proportions and with a natural balance of proliferative and inhibitory agents. The release of these growth factors stimulates the cells around the injection site, plumping them up, stimulating collagen production and causing a densification of the dermis.¹

Autologous Thrombin Serum

Autologous Thrombin Serum is prepared from the patient's own blood. It contains activated Autologous Thrombin.

The addition of Autologous Thrombin Serum (ATS) to the RegenPRP platelet concentrate, activates the coagulation process in a physiological manner, including the formation of a 3D fibrin matrix in which the platelets are entrapped.

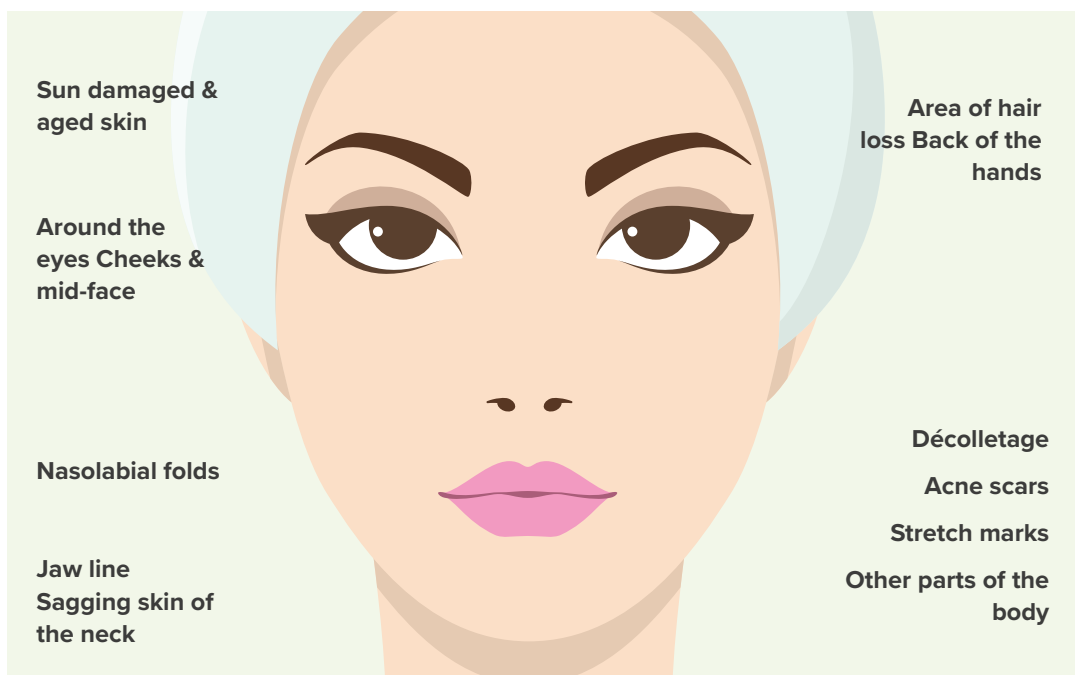
Thrombin is the enzyme that converts soluble fibrinogen to fibrin monomers which

polymerise to form the clot. The clot allows a long lasting growth factor delivery at the treatment site, and its fibrin matrix serves as a scaffold for new tissue reconstruction.

Application of RegenPRP

The application of RegenPRP has been documented in many fields, ranging from hard tissue regeneration to soft tissue management. Due to RegenPRP's ability to induce collagen synthesis by dermal fibroblasts, RegenPRP has been proposed as a promising treatment option in the field of skin care.

For a few years, it has been successfully used in numerous skin care applications, including alopecia, scar revision, acne scars, stretch marks, skin rejuvenation and dermal augmentation. For some indications, RegenPRP may be used in association with other treatment modalities such as laser, radiofrequency or fat grafting to improve clinical outcomes.



REGENPRP WITH SKIN REJUVENATION

PRP leads to skin rejuvenation and slows down the aging process by stimulating:

Fibroblast proliferation

Cell proliferation & differentiation

Collagen¹ & elastin production which leads to thickening & tightening of skin

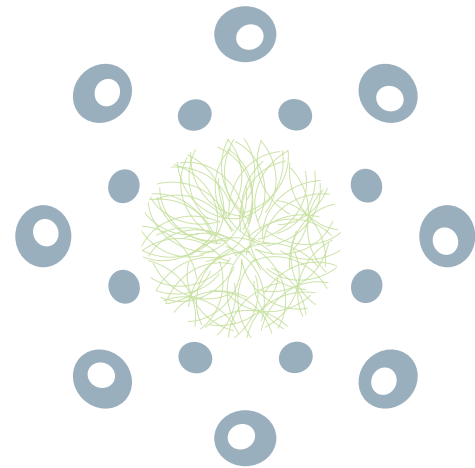
Contraindications

- Platelet dysfunction syndrome
- Critical thrombocytopenia platelet count <100 000 plts/ microliter Hemodynamic instability
- Septicemia
- Local infection at the site of the procedure
- Patient unwilling to accept risk
- Consistent use of NSAIDs within 48 hours of procedure is not recommended Corticosteroid injection at treatment site within 1 month
- Systemic use of corticosteroids within 2 weeks
- Tobacco use
- Recent fever or illness
- Cancer – especially hematopoietic or of bone
- HGB <10g/dl
- Pregnant or Lactating women
- Autoimmune diseases

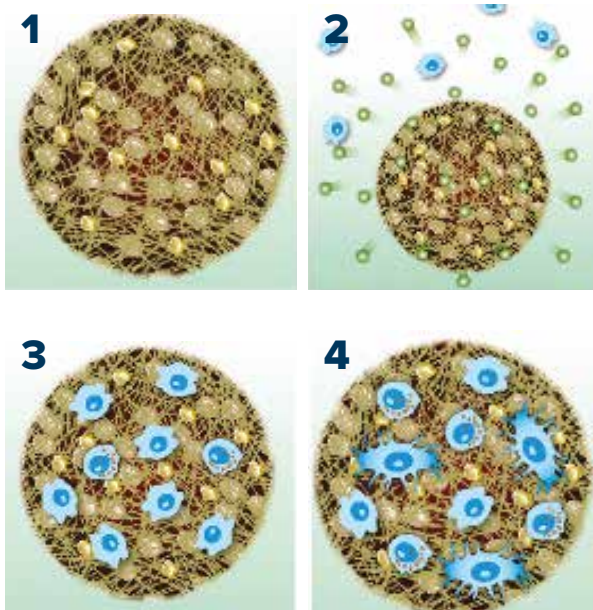
Side Effects

PRP itself does not generally cause adverse reactions. Sometimes there are minor side effects due to injecting technique or the area injected. The effect is very localised and lists as:

- Pain
- Swelling
- Bleeding
- Redness
- Irritation
- Ecchymosis



RegenPRP Mechanism of Action



- 1** Formation of the tridimensional fibrin network.
- 2** Release of chemo-attractants by platelets and leukocytes present in the network.
- 3** Cell proliferation.
- 4** Progenitor cell differentiation into several cell types needed for tissue restoration.

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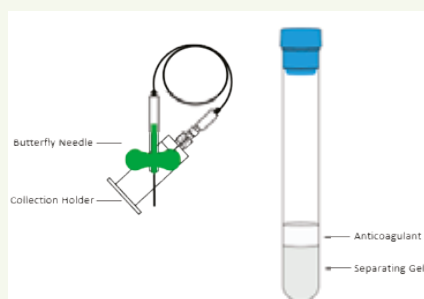
RegenPRP Preparation: Step by Step Guide

RegenPRP is prepared by taking a small sample of the patient's blood. The tubes are centrifuged, during centrifugation the blood is separated into plasma, platelets, white blood cells and red blood cells by the centrifugal force.

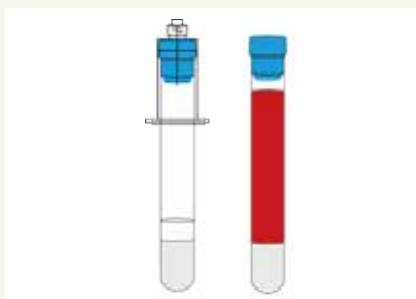
The separating gel present in the tube migrates above the blood cells and isolated the platelets and the plasma. RegenPRP is then easily collected from the upper part of the tube and can be injected into the treatment site to promote healing, reverse the signs of aging and matrix remodelling, resulting in skin stimulation. The whole preparation process is simple and takes up to 10 minutes.

It is important to note that this procedure can only be performed by trained practitioners.

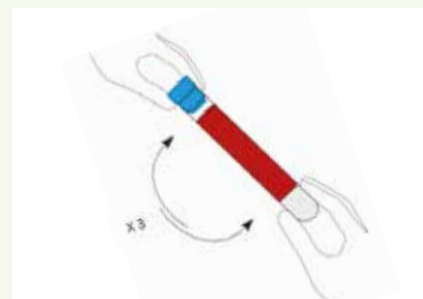
1. Collect blood directly into RegenBCT tubes using a blood collection set.



2. Once the butterfly needle is in the vein, insert the tube in the holder to collect blood automatically.



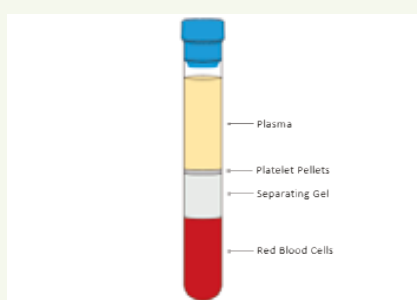
3. Invert the tube 3 times to mix the anticoagulant with whole blood.



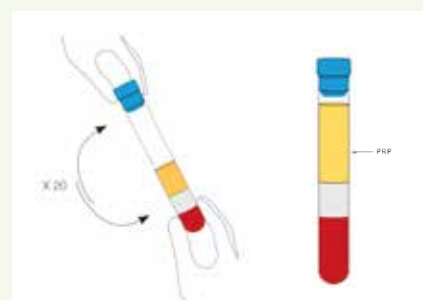
4. Centrifuge for 5 minutes at 1500g.



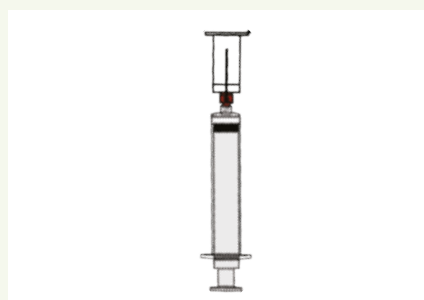
5. Blood components are separated after centrifugation.



6. Gently rock the tube at least 20 times to ensure that the platelets are detached from the separating gel.



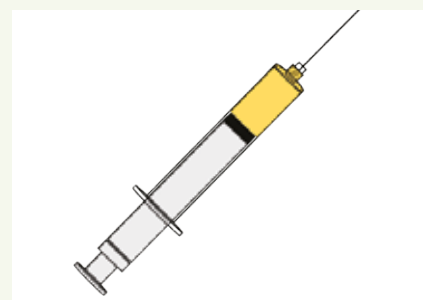
7. Connect the Luer Lock Syringe to the transfer device.



8. Connect the RegenBCT tube to the transfer device to extract RegenPRP.



9. Connect a needle to syringe, RegenPRP is ready for use.



Proven Performance of RegenPRP prepared with RegenBCT tubes

REGEN BCT*	PLATELETS	CONCENTRATION	RED BLOOD CELLS	WHITE BLOOD CELLS	MONONUCLEAR CELLS	LYMPHOCYTE	MONOCYTE	GRANULOCYTE
	~80%	1.6x	<0.3% 0.007x	10-13% 0.2x	1.6X	25-35% 0.5x	10% 0.2x	3.5% 0.06x

*BCT stands for Blood Cell Therapy

Features / Benefits Efficiency

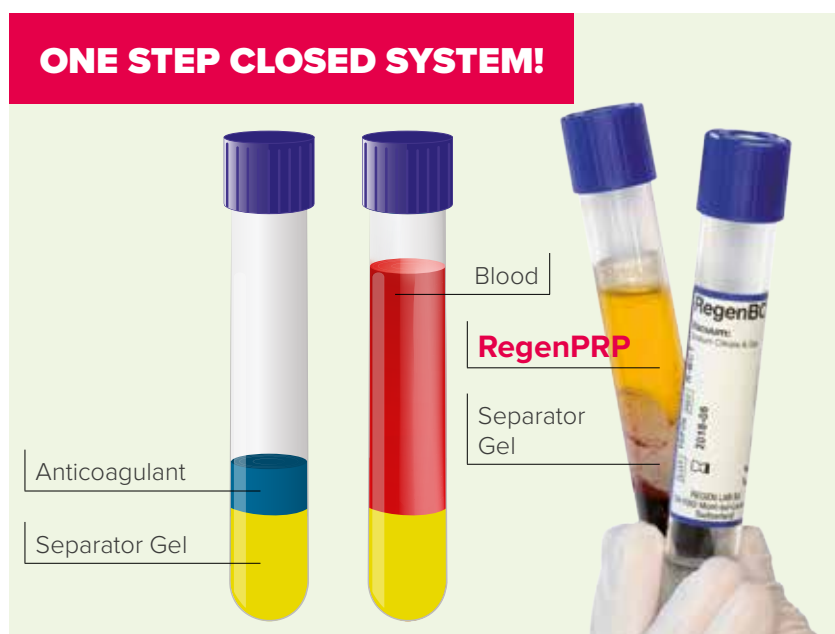
- Fully automated process
- Simple and easy procedure
- Process in closed circuit: Blood in, short centrifugation, PRP out Blood component separation at the cellular level
- High recovery (>80%) of fully functional platelets
- Low level of undesired cellular contaminants
- Anticoagulant is already located in the device

Safety and Quality

- Close circuit system – safety for the patient and the operator
- Made of biocompatible and non-pyrogenic components
- Regen Lab tubes are made of evacuated pharmaceutical grade glass
- A pharmaceutical solution of sodium citrate at pH 7 is used as the anticoagulant



ONE STEP CLOSED SYSTEM!



SEPARATING GEL TECHNOLOGY

Regen Lab devices use a unique technology called Thixotropic separating gel. The gel is biologically inert and specifically designed for platelet and plasma isolation from blood cells. During centrifugation the gel becomes less viscous, detaching from the glass walls and migrating in a whole mass over the denser blood elements. At the end of the centrifugation the gel regains its solid state and forms a solid barrier between blood components.

Advantages of RegenPRP

RegenPRP shortens the different phases of the natural healing process, as RegenPRP is prepared from autologous blood it represents an inherently safe option to heal soft and hard tissue, thereby eliminating the risk of immune reactions or transmission of infectious diseases. RegenPRP acts not only as a course of multiple growth factors, which stimulates cell proliferation, but also as tridimensional (3D) bioactive scaffold, which enhances cell migration and new extracellular matrix deposition.

- Improvement of skin texture and tone
- Gradual increase in skin thickness²
- Can be used for sensitive areas
- May be combined with other treatment modalities such as laser, radiofrequency or
- fat grafting to stimulate biological effect. PRP should never be combined with other
- injectable treatments during the same session
- Red blood cells are removed at 99.7%
- White blood cell levels are drastically reduced, with a preferential depletion (96.7%)
- of the pro-inflammatory granulocytes
- Regen Lab separator gel allows for the easy, rapid and consistent preparation of standardised RegenPRP
- Platelet recovery rate is above 80%
- Platelet concentration factor in RegenPRP is 1.6 fold over baseline value in blood (1.6X) Regen Lab is a fast one-step, easy to use closed circuit system

Treatment Areas

Skin Texture and Elasticity

RegenPRP increases vascularisation, neo-collagenesis, tone, skin thickness and elasticity. It can be used as a single treatment or combined with technologies such as fractional laser, LED, chemical peels, dermal fillers and dermabrasion. Use your own platelet growth factors to improve skin tone, elasticity, thickness and texture². Regen Lab technology not only offers cosmetic skin improvements, but actually stimulates the skin with results lasting up to a year.

Wrinkles and Dark Circles

RegenPRP restores facial harmony by softening the skins texture and tone, as the localised action of the platelets at the treatment site triggers a biological reactions that ensure long-lasting results. Once PRP is injected into the dermis of the skin the released growth factors will stimulate the collagen production which will increase the skins volume while the skin becomes firmer and more radiant.

Scars

The beneficial growth factors in platelets help with the creation of new blood vessels while also regenerating tissue, this improves the texture of your skin. The use of PRP for scar therapy ameliorates the appearance of scars by stimulating the connective tissue cells called fibroblasts and epidermal cells called keratinocytes.^{2,3}

Post Laser

The combination of fractional laser treatment and RegenPRP creates a powerful facial rejuvenation treatment that improves skin texture, tone and stimulates collagen production for a natural,⁴ long-last result. The analgesic and anti-inflammatory effects of RegenPRP help to control pain and significantly improve the speed of wound healing after laser or chemical peel treatments.⁵



Suggested Injection Process

Superficial Wrinkles

A powerful non surgical treatment, this injectable smooths wrinkles and unwanted lines for a more youthful and rejuvenated appearance.

- Mesolift and localised injections in the reticular dermis on the face, forehead, neck, décolleté and back of hands
- 1-2 RegenBCT tubes depending on area size
- Nappage with mesotherapy needle 27-32 Gauge needles at an angle of 35 to 45 or with a mesogun
- Let excess RegenPRP dry on the skin
- Do not wash treated areas for the following 4 hours

Treatment Plan

- 3 initial treatments with 15 days in between
- Follow up treatment between 3-6 months as required



Mature Skin

- Mesotherapy for mature skin and localised injections in the reticular dermis on the face, forehead, neck, décolleté and back of hands
- 1-2 RegenBCT tubes plus 1 RegenATS tube, depending on area size
- Prepare 1ml syringe with 0.1ml of ATS serum prepared with the RegenATS tube with 0.9ml RegenPRP immediately prior to injection, repeat as required
- Nappage with mesotherapy needle 27-32 Gauge at an angle of 35 to 45 or with a mesogun
- Let excess RegenPRP dry on the skin
- Do not wash treated areas for the following 4 hours

Treatment Plan

- 3 initial treatments with 15 days in between
- Follow up treatment between 3-6 months as required



Deep Winkles & Dark Circles

- 1-2 RegenBCT tubes plus 1 RegenATS tube depending on area size
- Prepare 1ml syringe with 0.1ml of ATS serum prepared with the RegenATS tube with 0.9ml RegenPRP immediately prior to injection, repeat as required
- Injections in the reticular dermis with a flexible needle of 30 Gauge by 25mm
- Use 1ml for each injection site (retro tracking injection)
- For the periorbital area, injections of small amounts (0.1ml) around the orbit,
- avoiding the angular vein (Caution: high risk of thrombosis)
- Immediately after the injections, massage the orbital area from up to down to spread the thrombin gel

Treatment Plan

- 3 initial treatments, 30 days apart
- Follow up treatment between 6-12 months as required.



Ideal Platelet Rich Plasma Treatment Plan

- Treatment 1 (day 0)
- RegenPRP treatment for mature skin
- Treatment 2 (day 30)
- RegenPRP plus RegenATS treatment for deep wrinkles and dark circles Treatment 3 (day 45 - 60)
- RegenPRP treatment for mature skin

Patients are recommended to undergo 3 initial treatments, spaced one month apart. After the initial 3 treatments a personalised maintenance program can be developed and implemented to help patients retain more youthful appearances.



Scar & Stretch Mark Treatment

- 1 RegenBCT tube
- Prepare 1ml RegenPRP in a 1ml syringe
- Massage around the scars
- Injections with a needle of 27-32 Gauge at an angle of 35 to 45°, to stimulate the superficial layers of the dermis
- Deep injections point by point, underneath the scar with a 32 Gauge by 4mm needle at an angle of 90
- For hypertrophic scars, debride the surface of the scar before applying RegenPRP

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Platelet Rich Plasma Frequently Asked Questions

What anticoagulant does Regen Lab use?

RegenLab uses Sodium Citrate as their anticoagulant which is a fully reversible anticoagulant. Sodium citrate is anticoagulant and has a neutral pH (pH=7)

and has no ancillary effect on the patient. The benefit for using sodium citrate is that the pH level of the RegenPRP does not change like it would with ACD-A anticoagulant. ACD-A is an anticoagulant often used for PRP preparation, ACD-A is highly acidic

(pH=4.5-5), contains hyperomolar dextrose and triggers more pain than sodium citrate. The anticoagulant comes already in the tube making it a closed loop circuit.

What makes Regen Lab Devices different?

- Quality, Safety and Efficiency
- Fully automated process, simple and easy procedure
- Blood component separation at the cellular level
- High recovery (80%) of fully functional platelets
- Extremely low level of undesired cellular contaminants
- Regen Lab devices are Medical Devices for therapeutic use, not blood collection tubes Platelets and plasma remain over the separator gel in the upper part of the device with a few mononuclear white blood cells. The rest of the buffy coat is trapped below
- the separator gel with the red blood cells in the lower part of the device.

When will patients see results?

Typically, first results are visible 2 weeks after treatment and full results around 4 months after, as platelets stimulate the release of growth factors which assist in collagen regeneration. Increasing the collagen in the patient's skin means over time the skin will appear younger and fresher looking. Results will vary from one individual to the other.

Things to remember when injecting RegenPRP plus ATS combination:

Regen recommends the use of ATS serum to jellify RegenPRP for face injections, the combination of RegenPRP with ATS serum should be injected as soon as prepared, as it will rapidly form a clot. Regen Lab advises to use a 1ml syringe filled with 0.9ml of RegenPRP and 0.1ml of ATS serum. The combination is injected using the same technique as a filler though it is not to be described as a filler. It needs to be injected very quickly otherwise it will solidify in the syringe. A platelet gel will form at the site of injection. This will ensure a more localised action, as the product will not diffuse, to treat specific zones such as deep wrinkles or dark circles. For the periorbital area, perform injections of small amounts of the mix around the orbit, avoiding the internal eye's angle. Immediately after the injections, massage the orbital area from up to down to spread the thrombin gel.

Before & After



Complexion Analysis - Pigmentation Aug 2020



Complexion Analysis - Pigmentation Sep 2020



Cross Polarised - Inflammations, pigmentation, dermal structure, vascular conditions Aug 2020



Cross Polarised - Inflammations, pigmentation, dermal structure, vascular conditions Sep 2020

Product Reference Guide

RegenKits

RegenKit-BCT-3 – RK-BCT-3

Kit Breakdown

3 x Regen BCT Tubes

RegenKit-BCT-T – RK-BCT-T

Kit Breakdown

1 x Regen BCT Tube

RegenATS-T - RK-ATS-T

Kit Breakdown

1 x Regen ATS Tube

RegenACR Kits

Regen ACR Plus Kit – R-ACR C/BA

Kit Breakdown

1 x Safety-Lock Butterfly Needle

1 x Collection Holder

2 x Regen BCT Tubes

1 x Regen ATS Tube

1 x Transfer Device

1 x 1ml Luer-Lock Syringe

1 x 80mm Transfer Cannula

2 x 5ml Luer-Lock Syringes

Regen ACR Classic Kit – R-ACR C1/B

Kit Breakdown

1 x Safety-Lock Butterfly Needle

1 x Collection Holder

1 x Regen BCT Tube

1 x 3ml Luer-Lock Syringe

1 x Transfer Needle

1 x Transfer Device

Regen ACR Extra Kit – R-ACR C2/B

Kit Breakdown

1 x Safety-Lock Butterfly Needle

1 x Collection Holder

2 x Regen BCT Tubes

1 x 1ml Luer-Lock Syringe

1 x 5ml Luer-Lock Syringe

1 x Transfer Needle

1 x Transfer Device

1 x 80mm Transfer Cannula

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6. Gorgu, M., A. Gokkaya, and A. Dogan. "Comparison of Two Anticoagulants for Pain Associated with Platelet-Rich Plasma Injections." *Aesthetic Plast Surg* 44, no. 3 (Jun 2020): 955-61. <https://doi.org/10.1007/s00266-019-01541-z>. <https://www.ncbi.nlm.nih.gov/pubmed/31722064>.



Regen Lab devices are sub distributed in Australia & New Zealand by Cryomed Aesthetics



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