### **PRP Ultra**

### **Next Generation Refrigerated Centrifuge**



- ► Sterile Autologous Platelet Concentrate
  - ► Maintains 22°C as per Platelet Separation SOP
    - **Pre-Validated Set Programs for Standardization** 
      - ► Platelet Concentration up to 4-5 Times













#### **PRP** Ultra

REMI is a leading name in India for Blood Bank & Laboratory equipments. REMI is synonymous for centrifuge performance, since year 1960. Our expertise in blood component separation brings the best solution - PRP Ultra centrifuge for easy extraction of low volume autologous PRP.

PRP Ultra ensures platelet concentration up to 4-5 folds every time. Pre-validated dual spin programs in PRP ultra helps in maintaining standard platelet properties & yield. Microprocessor controls all 5 critical centrifuge parameters (RPM/RCF, Acceleration, Deceleration, Time & Temperature), for consistent results.

- Consistent Performance: Brush-less induction drive motor (practically maintenance free), prevents speed variations, Sophisticated anti vibration system for jerk free operations,
- Safety Features: Door interlock prevents accidental lid opening, Overload protection & Imbalance cut off for safety of operator & system.
- Ease of Operation: Interactive multicolor backlit LCD display, Feather touch Keypads, Emergency lid opening in case of power failure, LED window to see status of centrifugation from a distance, Comfortable height for an easy access



**Automation with Ease of Operation** 

Supports Hygiene: Easy to clean ABS rounded corner body & Stainless steel inner chamber

### Autologous Platelets: Refrigerated centrifugation is the Key

- Vibration free centrifugation with right speed, time & temperature is important for intact biological properties
- Platelet's Processing & storing temperature at 22\*C is important

\*AABB Technical Manual 18th Edition

Cooling centrifuge saves platelets from the effect of heat generated during centrifugation \*\*Blood Vol 32, No. 2 (August), 1998

TECHNICAL Keep blood at room temperature (20 to 24 C) before separating platelet-rich plasma from the red cells. This separation must take place within 8 hours of phlebotomy. \* Method 6.13. Preparation of Platelets from Whole Blood; AABB Technical Manual 18th Edition

Heat induced loss of functional capacity is due to irreversible structural changes in platelets develop after warming PRP above 40°C. Heat produced a distinct morphological transformation characterized by loss of discoid shape, irregular swelling, and movement of hyaloplasmic organelles.

\*\* Effect of heat on platelet structure and function; Dr James G. White; Blood, Vol.32, No. 2 (August), 1998











### **Dermatology & Plastic Surgery**



#### **Dental Procedures**



- Alopecia (Baldness)
- Hair Transplant
- Skin Rejuvenation
- Vampire Facelift
- Wrinkle Improvement:
- Skin Graft Fixation
- Skin Pores & Elasticity
- Autologous Fat Transfer
- Fixation of Cartilage Bone Skin Pigmentation disorder

- Striae Distensae (Streatch Marks)
- Accoustic Neuroma
- Craniofacial Surgery
- Head & Neck Cancers
- Chapped skin
- Burn wound
- Tonsillectomy
- Parotidectomy
- Thyroidectomy

PRP

## **Excels Tissue**

- Supplementary to all GBR (Guided Bone Regeneration Technique)
- Bone grafting for dental implants.
- Ridge augmentation procedures.
- Closure of cleft, lip and palate defects
- Repair of Dental Bone Defects
- Improvement in stability of Dentition
- Repair of Fistulas between sinus cavity and mouth

- PRP in Sexual Dysfunction
- Priapus Shot in Men
- O Shot in Women
- Non surgical Vaginal Cosmetic & Rejuvenation
- PRP in endometrium Health
- Stimulation of Ovary function



Sexual Dysfunction & IVF











### Diabetic & Wound Management



- Infected Wounds
- Wound Stitches Marks
- Venous Ulcer & Venostasis Ulcers
- Severe Burn & Cellulitis
- Non Healing Wound
- Diabetic Foot Ulcers & Diabetic Neuropathy
- Bed Sore Heels Pressure Ulcer
- Neuropathic Ulcer & Decubitus Ulcers

# **Ultra**

## **Growth Naturally**

- Tendon Ligament & Cartilage Iniuries
- Plantar Fasciitis,
- Achilles Tendonitis
- Trigger Finger Tendon Injury
- Shoulder Adhesive Capsulitis (Frozen Sholder)
- Chronic Elbow Inflammation
- Damaged shoulder rotator cuff
- Chondromalacia patellae
- Cervical Laminectomy
- LeFort Fractures
- (Guerin's Fracture)

- Knee Degenerative Arthritis
- Elbow Bursitis

(Chronic Elbow Inflamation)

Chondromalacia

(Inflamation of Patella & Softening of cartilage)

Lumbar Fusion

(Spinal fusion surgery)

- Axillary Dissection
- Wedge Tarsectomy
- (Ligament injury of ankle) 
  Thumb Degenerative Arthritis
  - Non-Union Bony Defects

- Ocular Surface Disorders
- Ocular Epithelial Defects
- Symptomatic Dry Eye Disease
- Dormant Corneal Ulcers
- Refractory corneal ulcers



**Ocular Regeneration** 



Orthopedic & Sport Injuries











## Advantages of PRP Therapy



#### PRP - Platelet Rich Plasma

The PRP therapy is gaining in popularity as single supportive treatment option for many indications. Autologous PRP contains different growth factors and other cytokines which may elicit gathering of stem cells around the damaged region stimulating cellular proliferation and tissue regeneration.

PRP contains growth factors that stimulate cellular growth and division.

- TGF-B (Transforming Growth Factor-beta)
- bGFG (Basic Fibroblast Growth Factor)
- PDGFa-b (Platelet Derived Growth Factor)

- EGF (Epidermal Growth Factor)
- VEGF (Vascular Endothelial Growth Factor)
- CTGF (Connective Tissue Growth Factor)

## PRP dvantage

#### Safe

Autologous blood means there is no risk of infection, allergic reaction, or any other side effect.

#### Convenient

The treatment is quick and absolutely non-Invasive.

#### **Natural**

Patient feel no sense of violation by foreign bodies and the treatment effects are completely natural.

#### Effective

Treatment uses natural growth factors, its effects are proven & well documented

Autologous Platelet Rich Plasma (aPRP) is given as **Proliferation therapy** or **Regenerative injection therapy**.

Activated Platelets releases growth factors, proteins & cytokines that initiate and regulate natural wound healing. Fibrin, fibronectin, and vitronectin present in Plasma also contribute to repair matrix.

#### **Optimum Platelet Concentration Level for PRP: -**

1m platelets/μL appears to be the "magic number" Or levels are in the 4-5x range, the influx of adult stem cells has been noted to increase by over 200%.

#### **Activation of PRP: -**

Growth Factors from PRP are released within 10 minutes of activation. PRP can also be artificially activated by mixing with 10% calcium chloride (W/V) and/or thrombin to make a gel-like graft. The activation is either done just prior to injection or through injecting the activator simultaneously via another syringe at the desired healing site.

#### PRP Mechanism of Action: -

PRP stimulates the chemotactic migration of human mesenchymal stem cells to the injury site in a dose-dependent manner - i.e., the more concentrated the platelets, the more stimulation.







No PRP Added

Illustration of the split-thickness skin graft donor site at 45 days.

\* Dental and craniofascial applications of platelet-rich plasma. Quintessence Publishing Co. Inc. 2005













#### **PRP Ultra**



#### **Next Generation Refrigerated Centrifuge**

### **Multicolor Display with Pre-validated Set Programs**



#### **PRP Ultra Display**

#### **Dedicated Preset Function Keys:**

- Pre-cool run before procedure
- F2 1st spin for platelet separation
- 2nd spin for platelet concentrate - F3
- F4 Speed & time adjustment for quality validation (Programmed for pre-cooled / run at 22°C temp)

| Technical Data                           |                 |
|--|-----------------|
|  | PRP Ultra       |
| Dimensions WxDxH (mm)                    | 440 x 560 x 335 |
| Voltage Stabilizers                      | VS - 02         |
| Supply: 220-240 Volts 50 Hz single Phase |                 |

#### **Corporate Marketing Office**

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## **The Perfect Companion**



- ► Autologous Platelet Concentrate at Its Best
  - **Dual Spin Method for Quality Platelet Yield** 
    - **Closed System Kit for Safe Therapy**









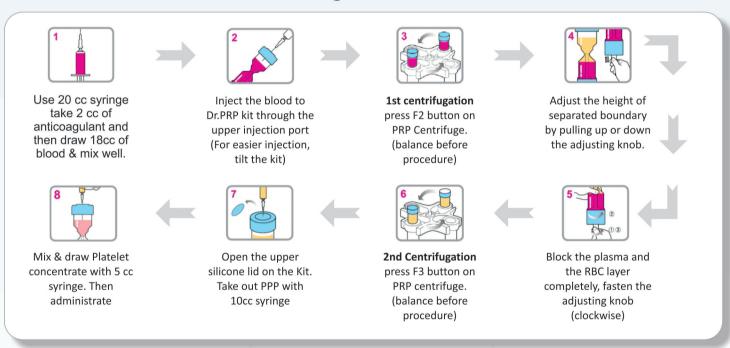




Dr.PRP is a medical device exclusively designed for autologous PRP separation. Highly concentrated platelets by the Dr.PRP kit release large amounts of growth factors which are normally inside the platelets.



#### **Extraction Procedure of Autologous Platelets**



The viability of the platelets and continued release of growth factors into the tissue continues for seven days. The amount of initial platelets present in the wound determines the rate of wound healing.

Platelet-rich plasma: evidence to support its use. J Oral Maxillofac Surgery. 2004 62: 489-496. 28. Ibid. ref. 25; p 4

PRP may be valuable in enhancing soft-tissue repair and wound healing.

Enhanced histologic repair in a central wound in the anterior cruciate ligament with a collagen-platelet-rich plasma scaffold. J Orthop Res. 2007;25(8):1007-1017.

G. Clinical use of platelet-rich plasma in orthopaedics. AAOS Now. 2012;6(8)

Physicians should consider platelet rich plasma prolotherapy for patients with tendinopathies before any surgical interventions.

Donna D. Alderman, DO Medical Director- Hemwall Center for Orthopedic Regenerative Medicine Valencia, California







