# Use Your Own Biology To Heal Naturally

With the Angel® Concentrated Platelet-Rich Plasma (cPRP) System



### Introduction

Healing after an injury involves a well-orchestrated and complex series of events, where proteins in the blood act as messengers to regulate the healing process. Many proteins involved in the healing process are recovered from small cell fragments found in blood called **platelets**. When you are injured, the platelets activate and start to gather at the injury site to release beneficial proteins called growth factors. This is the beginning of the healing cascade.

## What Is Platelet-Rich Plasma (PRP)?

PRP is a concentration of platelets and growth factors created from blood. To create PRP, blood is centrifuged to separate the platelets from the unwanted cellular components. PRP contains increased levels of platelets and growth factors, which have the potential to improve cells' ability to respond to an injury.



Whole blood is collected in a syringe and placed into the Angel® system.



The Angel system spins the blood at a high speed.



The Angel system uses light sensor technology to separate the concentrated platelets into a delivery syringe.

## Making Your Cells Count With the Angel® System

Growth factors are always present in blood and inside platelets. Platelets are inactive in our bloodstream but become activated when an injury occurs. They collect at the injured site and release these proteins (the growth factors), which in turn promote the healing process.<sup>1</sup>

## How Is the Angel System Unique?

The Angel system uses technology to precisely separate platelets from the other components of blood to support healing and rebuild tissue. The Angel system allows for a customizable output with varying cellular concentrations based on your specific needs.



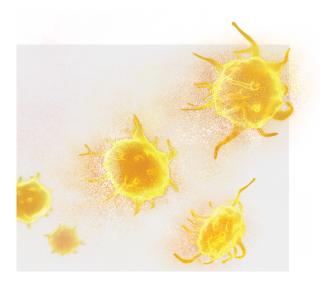
Blood is usually collected from a vein in the upper arm.

## How Does the PRP Process Work?

Your health care provider will collect your blood in a typical blood draw procedure. They place the blood into the Angel® system, which uses rapid spinning processes to precisely separate and concentrate the platelets and other beneficial growth factors from the blood. This process is typically done in about 20 minutes.

## Am I a Candidate?

Your health care provider will perform an examination to determine if PRP treatment is right for you or if another treatment regimen is better suited for your procedure. Your doctor will determine your pre- and postprocedural protocol.



#### Indications

The Angel system is indicated to be used intraoperatively at the point of care for the safe and rapid preparation of autologous platelet-poor plasma (PPP) and platelet-rich plasma (PRP) from a small sample of peripheral blood or a small sample of a mixture of peripheral blood and bone marrow. The PPP and PRP are mixed with autograft and/or allograft bone prior to application to a bony defect for improving handling characteristics.

#### Disclaimer

PRP prepared from a mixture of whole blood (WB) and bone marrow may contain higher levels of plasma-free hemoglobin than PRP prepared from WB.

#### Contraindications

The Angel system may be contraindicated in cases where there are active systemic infections or systemic heparinization.

#### Warnings

This device is intended to be used by a trained medical professional. A trained operator should be present at all times to operate and monitor the Angel system during processing. Biohazard waste, such as needles and contaminated surgical equipment, should be safely disposed of in accordance with the institutions policy. Disposal of used equipment and/ or used Angel processing sets should be performed in accordance with federal, state, and local regulations. These materials should be considered biohazardous. Universal precautions for blood-borne pathogens.

#### Reference

Notes

 Eisinger F, Patzelt J, Langer HF. The platelet response to tissue injury. Front Med (Lausanne). 2018;5:317. doi:10.3389/fmed.2018.00317



Learn more about the Angel<sup>®</sup> cPRP system

The information contained in this brochure is not medical advice and is not meant to be a substitute for the advice provided by a surgeon or other qualified medical professional on the use of these products. You should talk with your physician or health care provider for more information about your health condition and whether Arthrex products might be appropriate for you. The surgeon who performs any surgical procedure is responsible for determining and using the appropriate techniques for surgical procedures on each individual patient. Arthrex recommends that surgeons be trained on the use of any particular product before using it in surgery. A surgeon must always rely on their own professional medical judgment when deciding whether to use a particular product when treating a particular patient. A surgeon must always refer to the package insert, product label, and/or directions for use before using any Arthrex product. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes. Products may not be available in all markets because product availability is subject to the regulatory approvals and medical practices in individual markets. Please contact Arthrex if you have questions about the availability of products in your area.



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