



WHAT IS PRP?
YOUR GUIDE TO PLATELET RICH
PLASMA TREATMENTS

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You've probably heard about platelet rich plasma (PRP). Since it can be used to treat musculoskeletal conditions, like tendinopathy, ligament and tendon tears, and arthritis, it's a treatment solution that is common in active people, from professional athletes to weekend warriors. What is PRP?

PRP applies to a variety of similar, but different, preparations made from blood platelets. Platelets are little packets of growth factors and other natural healing molecules that help clot your blood. If you get a paper cut, platelets not only stop the bleeding but also release healing growth factors to help get local cells on the right course to heal the skin.

How Is PRP Made?

PRP is made by centrifuging (separating by spinning in a centrifuge machine) whole blood and concentrating the platelets in the blood serum. The idea is that more of a good thing—the platelets—is better than less.

Among medical practices that offer PRP, about 95% make it in a [push-button, automatic centrifuge](#). The advantage to making PRP this way is that it's a simple solution for the medical practice. The physician only needs to know where to place the sample and where the "On" button is.

The disadvantage to this automated bedside approach? The PRP produced is "one size fits all." [If a patient is more or less hydrated, for example, it is not accounted for in these machines](#). Depending on the sample's water content, there can be fluctuation in the area where the platelets are located in the centrifuged blood. Based simply on how much water the patient has consumed, the platelet concentration produced on one day will be different from that produced on another day.

Another way PRP can be made is in a lab.

Can a Better PRP Be Created in a Lab?

Absolutely, but as noted above, most physicians who provide PRP treatments don't go above and beyond a simple automated machine. In our clinical experience, a [lab in the medical practice can accomplish much more than a bedside centrifuge](#): A lab can adjust the processing to the unique properties of the patient sample

1. A lab can achieve much higher concentrations of platelets
2. A lab can customize various types of PRP to address the specific needs of a patient

Because it is made in a lab, the PRP our skilled lab technicians can create is more pure and customizable. They can separate and concentrate the good components from the whole blood and get rid of the undesirable cells.

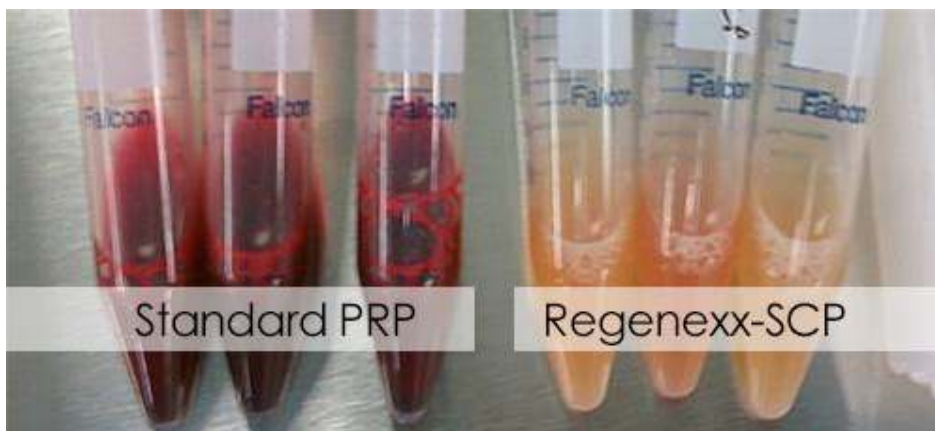
Automated centrifuges (those push-button machines) typically concentrate 2–5 times the normal platelet count. Our lab uses a more advanced process that creates super-concentrated platelets (SCP). This can yield platelets at 10 to 40 times the normal number. This allows for a customizable solution specific to each patient’s needs. This higher concentration has been shown in our lab to have a positive effect on the stem cells that are responsible for repairing tissue.

It’s not only about the numbers. It’s also about the kinds of PRP being created.

Are There Different Kinds of PRP?

Yes. There are stark differences between different PRP preparations. Some samples are red in color, while others are more amber. Let’s review what these different colors mean.

1. Red PRP—Red PRP is literally red in color, and it is often concentrated to lower levels. This was the first type of PRP available. It’s rich in white blood cells, so, generally, there is more inflammation and a stronger reaction when it is injected. Red PRP may be less effective for most orthopedic treatments because of these numerous white blood cells. However, a few conditions may benefit most from red PRP.
2. Lower-Concentration Amber PRP—Amber in color and concentrated to lower levels, or fewer platelets, amber PRP is a newer type that is typically poor in white and red blood cells. Amber PRP can also be called “pure PRP.” It causes less tissue reaction and swelling, compared to red PRP, when injected. This type is considered to be ideal, by most doctors, for injecting tendons and ligaments.
3. Higher-Concentration Amber PRP—Also amber, but with more platelets, this high-concentration PRP typically cannot be created on those push-button automated machines, so this type is less common. This type of PRP, based on our research, is ideal in joint applications and is best used to treat arthritis.



While no one knows for certain if one type of PRP is clinically better than the other, it is clear that [red PRP injections promote significantly more inflammation than amber PRP](#) without red or white blood cells. Additionally, [our lab research clearly showed that stem cells exposed to both types of PRP did much better with amber PRP and did poorly with red PRP](#). The [Regnexx-SCP](#) process results in an amber PRP, as you can see in the image above, that is far more pure.

The Benefits of PRP Injections at Regenexx

Recently, I was injecting a low-back patient who also needed a tendon and a knee injection. As I looked at the sterile tray of what was to be injected, I realized I had three different platelet preparations on the sterile field. I also realized how unique Regenexx is in the world of [PRP injections](#) (or what we call SCP—super-concentrated platelet).

For example, for this patient I had the following:

1. A 7X (7 times the normal platelet concentration) amber-colored PRP to inject into his tendons. This means the platelet concentration was 7 times over his normal baseline platelet count.
2. A 20X amber-colored PRP to inject into his knee joint. In our experience and based on our lab data, [much higher concentrations of PRP are needed for successful joint treatments](#), especially in middle-aged and older patients who may have more significant arthritis. What is interesting here is that no “one size fits all” PRP machine on earth could have produced this sample as most will only concentrate to about 7X-10X max, and that’s with running the sample twice (not recommended by the manufacturer of the device).
3. A fourth-generation platelet lysate. This is PRP that has had all of its growth factors stripped from the platelets. This was being used to inject via epidural to help reduce swelling and improve blood supply around irritated nerves in his low back. Watch this video, [“What Is a Platelet Lysate,”](#) to understand the difference between PRP and platelet lysate.

No clinic outside of the Regenexx Network could tailor what this patient needed by producing three different types of platelet injectates. There are major differences between what we do with platelets at Regenexx and what’s being done by other doctors who are dabbling in regenerative medicine.

Regenexx super-concentrated PRP (SCP) is an advanced form of PRP injection. It costs less than stem cell procedures, and PRP treatments can be effective because platelets have a stimulating effect on the stem cells within the targeted area. Stem cells are found throughout the entire body and play a key role in repairing damaged tissue, so a primary goal in platelet treatments is to get these powerful cells to work harder and faster.

A PRP shot is not the same worldwide or even within the United States. There are many different types. At Regenexx we sometimes take for granted that we have so many options available to us and that we have spent a decade perfecting every aspect of these procedures. It's easy to forget that we are operating on an entirely different level from others when it comes to regenerative-medicine procedures.

Why take the risk of getting an injection of something that just isn't as advanced when you can stack the deck in your favor and increase the chances of a full recovery with a Regenexx PRP procedure?

Disclaimer: Like all medical procedures, Regenexx Procedures have a success & failure rate. Not all patients will experience the same results.

Regenexx® is VERY Different - Why Regenexx Stem Cell Treatments are Superior to Other Solutions





Regenexx Procedure Network

Find a Physician



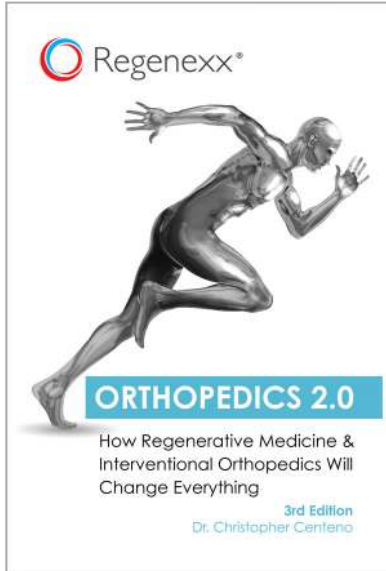
Regenexx Supplements

Advanced Stem Cell Support Formula, Turmeric Curcumin Complex and Concentrated Pro Omega 3 Fish Oil.

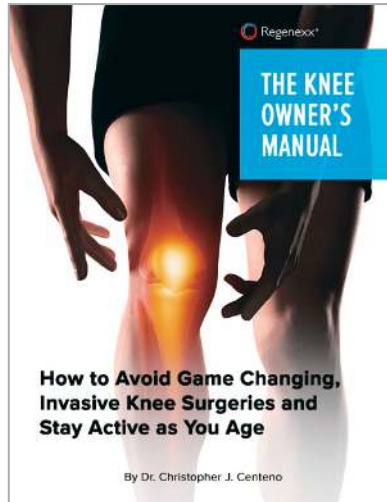


Orthopedics 2.0

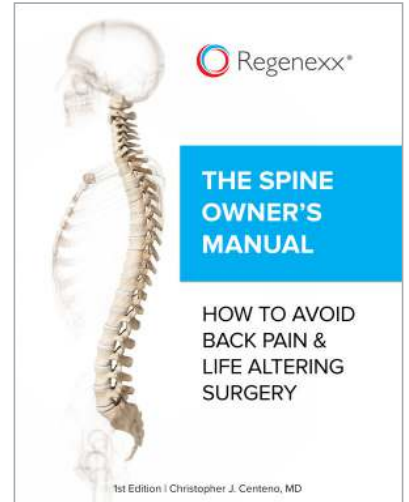
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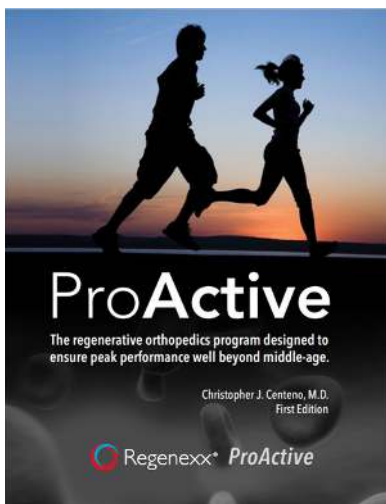
The Knee Owner's Manual



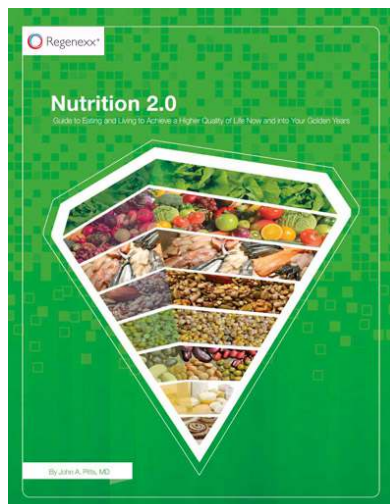
The Spine Owner's Manual

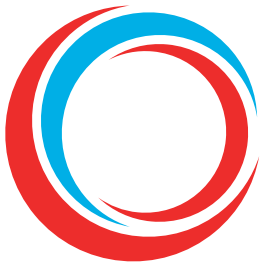


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