

A summary statement by Dr. Nielsen about the PRP research listed with comments on the 'agendas' of publications.

Also read Systematic Review—The Potential Implications of Different Platelet-Rich Plasma (PRP) Concentrations in Regenerative Medicine for Tissue Repair.

You will find all this research hard to decipher. It's much more like the five blind guys describing a elephant. I would like to give you a list of variables great researchers who were functioning honestly would discuss.

- 1- Most importantly, PRP causes Glucosamine, Hyaluronic acid, Water, Zinc, Vitamin D and Testosterone to be consumed during repair. If you want good results, Fix your hormones, take Vitamin D drops, hydrate and take all your supplements!
- 2- Who did the research? U.S. research is most likely to be fraudulent since PRP is cheap and profit goes to physicians while orthopedic surgery makes a LOT of money for hospitals. Second, the Chinese love PRP because they are socialized and need injured workers back to work.
- 3- What layer of centrifuged blood is being used? You will see comments on Leukocyte free, platelet poor and Platelet Rich.
- 4- How long was the blood centrifuged, how long is the centrifuge arm, and at what RPM's? The best centrifuges such as the German Hettich 32A, are capable of 4000 RPM's while cheaper machines may achieve only 2500 RPM. Cheaper units 'vibrate' mixing rather than separating.
- 5- What is the volume of blood being harvested? And what proportion of percentage is being used for injection. If the amount is about 10-15%, it will be concentrated and powerful BUT if it is higher, it is more volume which has its own benefits.
- 6- How quickly is the PRP being injected. PRP decays quickly after 60 minutes.
- 7- What is the anti-coagulant? Sodium Citrate breaks down to 'salt' and Citric acid (used by the body in the citric acid cycle)- very natural. EDTA works almost as well but moves mercury from the body into the brain! It is a chelator.
- 8- Is Calcium being used as an activator. If so, be sure to get PRP injected much faster, but it does make PRP stronger.
- 9- Is the PRP being drawn and spun in glass or plastic? Glass is ideal, too expensive and no one does it for that reason, but it is a variable.
- 10- Is there anything that can be added to PRP at the time of injection to enhance healing? Yes! BPC157, the peptide made from Guinea pig gastric mucosa (How Tiger Woods won the last Masters!) and a small dose of testosterone.
- 11- No one is studying study failure due to recent use of steroids or NSAID's like Motrin, see Naproxyn study.

CONCLUSION: Doctors who go to one course and order a machine with a kit, have removed any possibility of adjusting all the above variables to match the needs of each particular procedure. I have been doing 'bench' PRP harvesting using the best centrifuge and then optimizing my product since I began.

Much research is done by University Orthopedic Surgeons to prove PRP does not work. One of the articles uses 2cc's of blood spun for 5 minutes and makes no comment on RPM's then claims PRP does not work.

I use 80 cc's of blood spun at 4000 RPM's for 15 minutes on the lowest vibration machine made, the Hettich 32A in 50 ml plastic tubes.

The cost of PRP is TIME! Nothing is expensive except the original purchase of the centrifuge. A single draw of 80 cc's of blood spun for 15 minutes and then separated takes 25 minutes. A double draw of 160 cc's takes 30 minutes! The supplies are \$20. With a kit like Emcyte, a double draw is twice as expensive and twice as long.

This study on ankles in Netherlands actually was positive and showed PRP works when they designed it to fail!

[Effect of Platelet-Rich Plasma Injections vs Placebo on Ankle Symptoms and Function in Patients With Ankle Osteoarthritis: A Randomized Clinical Trial | Geriatrics | JAMA | JAMA Network](#)

EXCERPT: One syringe of 15 mL of autologous blood was collected(I use 60 mls)from the cubital vein at inclusion and 6 weeks later. After blood collection, the syringe was centrifuged for 5 minutes(I do 15 minutes)and the injection was administered within 30 minutes(I inject with in 10)after venipuncture to prevent blood clot formation. (no clot would ever form but they used no anti-clotting agent!) No additional substances (calcium, thrombin, or citrate) were added to the PRP solution. For each procedure, 2 mL of PRP or placebo was injected (I would use 4ml) into the affected ankle joint under ultrasonography guidance using sterile technique.(they didn't use PRP, they threw away the good part and used Platelet Poor Plasma!)

In spite of doing everything wrong, the PPP worked some.