



### Questions from 3/25 Clinician's Guide to Autologous Medicine-PRP

1. Any important difference between PRP and PRFM?
  - a. PRFM is simply a marketing term for the Selphyl PRP system that instructs users to add calcium chloride 10% into the syringe to form an activated clot. In the webinar we discussed potential regulatory issues with that step now that the FDA has defined the "minimal manipulation" standard for autologous regenerative procedures. So far, the FDA has focused their energy on applying that rule to autologous "stem cell" procedures like bone marrow and ADRC.
  
2. How long after the first PRP injection can the patient see results?
  - a. We offer an online CME training course on PRP for hair that focuses on clinical outcomes and patient selection. Sign up for that course here <https://revivetrainings.com/product/platelet-rich-plasma-prp-hair-and-face-online-training/> or contact your PRP manufacturer to see if they will provide a grant for this training.
  
3. What kind of locations can PRP be performed?
  - a. Only licensed medical practices can use Class 2 FDA cleared devices.
  
4. Major difference between PRP vs PRF?
  - a. Spinning down whole blood without anti-coagulant will produce what the wound healing and oral maxillofacial literature refers to as PRF or Platelet Rich Fibrin. This is a platelet fibrin clot that cannot be injected but can be applied topically to a wound or pressed to produce an autologous fibrin membrane that gets sutured into tissue. There are FDA cleared kits for this process but the companies selling them are mostly in the dental space. You may be referring to the company, EZPRF specifically, who is marketing and selling their "PRF" product without an FDA clearance. They have registered it as a class 1 blood collection tube. What they are instructing doctors to collect is the top portion of serum above the platelet rich fibrin (PRF) clot which gets injected in their videos – its likely doctors using EZPRF this way are just injecting the PPP (Platelet Poor Plasma) above the clot but a test of the product must be conducted to know for sure.

5. Is it preferable to use PRP vs using the whole plasma which contains the same number of platelets?
  - a. The consensus literature on PRP for hair loss points to the most effective concentration being found on a bell curve between 3-6X the platelet count in whole blood which means with most PRP systems you will need to remove some of the PPP before collecting the PRP.
6. At what point in wound healing should PRP injections be administered and how often should treatments be done?
  - a. We'll be creating a topical wound healing training course with PRP for post laser, microneedling and wound care. Follow us on social media and subscribe to our email list to stay tuned for details on that webinar.
7. Are you using Calcium Chloride?
  - a. Dr. Khetarpal stated in the webinar that she does not use calcium chloride when doing PRP injections.
8. Do you super concentrate your PRP? draw off some of the PPP?
  - a. Yes, Dr. Khetarpal removes the PPP before performing PRP scalp injections.
9. Who can perform PRP in MD, NYC, Pennsylvania, California, Georgia, Colorado?
  - a. Each state also governs which level of providers in your medical practice can actually inject PRP. As a rule, if they can inject botox or fillers in your state, they can inject PRP. If they can use class 2 lasers, they can use PRP devices. Check with your medical board for your state.
10. How are you using it for scars - injection, microneedling, or both?
  - a. Yes, Dr. Khetarpal uses PRP for both of these dermatologic applications.
11. What do you think about PRP for autologous serum eye drops? Do you know of training on creating the drops?
  - a. There is positive literature demonstrating that this works very well compared to artificial tears. REVIVE™ is working on a training course with board certified ophthalmologist as we speak.
12. Has PRP given good results for periorbital hyperpigmentation in your practice?
  - a. REVIVE™ offers a skin rejuvenation CME course which includes efficacy for periorbital rejuvenation. <https://revivetrainings.com/product/platelet-rich-plasma-prp-hair-and-face-online-training/>
13. How long do you recommend avoiding NSAIDS for after each treatment?
  - a. This is also discussed in our various CME training webinars for hair/skin and sexual wellness.
14. Can we do PRP on Keloid forming patients?

- a. PRP companies and microneedling companies list keloiding as a relative contraindication as a precaution. This is also discussed on our CME microneedling/PRP skin rejuvenation webinar.
15. Are there stem cells that are FDA approved besides those derived from fat?
- a. There are several FDA cleared devices for collecting autologous stem cells from BMAC and Lipo aspirate. The only FDA-approved allogeneic stem cell therapy is for leukemia patients. All other allogeneic stem cell products must get FDA approved as a drug.
16. How long can the spun blood sit before decanting the PRP?
- a. Studies show that up to 4 hours after centrifugation the platelets are alive and intact at room temperature. After that the number of viable platelets gets depleted.
17. If the PRP is slightly blood-tinged during withdrawal of PRP is it safe to inject and will it affect efficacy? Should it be discarded or re-spun?
- a. Some hematocrit is fine and certainly not unsafe. The goal of a pure PRP system is to remove as much of the red and white cells as possible. Slightly blood-tinged PRP should not be discarded and most separator gel devices are not designed to be respun. Keep in mind most double spin systems always have a red cell count which may be ok for orthopedic applications but doesn't add any benefit.
18. What do you think of independent labs conducting tests that show some PRP systems have more platelets than others?
- a. If it's a peer reviewed published study or video of PRP samples being analyzed one can trust it. If it's a non-peer reviewed study in a comparison marketing piece given to you by a sales representative, there is reason to be skeptical. There are many variables with the different PRP systems' collection processes that can be intentionally manipulated to make some companies look better than others. PRP companies are floating around with marketing materials that are masquerading as very official looking "independent lab tests". Look at the source before trusting the information.
19. Anyone know if Procell Therapies Stem Cell FDA- approved?
- a. Ask all companies selling allogeneic stem cell products to provide an IND number or FDA approval to verify they are selling it legally. To date we are not aware of any legal allogeneic stem cell or exosome products in the elective regenerative medicine space.
20. How is 1 - 13ml tube of PRF achieve 4-6x concentration?!?
- a. This seems very unlikely considering such a low blood draw volume. We recommend asking your manufacturer for validation of platelet concentration claims.
21. Question about PRP vs PRFM is with regard to facial rejuvenation?

- a. Activation could be appropriate if the goal is to prevent the PRP from diffusing away from the target treatment site. To date there are no studies comparing activated vs. non-activated PRP for skin rejuvenation. There is proof that platelets activate endogenously once injected into the skin.
22. If the nurses in our practice draw the patient's blood and spin it, could our estheticians apply the PRP after a microneedling on one of their patients? Or is this exclusive to medical professionals?
- a. Consult your medical board and use best judgment as to which mid-levels in your practice should handle blood products.
23. How does PRP compare to PEP for male pattern baldness?
- a. If you are referring to injectable peptides for hair regrowth there are far more studies for PRP at this point. Also, the legality of injecting non-approved peptide (drugs) products could be an issue for your malpractice.
24. I have heard a lot about Benev exosomes....not FDA approved?
- a. According to the warning letter put out by their FDA, Exosomes are considered a drug (351) and there are currently no FDA-approved exosome products.
25. Can you do too many PRP treatments? At what point does it make no difference?
- a. There is a lack of research on the ideal maintenance program for dermatologic applications and PRP. Please check out our PRP Hair/Skin CME webinar to find out which maintenance programs our Board-Certified staff suggest.