

Editorial: More Platelets, Better Outcomes?

Revisiting PRP Dosage in Knee Osteoarthritis

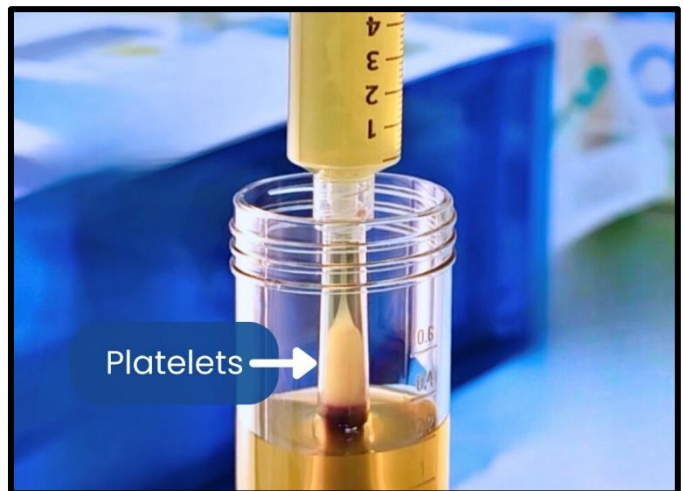
Knee osteoarthritis (OA) continues to challenge both patients and clinicians alike, with pain, reduced mobility, and poor quality of life characterising the disease's long-term burden.

In recent years, platelet-rich plasma (PRP) has gained popularity as a biological treatment alternative, offering potential for symptom relief without the adverse effects of corticosteroids or the cost of surgical interventions. Yet, questions remain regarding the optimal formulation and administration of PRP. A recent systematic review titled [*"A Greater Platelet Dose May Yield Better Clinical Outcomes for Platelet-Rich Plasma in the Treatment of Knee Osteoarthritis" \(2025\)*](#) provides compelling evidence that platelet concentration may be a critical determinant of therapeutic success.

The authors evaluated outcomes across studies with varying platelet dosages and found a consistent trend: higher platelet doses were associated with improved clinical outcomes. This dose-response relationship highlights a key principle in regenerative medicine—more is sometimes better. Platelets contain a myriad of growth factors such as PDGF, TGF- β , and VEGF, which can stimulate cartilage repair, modulate inflammation, and support joint homeostasis. Increasing the absolute number of platelets delivered to the joint could logically amplify these effects.

The authors reviewed 29 studies with positive results finding a mean platelet value of **5.5 billion** platelets were needed for knee osteoarthritis.

However, the review also underscores the current heterogeneity in PRP protocols. There is still no universally accepted standard for PRP preparation, platelet quantification, or frequency of injections. This lack of standardization poses a barrier to direct comparisons across studies and to clinical implementation. Moreover, while greater platelet doses appear more effective, the safety and threshold of this approach remain areas for further investigation. Could excessively high concentrations yield diminishing returns or adverse inflammatory responses? Future studies must not only refine dose-response curves but also explore patient-specific factors such as OA grade, comorbidities, and platelet functionality.



This systematic review serves as a call to action. If PRP is to fulfill its promise as a minimally invasive, biologically rational therapy for knee OA, greater scientific rigor and standardization in dosing strategies are needed. Clinicians and researchers must move toward consensus guidelines that define not just "what PRP is," but "how much PRP is optimal."

In the evolving field of orthobiologics, quantity may indeed be a quality of its own. It is worthwhile asking your provider how many platelets they yield and what device they use.

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