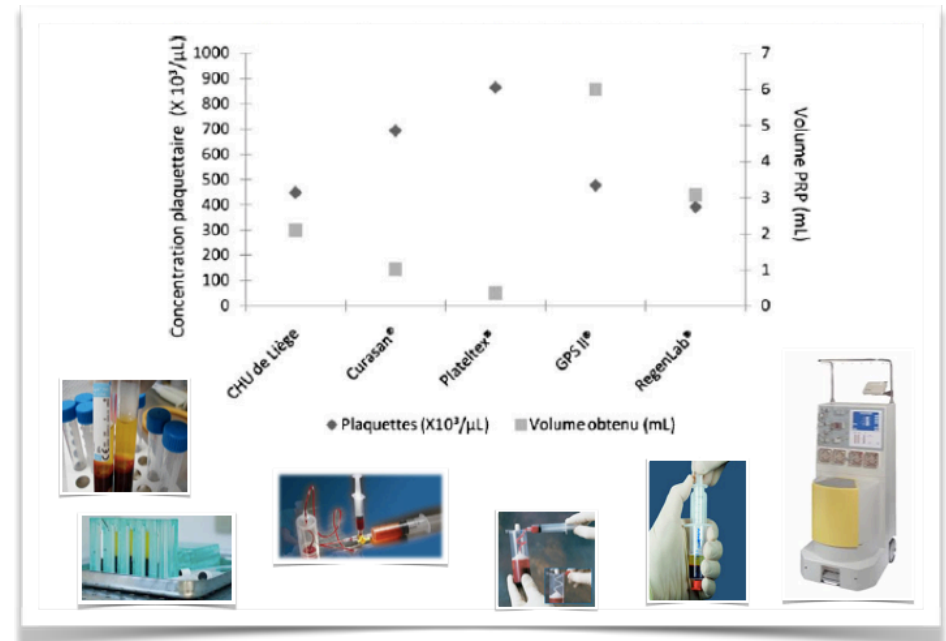


**Introduction:** Platelet-rich plasma (PRP) is blood plasma with a high concentration of autologous platelets which constitute an immense reservoir of growth factors. The clinical use of PRP is widespread in various medical applications. Although highly popular with athletes, the use of PRP for the treatment of tendinopathies remains scientifically controversial, particularly due to the diversity of products that go by the name of “PRP”. This may partly explain the disparity of results obtained in the literature.

**Purpose:** The objective of this study was to evaluate the similarities and differences between the variety of PRP formulations, preparation, and uses of this techniques in literature and to try to determine characteristics of the PRP which tend to give the best responses for the treatment of knee osteoarthritis.

**3. Methods:** A search for articles was conducted in the Pubmed and Pedro databases. The results were obtained by using the following key words and combinations of these key words: PRP, platelet-rich plasma, injection, treatment, tennis elbow, greater trochanteric pain syndrome, jumper’s knee, Achilles tendinopathy, plantar fasciitis, anticoagulant, sodium chloride, local anesthetic, and centrifugation speed.

In this literature review, we take a closer look at eight parameters which may influence the quality of PRP: 1) anticoagulants used to preserve the best platelet function, 2) the speed of centrifugation used to extract the platelets, 3) the platelet concentrations obtained, 4) the impact of the concentration of red and white blood cells on PRP actions, 5) platelet activators encouraging platelet degranulation and, hence, the release of growth factors, and 6) the use or nonuse of local anesthetics when carrying out infiltration. In addition to these parameters, it may be interesting to analyze other variables such as 7) the use of ultrasound guidance during the injection with a view to determining the influence they have on potential recovery.



**5. Conclusions:** Although there is an increasing amount of scientific proof about the benefits of PRP infiltration in the treatment of tendinopathies, there is currently no consensus as to how to obtain or use it. This may partly explain the disparity of results obtained in the literature. Similarly, the biological parameters and risk factors for tendinopathies of patients themselves may possibly influence the results of this treatment even if, to date, this has not yet been demonstrated. There is a lack of standardization in PRP preparation technique for chronic tendinopathies. However, our study helped identify features of PRP recommended a platelet concentration lower than 5 times the baseline (from 3 to 4), and avoiding leukocytes and erythrocytes. We recommend leveraging this information about PRP for future studies.