

## The Use of Platelets-Rich Fibrin (PRf) to Accelerate Healing Process After Tooth Extraction and Dental Implants

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### Abstract:

**Objective:** Postoperative wound healing is an important stage that cannot be ignored. The literature contains relatively limited informations about disturbed wound healing, and there is no acceptable description about wound healing process in oral cavity. Wound healing contains a sequence of complex biological processes, All tissues alike follow a similar essential pattern to complete the healing process. Generally, we have two main types of tissues included in surgery of oral cavity, soft tissue (gum) and hard tissues (jaws bones), each one of them has its own requirements to complete the process of healing, And each of them requires a certain time also to be fully recovered. By Focusing on the time required to recover, in this research we are going to discuss a new method (Platelets Rich Fibrin) to accelerate wounds healing process mainly after 3rd molar extraction and after an implant fixation to the jaws bones. Platelet rich fibrin (PRF) is a fibrin matrix in which platelet cytokines, growth factors, and cells are trapped and may be released after a certain time and that can serve as a resorbable membrane.

**Methodology:** When placing blood in a tube, Blood is separated into three components with the formation of a strong fibrin clot in the middle of the tube. This fibrin collection acts as a plug that traps most invisible or light blood components, such as leukocytes and platelets, also circulating molecules, such as growth factors and fibronectin. This method leads to the natural production of a dense leucocyte-rich PRF (L-PRF) clot. After compression of the LPRF clot, it can be used easily as a membrane. Then this membrane is ready to be used in acceleration of wounds healing process; because of its composition which is rich with the factors That enhances and speeds up the process. For the picture to be clearer, we'll show an example for a patient His wisdom teeth were extracted. after the extraction the doctor decided to apply PRF to the wound, so he got a blood sample from the patient and made PRF membrane, after that he applied it to the wound And noted the changes that have occurred.

**Result:** The wounds has fully recovered without any difficulties and the recovery was faster than if he didn't use PRF.

**Conclusion:** Our data suggested that PRF plays an effective role in the healing process by making it faster, If it used in the correct way. Also its worth noting that this technique has been used in the treatment of lower extremities wound in Diabetics, But it did not receive enough success; because this type of wounds usually needs more than two time of application of PRF, which may leads to an inflammatory response. Therefore, these experiances field. On the other side in dentistry it has been tested many times in different cases and it yielded impressive results as in the case mentioned.

**Keywords:** healing, acceleration, postoperative, treatment.

**Abbreviations and acronyms:** PRF (platelets-rich fibrin), LPRF (leucocyte-rich PRF).

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