

Smile Center Oral Surgery

Platelet Rich Fibrin

Platelet Rich Fibrin (PRF) is exactly what its name suggests. The substance is a by-product of blood (plasma) that is rich in platelets. Until now, its use has been confined to the hospital setting. This was due mainly to the cost of separating the platelets from the blood (thousands) and the large amount of blood needed (one unit) to produce a suitable quantity of platelets. New technology permits the doctor to harvest and produce a sufficient quantity of platelets from only 55 cc of blood drawn from the patient while they are having outpatient surgery.

Why all the excitement about PRF?

PRF permits the body to take advantage of the normal healing pathways at a greatly accelerated rate. During the healing process, the body rushes many cells and cell-types to the wound in order to initiate the healing process. One of those cell types is platelets. Platelets perform many functions, including formation of a blood clot and release of growth factors (GF) into the wound. These GF (platelet derived growth factors PDGF, transforming growth factor beta TGF, and insulin-like growth factor ILGF) function to assist the body in repairing itself by stimulating stem cells to regenerate new tissue. The more growth factors released sequestered into the wound, the more stem cells stimulated to produce new host tissue. Thus, one can easily see that PRF permits the body to heal faster and more efficiently.

A subfamily of TGF, is bone morphogenic protein (BMP). BMP has been shown to induce the formation of new bone in research studies in animals and humans. This is of great significance to the surgeon who places dental implants. By adding PRF, and thus BMP, to the implant site with bone substitute particles, the implant surgeon can now grow bone more predictably and faster than ever before.