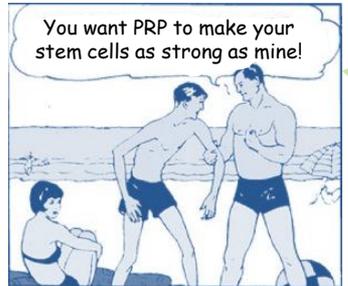


# How do we get Platelets to Stimulate Stem cell Growth?

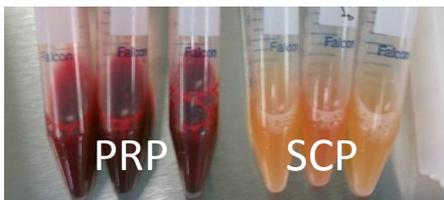
## What is SCP?

SCP stands for "Super Concentrated Platelets". It's a mixture obtained from whole blood that's similar to Platelet Rich Plasma (PRP), except that unlike PRP it is low in red blood cells (RBCs) and white blood cells (WBCs). As such it's tailored to maximize the activity of your local stem cells, which can be inhibited by RBCs and WBCs. It can also be concentrated many times more than the commercially available bedside units that many physicians use.



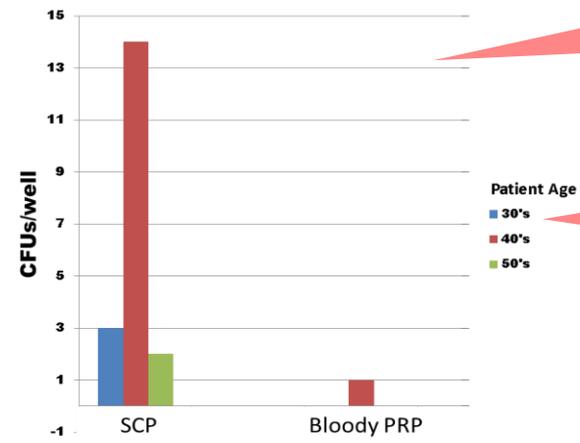
**What does PRP do?** PRP is a concentrated platelet mix that releases growth factors to allow the local stem cells to kick into action and repair an injury. So the concentrated platelet mix you want should be designed to stimulate your own stem cells.

Are You being Injected with Bloody PRP?



**Why should I care?** If the PRP you're being injected with is red, then it has far too many red and likely white blood cells. This will not only cause more unneeded inflammation, but it also inhibits the response of your local stem cells. You want the platelet prep being used to do the opposite-stimulate your own local stem cells! As a result, the injection should be amber in color.

The Regenexx-SCP procedure produces a mixture of super concentrated platelets to promote healing.

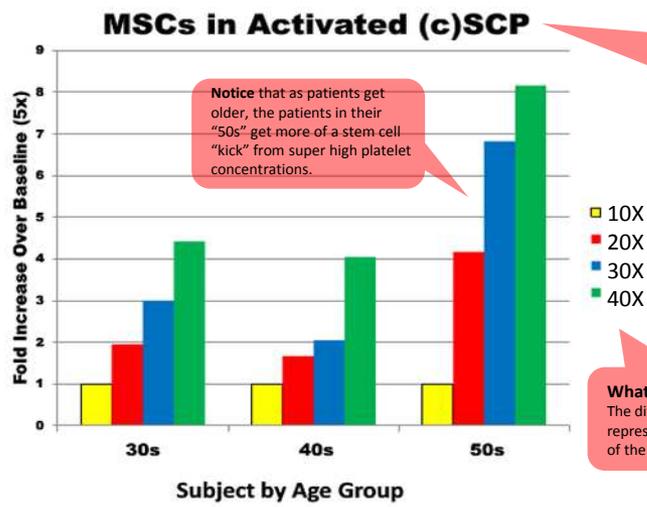


**Caution!** This is in-vitro data, which is not the same as a controlled trial in patients. This means it was collected in a lab experiment.

**What does this mean?** The different colored bars represent the age of the patient samples (i.e. "30s" means a sample from a patient between age 30-40).

Three patients of differing ages had their platelet preps used to culture similar age human allogeneic MSC samples [1]. The same MSC samples were used with both Machine PRP and SCP. CFU's (Colony Forming Units) are a standard metric for measuring the proliferation of MSCs. Platelet concentration was kept constant between the samples. [1]-MSCs cultured monolayer using A-MEM plus the tested platelet prep and cultured at 5%O<sub>2</sub>/CO<sub>2</sub> for 6 days. CFU's counted using microscopy.

**What do these two graphs mean?** The top graph shows the ability of SCP to out-perform the best selling machine made, bloody PRP. The height of the bars represent the number of stem cell colonies that were stimulated to grow by each platelet prep-the higher the bar the better the stem cell growth. Our other tests have shown the same thing-SCP outperforms bloody PRP. The graph below represents the response of stem cells to various platelet concentrations. Most bedside machines that make PRP can concentrate platelets up to 5X (5 times normal concentration). However, our data shows that better stem cell growth can be obtained with 10, 20, 30, or even 40X concentrations. The problem is that without a specialized Regenexx lab, a doctor can't get to these higher levels!



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**Notice that as patients get older, the patients in their "50s" get more of a stem cell "kick" from super high platelet concentrations.**

Passaged MSCs were plated at 4,000 cells/cm<sup>2</sup> in 50% α-MEM, 50% (c)SCP activated by Thrombin & CaCl<sub>2</sub> and incubated for 3.5 days before trypsinized and counted.

**What does this mean?** The different colored bars represent the concentration of the platelets tested.