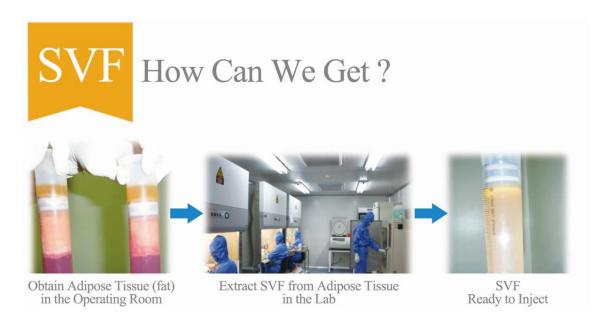


# **Use Your Own Fat to Treat Knee & Hip (Arthritis)**



### What is arthritis?

Before we can know how to get rid of joint pain, we need to understand what causes it. At it's fundamental level, Arthritis is an inflammation of joints that causes stiffness and immobility. When we look deeper at the root causes of arthritis we find that much of it can be traced the degradation of the meniscus tissue in these joints.

Mesenchymal Stem Cells (MSCs) are the "repair stem cells" that exist naturally within the joints that allow your body to regenerate damaged and worn done tissue. As you age, your body's ability to repopulate these after use diminishes. How plentiful these cells are can be used as a reasonably accurate measure of one's rate of gaining. Arthritis of the hip can in some regards be called MSC deficiency.

# What does this mean for my treatment options?

Traditionally speaking, when a joint such as a knee of hips begins to degrade, there were few options to get rid of joint pain available other than simply alleviating the symptoms. With the advent of "hammer and chisel" knee and hip replacements, human immobility due to advanced age could be greatly alleviated temporarily but at a high and irreparable cost.

Knee and hips replacements are major surgeries that are generally only done once in a person's lifetime. As one ages it becomes increasingly risky to perform major operations and as such ends to be a one off. This is a problem because with the advancements in prosthetics has not kept up with the rate of increase in human life expectancy.

Most people begin experiencing joint pain in their mid 40s with some having an early onset as early as their 30s. Historically, prosthetic hips and knees last between 10 - 15 years with the most advanced possibly lasting 20. This creates a gulf in the medical need of patients as people regularly live into their 80s and beyond these days.

#### How can stem cell therapy get rid on my joint pain?

As stated above, lowering counts of MSC's are the major contributing factor to arthritis and joint pain, thus it would seem that the most prudent solution would be to repopulate these cells instead of tearing out the entire joint.

Modern techniques have allowed to creation of natural stem cells that:

- 1) home (go to where they are needed);
- 2) integrate (blend in with the cells that are already there);
- 3) differentiate/proliferate (generate new bone and cartilage-producing cells).

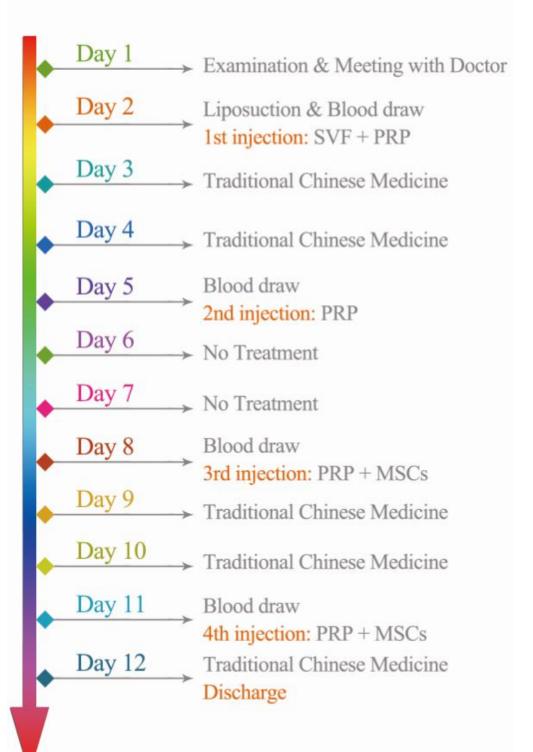
# Therapies available in Beijing Puhua International Hospital: SVF + PRP

The end result of many years of research into the extraction and applications of stem cells, the world's leading medical scientists created the SVF + PRP procedure which generates MSCs through the use of the patient's own fat cells. Stromal Vascular Fraction (SVF) is the end product that is obtained by breaking down adipose tissue. This end product contains various cell types, including mesenchymal stem cells(MSCs). SVF obtained from 100cc adipose tissue, contains around 40million MSCs.

Stem Cell Therapy has been controversial more many years, mainly due to how and from where stem cells are extracted. This procedure enables our team to safely create stem cells from a patient's own tissue without any need or embryonic or placental tissue. This not only alleviates most of the controversy surround stem cell treatment but also ensures that one's body does not reject the cells.

# Why do we add PRP?

# Treatment Protocol 12 Days Outpatient Plan



Like any cells, stem cells require certain conditions in which to flourish. Platelet Rich Plasma (PRP) is a blood plasma solution with high concentrations of blood platelets that creates the ideal environment needed for stem cells to populate.

The role of PRP:

Increase the number of stem cells injected.

Can enhance the differentiation of stem cells to cartilage.

Can provide scaffolds for stem cells to attach and grow.

Can stimulate progenitor cells in the surrounding tissue to grow in number, hypertrophy and/or differentiate.

Over the last decade, Puhua International Hospital has been at the forefront of stem cell and biotechnology research and treatment with thousands of patients having already undergone our procedures. This experience allows us to make the following statement about our treatment outcomes with confidence:

>90% of patients saw an improvement in symptoms by the 3rd month following their treatment.

65-70% of patients described their improvement as significant or life changing.