

reflex

STEM CELL THERAPY

STEM CELL PROCESS

- Blood is drawn for PRP that is utilized with the Stem Cells
- A harvest site is chosen and adipose tissue is extracted via lipoaspiration
- The blood and adipose tissue is prepared via centrifugation to separate out the various components: PRP (from blood) and Stem Cells (from the adipose tissue)
- The PRP and Stem Cells are then mixed together and injected into the knee joint *lipoaspirate*
- Recovery is a gradual return to pre-procedure activity over the next 4-8 weeks.
- The goal is to reduce inflammation and promote healing to damaged tissues within the knee joint, with the possibility of cartilage regeneration.
- *80% of* Most patients report *significant* improvement after treatment lasting approximately 12-24 months.

WHAT ARE STEM CELLS?

Stem cells are the source cells that allow our bodies to heal and renew as old cells die. They are in an undifferentiated state, meaning they can be programmed to become several different tissue types such as bone, cartilage, muscle, ~~nerve or organ tissues~~ *muscles or tendons*

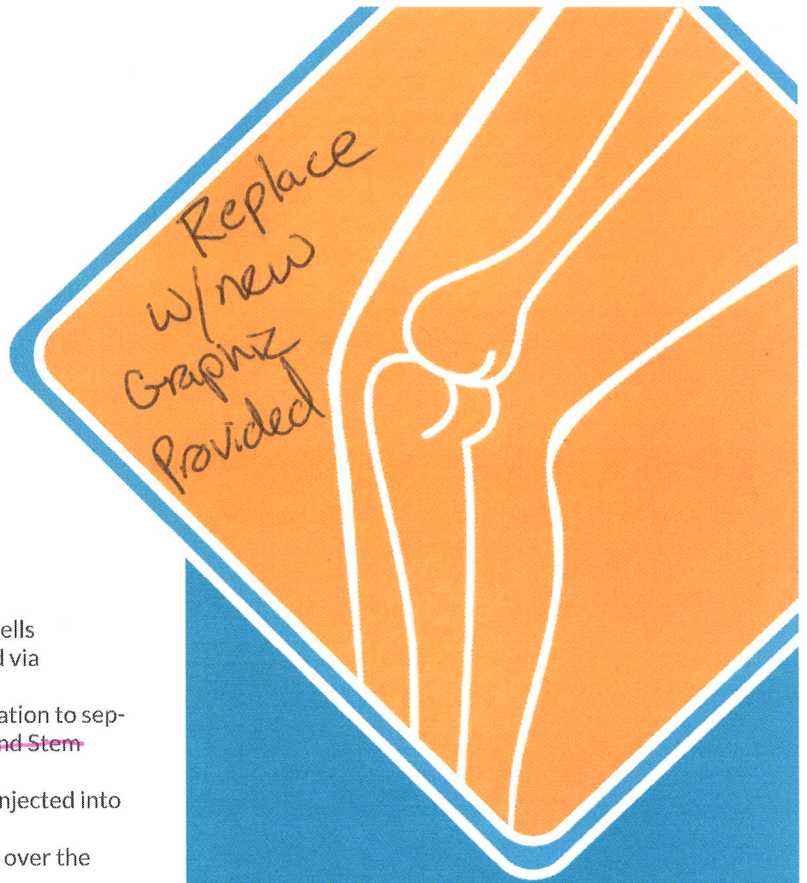
WHERE DO STEM CELLS COME FROM?

In general, there are 2 types of stem cells -- embryonic stem cells and adult stem cells. Due to ethical concerns, embryonic stem cells are not used for medical treatments.

In recent years, it has been discovered that adipose (fat) tissue has 500 times more stem cells per gram of tissue than in bone marrow (the source historically used for stem cell harvesting). Fat is readily accessible and harvesting adipose tissue is significantly less painful than harvesting from bone marrow. For these reasons, adipose is the tissue source used for harvesting stem cells at Reflex.

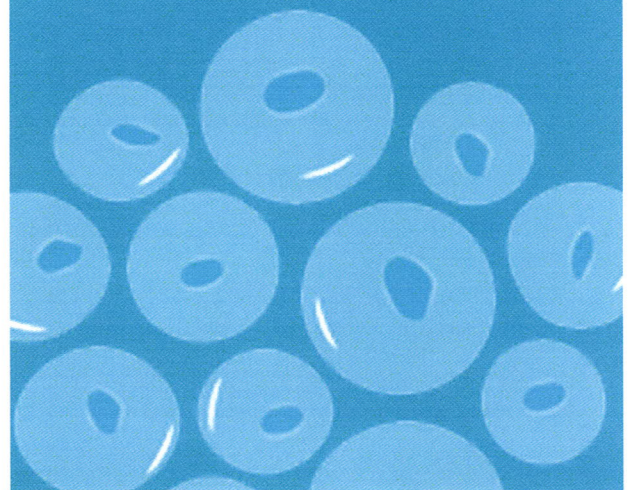
HOW CAN STEM CELLS POTENTIALLY HELP PATIENTS WITH KNEE OA?

Stem cells have the potential to help diseased or damaged tissue regain its function, as well as the potential to replace damaged cells. Combining Platelet Rich Plasma (PRP) with the stem cell tissue graft provides important molecular messengers to recruit the stem cells to participate in the healing process. This mixture will inhibit cellular pathways promoting cartilage breakdown while simultaneously supporting pathways which promote cartilage healing and repair. There are several physicians around the world reporting favorable outcomes with stem cell transplantation -- including increased cartilage thickness.



WHY IS PRP MIXED WITH STEM CELLS?

Stem cells respond to the growth factors present in PRP. There is far greater potential for long-term healing when an adequate number of stem cells are available to participate in the repair and regenerative process being orchestrated by the PRP.

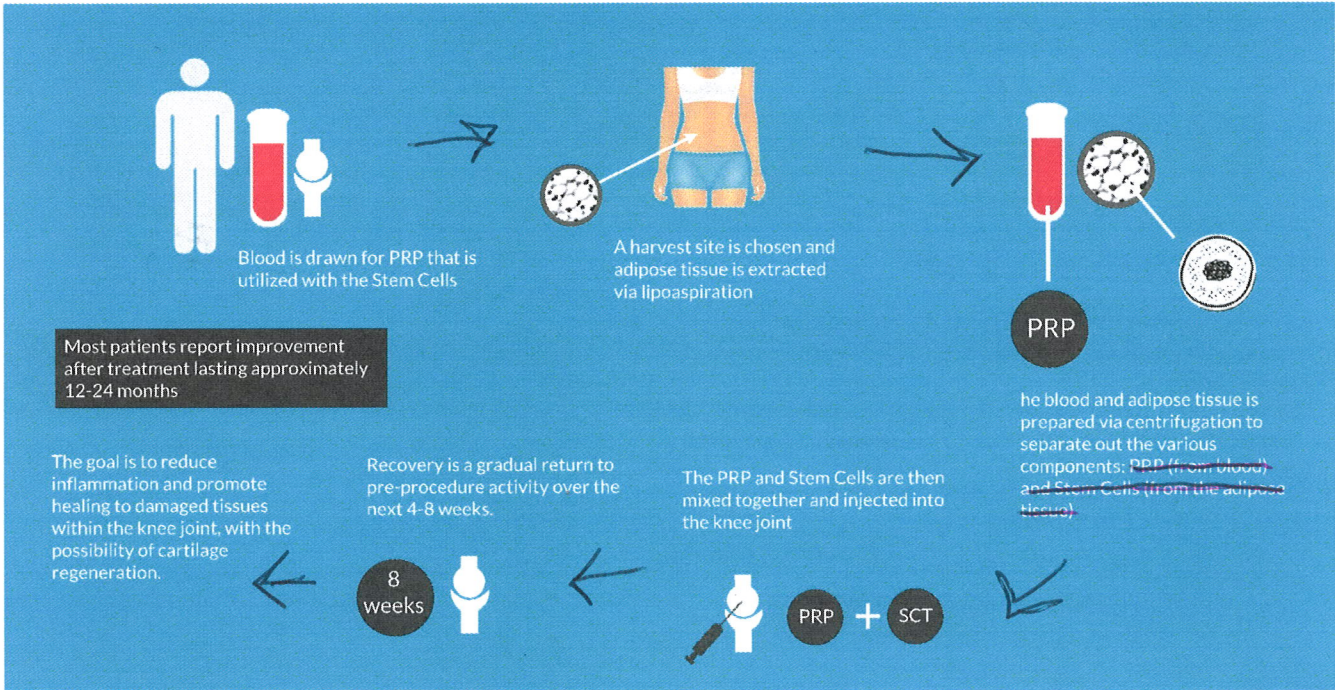


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WHICH PATIENTS WITH KNEE OA MIGHT BENEFIT FROM STEM CELL TRANSPLANTATION?

Since there is limited data regarding stem cell treatments in knee OA, the characteristics that make an ideal candidate have not ~~yet~~ ^{fully} been defined. In general, patients in the earlier stages of OA are expected to have better outcomes than patients with end-stage disease.

HOW SAFE IS STEM CELL TREATMENT FOR KNEE OA?

Thousands of stem cell procedures are being performed each year around the world, and no serious adverse reactions or safety concerns have emerged. However, since no large, randomized, controlled studies have been conducted on stem cell treatment for knee OA, the effectiveness and long-term safety are still unknown.

CALL
and schedule your stem cell
CONSULTATION APPOINTMENT

IS STEM CELL TRANSPLANTATION FOR KNEE OA APPROVED BY THE FDA?

Stem cell transplantation is considered experimental and is not currently approved by the FDA.

WHAT IS THE NEXT STEP IF I'M INTERESTED IN STEM CELL TRANSPLANTATION?

Established Reflex patients can call to schedule a stem cell consultation appointment with Dr. Riggs. This is a ³⁰⁻⁴⁵ ~~45~~-minute appointment during which Dr. Riggs will determine if you are a good candidate for stem cell transplantation, and will review the specifics of the procedure with you.

New Reflex patients will first need to schedule a New Patient Evaluation with any one of our physicians. During your initial evaluation, the current grade of your knees will be established and a diagnosis will be made. Then non-surgical treatment options for your condition will be reviewed with you.

Reflex is keeping abreast of the latest developments in the rapidly-evolving field of Regenerative Medicine. Please check our website and blog posts for updates as they become available.