FAQ

**(Stem Cells for Tissue Regeneration & Repair)**

**What is Stem Cells for Tissue Regeneration?**

A medical aesthetic treatment that uses Active Growth Factors to hasten recovery, improve skin quality, increase collagen and elastin production and generally enhance the results of aesthetic procedures.

Stem cells treatment work best with several non-surgical procedures like Laser resurfacing, Micro needling, Mesotherapy, Fillers to build collagen, Hair mesotherapy and with any other treatment that promotes tissue regeneration.

**What are stem cells?**

Stem cells are categorized by two major types: embryonic stem cells (ESCs) and adult stem cells (ASCs). Adult stem cells can be further divided into non-cultured expanded forms, such as mesenchymal stem cells (MSCs) and autologous stromal vascular fraction. The Regenerative Stem Cell Institute uses adult autologous (your own) stem cells. TRSCI does not use embryonic stem cells.

**How do stem cells and stromal vascular fractions work?**

Musculoskeletal damage, degeneration, and injuries are common health problems. Stem cells of a regenerative potential for damaged and injured tissue. Adipose SVF is use for many orthopedic applications in the clinical setting. These types of stem cells differentiate into cartilage and bone tissue, which is proven in many clinical studies. ASCs in the form of SVF possibly work by secreting cytokines, chemokines, and growth factors, which stimulate healing and tissue regeneration.

**How does Stem Cells for Tissue Regeneration & Repair work?**

In a Stem Cell treatment, a serum with active growth factors is applied on the face. A device with very fine needles is then maneuvered by the doctor on the skin to promote deeper penetration of the serum.

**How are autologous adipose svf obtained?**

To obtain adipose autologous SVF, liposuction is performed. After you are positioned on the procedure table, and the skin is cleaned using an antiseptic. After numbing the area using a local anesthetic, the Chicago stem cell doctor makes a small incision at the abdomen or other body area. A small cannula is inserted, and the adipose cells are gently removed via suction. Once obtained, the solution (called lipoaspirate) is processed in the operating room, and the incision is closed with Steri-Strips or a Band-Aid.

**Is the treatment painful? Is it safe? How long will the treatment take?**

The DermaPen used has spikes of 0.5-2.0 mm, making the treatment very comfortable and safe when done. The treatment takes only 20 minutes with no downtime. Topical anesthesia may be used upon request.

**How many treatments I need before I see results and how long will it stay?**

Immediate results of a plumper and rejuvenated skin will be observed after the first treatment. A 6 month treatment is recommended. Results last 6 months.

**What happens during processing?**

The lipoaspirates (fat tissue components removed by aspiration) are digested with an enzyme solution, which breaks down the matrix. The MSCs are released from the tissue. After being processed through centrifugation (spinning) and dilution, the ASCs are washed and isolated. The cells are processed again 3-4 times, and the end product is the SVF.

**How many stem cells are in autologous adipose svf?**

In adipose tissue, the number of stem cells derived as SVF can vary. The number of cells range from 500,000 to 2 million cells per gram of adipose tissue, and 1-10% of these cells are adult stem cells (around 4,000-200,000 in quantity).

**What are the side effects of stem cell transplantation?**

There are few side effects of stem cell therapy because of the use of a patient’s own cells and its minimally invasive nature. There is no rejection to cell products and a patient only has some mild tenderness for a few days following the procedure. Unlike surgery, patients never lose their mobility while resuming activities of normal living very rapidly. There is a very low rate of infection and no concerns for blood clots or pneumonias as seen with surgery. Finally, unlike surgical changes, if the procedure is ineffective for the patient then they still have all options open as they are never worse than prior to the procedure.