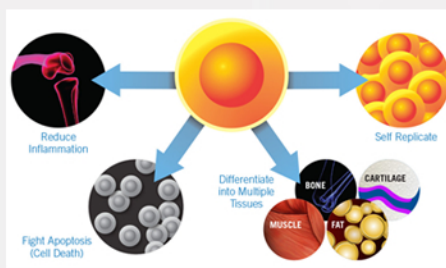


When these cells are placed in an injured environment, such as an arthritic knee, they are more likely to turn into the cells that the body needs. In the case of arthritis, the cells will recognize that there are cartilage injuries and will help to repair the cartilage defects. Also with arthritis, there is an imbalance between the cartilage cell's (chondrocyte's) ability to build up or turn over normal cartilage because of the increased inflammation inside the knee. The stem cells help to change the inflammatory stage of the knee, which not only helps to rebuild cartilage, but makes the knee significantly less painful.

### Mesenchymal stem cells have the ability to:



## 3

### What is treatment like?

The treatment is done in an office setting. No general anesthesia is required. We only use local anesthesia at the site of the injections. Carefully guided ultrasound is used to find a sample of stem cells or platelets. Typically, they are drawn from bone marrow in the pelvis bone. There is little pain during the procedure itself.

The sample is then concentrated in a stem cell centrifuge. Using ultrasound to guide the procedure, the concentrated stem cells are injected at the site of the injured joint. It's similar to a steroid injection. All of this is done in one visit, takes a little more than an hour, and you walk out of the office.

## 4

### How long is the recovery?

Patients may feel soreness in the knee for 3-5 days, but are generally able to walk and do their normal activities. Most patients will start home exercise or physical therapy about 2 weeks after the procedure to work on range of motion, balance and strength of the knees. Patients typically get back to sports and exercise at 4-6 weeks out from the procedure.

## 5

### What is the success of the treatments?

Success of the treatment depends on the severity of the knee condition and each patient's own healing potential. Most respond well to stem cell treatments and report significant improvement in their mobility and ability to return to activities they enjoy. Many of our patients have had dramatic recoveries from conditions such as arthritis, regaining the ability to walk, dance, run, climb and/or ski again without pain. At the very least, the vast majority of patients report a reduction in the pain they had been having. The success rate of your specific condition will be assessed at your initial consultation once we have a chance to review your injury.

## 6

### How long do patients benefit from the treatments?

If a patient responds well to the treatment, physician experience has shown that most will achieve improved pain and function for a period of 3-7 years from the initial stem cell procedure. Here again, success and longevity of the treatment depend on the severity of the knee condition and the individual's healing potential.



RESULTS. RECOVERY. RELIEF.™

### What other painful conditions can stem cells treat?

Stem cells have been shown to be helpful for treating joint pain caused by a wide variety of conditions including;

- Arthritis
- Achilles tendonitis
- Ligament sprains
- Muscle strains
- Nerve injuries
- Nonunion fractures
- Plantar fasciitis
- Tennis elbow
- Rotator cuff injuries

& many other conditions!

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