



REGENERATIVE  
MEDICINE  
Changing  
the game in  
orthopedics  
and pain  
management

# How can your own stem cells eliminate pain?



## 10 common questions about the use of stem cells to stop pain

Regenerative medicine in orthopedics is a non-surgical treatment that activates your own adult stem cells to repair injured tissues, reduce inflammation and stop pain. Here are 10 things you should know about how stem cell therapy can eliminate joint pain.



### What conditions can be treated with stem cells?

- Arthritis
- Carpal Tunnel
- Cartilage Defects
- Ligament Sprains
- Meniscal Tears
- Muscle Strains
- Nerve Injuries
- Plantar Fasciitis
- Rotator Cuff Injuries
- Tendonitis/Tendinosis

See [RegenOrthopedics.com](http://RegenOrthopedics.com) for more conditions treated.



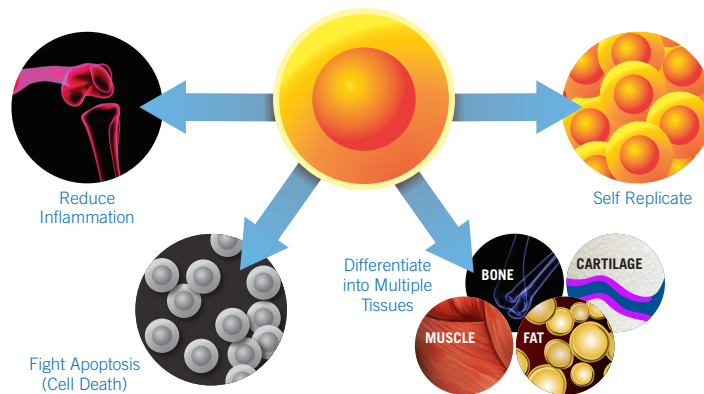
## How do stem cells work?

Stem cells are the very basic cells that have not yet decided what final tissue that they will become – such as a cartilage cell, bone cell, muscle cell, etc. We all carry stem cells throughout our bodies that naturally aid in healing and act as "repairmen."

There are several different kinds of stem cells. Mesenchymal stem cells (MSC) are the type used in orthopedic treatments. MSCs have the strongest potential to repair muscle, bone, joint and soft tissue injuries. These cells have the ability to self-replicate, reduce inflammation and differentiate into cartilage, bone, muscle and fat cells and may help the body regenerate lost tissue in an injured area.

We find that if these cells are taken from an area where they are usually plentiful (e.g. your bone marrow) and placed in an injured environment, such as an arthritic knee, they are more likely to repair damaged cartilage and tissues. In the case of 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 joint. The stem cells can help to change the inflammatory state of the joint, which may help to rebuild cartilage, and makes the joint less painful.

### Mesenchymal stem cells have the ability to:



## How are the stem cells obtained?

How the stem cells are obtained is a very important consideration when deciding to have a regenerative procedure. Not all providers of regenerative medicine follow the same protocol or use actual, live stem cells. At Regen Orthopedics, we follow FDA approved guidelines and use live autologous cells that are derived from the patient's own bone marrow and are injected into that same patient's injured area. Regenerative tissues may come from pelvic bone marrow and adipose fat tissue. Carefully guided ultrasound bone marrow aspirations are used to extract stem cells and platelets, this is then concentrated in a specialized centrifuge. The sample is then injected at the site of an injured tendon, ligament, muscle, bone or joint, again using ultrasound to guide the procedure. We follow FDA guidelines, and perform this procedure in the same building, in the same day, with minimal manipulation of the cells.



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## Research

Regen Orthopedics is actively involved in studying the effectiveness of regenerative treatments and follow the progress of our patients.

Additionally, we monitor the ongoing research in stem cell science being conducted throughout the world. We highly encourage patients to review the many studies on the use of adult stem cells in orthopedics that have been published in numerous medical journals. Check out the research section on our website for a few suggestions.

[Regenorthopedics.com/research](http://Regenorthopedics.com/research)



## Who performs the procedure?

At Regen Orthopedics, patient care is provided by nationally renowned orthopedic surgeon Reuben Gobezie, MD. With much of his work published in medical journals, Dr. Gobezie is known for his innovation and expertise as a surgeon, in providing both non-surgical and operative care. When considering regenerative treatments, it is very important that you be seen by a highly trained medical doctor who specializes in orthopedics. Orthopedics is the study and research of the musculoskeletal system (bones, joints, ligaments, etc.).



## What is the treatment like?

For the comfort of our patients, the treatment is done at our surgery center, though it is not a surgical procedure. The patient is put under light sedation for comfort. Typically, stem cells are drawn from bone marrow in the pelvis bone and fat tissue from the love handles. 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, similar to a steroid injection. All of this is done in one visit, takes a little more than an hour, and patients are able walk out of the office shortly after.



## What is the recovery like?

Patients may feel soreness in the joint treated for three to five days, but are generally able to do normal activities. Most patients will start home exercises or physical therapy about two weeks after the procedure to work on range of motion, balance and strength. Patients can typically get back into sports and exercise at four to six weeks out from the procedure.



## Conditions Treated

Achilles Tendinitis  
Arthritis  
Back, Neck Pain  
Degenerative Disc Disease  
Failed Back Syndrome  
Hip Pain  
Knee Pain  
Ligament Sprains  
Meniscus Tears  
Muscle Strains  
Nerve Injuries  
Nonunion Fractures  
Plantar Fasciitis  
Piriformis Syndrome  
Rotator Cuff Injuries  
Shoulder Pain  
Sacroiliitis  
Tendinitis/Tendinosis  
Tennis Elbow

**Find out if  
you are a  
candidate**

**Call us today!  
844.786.2355**



## What is the success of the treatments?

The success rates of the regenerative procedures are multi-factorial and will depend on the severity of your condition as well as your own health and healing potential. Most patients 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, regaining the ability to walk, dance, run, climb and/or ski again without pain. The vast majority of patients report a reduction in the pain they had been having. The success rate for your specific condition will be assessed at your first consultation once we have a chance to review your injury.



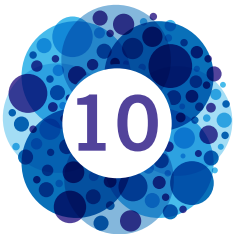
## How long do patients benefit from the treatments?

If a patient responds well to the treatment, physician experience has shown that most will achieve improved pain and function for a period of three to seven years from the initial stem cell procedure. Success and longevity of the treatment depend on the severity of the condition as well as the individual's healing potential.



## Can anyone have this procedure?

In most cases, these therapies are helping patients with joint or back pain who have failed conventional treatments such as anti-inflammatory medications, cortisone injections, physical therapy and rest. Some turn to these treatments to avoid surgery, prolong the time period before undergoing surgery, or who just may not be a candidate for surgery. There are rarely age limits to these procedures. The first step, is to find out if you are a candidate. We offer consultations to evaluate the injury and explore individualized treatment plans for each patient. This consultation with the orthopedic specialist is covered by most insurance.



## How many treatments do you need?

The vast majority of our patients only require one treatment. Rarely will a patient require more than three, and often that may only be in the case of an athlete who may overuse the treated joint early on. For example, think of a skier who goes out and pounds downhill moguls too soon after a knee procedure. Specific goals will be made for you at an initial consultation. After treatment, a follow up appointment at about 6-8 weeks will evaluate your condition and determine the next course of action.



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Learn more at [regenorthopedics.com](http://regenorthopedics.com)