

Arthritis, unfortunately, is a fact of life for most of us as we grow older. You wake up with joint pain and stiffness daily, and find the symptoms much worse as you exercise. Even walking can sometimes be a challenge. You have seen a surgeon, had xrays, and have tried all the basic remedies,

- physical therapy
- over the counter medications
- prescription non-steroidal medications
- joint injections
- bracing

BUT YOUR PAIN PERSISTS!

You can't do the things you once did, and as you are growing older, you find yourself living a life with far more limitations than you expected. A simple walk around the block may cause lasting pain.

Your surgeon may have told you that surgery is your only option. Yet despite the daily pain and limitation you experience, you fear that approach, knowing friends who have done just that and are still in pain. You have read that as many as 25% of total knee replacements leaves the patient with persistent, chronic, pain. But day after day, week after week goes by and you still have found no solutions, no remedy of any value, and the pain seems to be getting worse and more frequent.

IF YOU KEEP GOING LIKE THIS, YOU KNOW YOUR QUALITY OF LIFE WILL ONLY GET WORSE

You fear that the daily pain and stiffness, the limited rom will get worse and worse, and in fact your doctor has told you as much.....“Come back when you can't stand it anymore” was his last directive.

WHAT OTHER OPTION IS THERE?.....

COULD STEM CELLS BE THE ANSWER?

A friend with a similar problem has mentioned stem cell injections as a possible solution.

Is it possible that could help with your pain and disability? You are skeptical, but you have read patient testimonials, success stories, and you cannot help but wonder if it could be true.

Patient testimonials are great. But before you try this option, you need to know that stem cells really have the potential to resolve arthritic joint pain, and that there is clinical evidence they can help you.

AT SOUTHCOAST REGENERATIVE MEDICINE WE KNOW THAT STEM CELLS REALLY CAN HELP ARTHRITIC PAIN

LET US SHARE 6 REASONS WHY WE BELIEVE THERE IS CLEAR EVIDENCE STEM CELLS MAY HELP:

1 THERE IS CLEAR EVIDENCE THAT STEM CELLS CAN REGROW CARTILAGE.

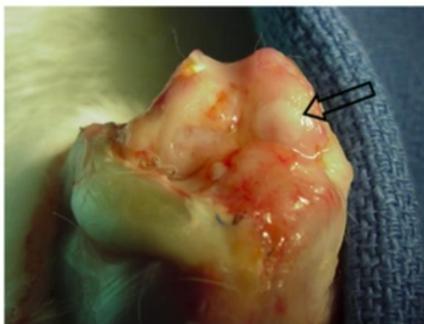
The major issue in joint related arthritic pain is a loss of cartilage. This happens because enzymes that can degrade proteins destroy the cartilage and it does not grow back! Once this happens there is no slippery surface between bones, and it leads to painful bone on bone motion. Typically when the cartilage is gone, it never grows back! However....

STUDIES HAVE SHOWN MESENCHYMAL STEM CELLS CAN REGROW CARTILAGE IN VITRO

This includes Jason Dragoo at Stanford, and work at the University of Pitt

Healing Full-Thickness Cartilage Defects
Using Adipose-Derived Stem Cells

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Treatment with ADSCs



Negative Control

2 MESENCHYMAL STEM CELLS HAVE THE POTENTIAL TO REGROW BONE

There is much data to show that mesenchymal stem cells can grow bone. In a 2013 study titled “mesenchymal stem cells in bone regeneration” , Knight and Hankenson, showed that these cells were quite capable of turning into bone cells and creating new bone growth.

3 STEM CELLS HAVE THE POTENTIAL TO HEAL LIGAMENTOUS AND MENISCAL INJURIES

Although the primary issue in arthritis is a loss of cartilage, the joint changes over time can affect other aspects of the joint as well, including ligament, meniscus and tendon.

Stem cells have been shown to have the potential to heal ligamentous and meniscal injuries.

In the 2015 publication “Meniscus repair using mesenchymal stem cells”, Yu concluded that “A comprehensive review of the literature suggests that MSCs possess an intrinsic therapeutic potential that can directly and indirectly contribute to meniscus healing.”

Conclusions

- Meniscal tears are a common source of knee pain.
- APM has been the mainstay of treatment after patients have failed a course on nonoperative treatment.
- APM has been found to be no better than PT or SHAM surgery and is associated with increased loads on articular cartilage and progression of degenerative changes of the knee joint.
- Autologous, minimally manipulated, micro-fragmented adipose tissue administered under ultrasound guidance appears to be a safe treatment option for meniscus tears reducing pain and improving function/mobility in approximately 70 % of treated subjects.
 - Significant improvements on NPS, all five KOOS subscales at one year.
 - Only significant adverse event was 1 case of uncomplicated cellulitis.

Studies have also shown Mesenchymal stem cells can repair anterior cruciate ligament injuries in animals as well as humans, including ongoing work by Dallo, Kanaya, and Oe. Figueroa et al. (2014) in a pre-clinical study showed 1 in 3 ACLs undergoing primary repair with collagen bio-scaffold and MSCs had complete regeneration of the ligament on histological evaluation at 12 weeks.

4 STEM CELLS HAVE AN INCREDIBLE CAPACITY TO SELF REPLICATE, AND THEIR EFFECT MAY POTENTIALLY LAST INDEFINITELY

One of the incredible aspects of stem cells, is that they can reproduce at an incredibly high rate. The act of doing so, supplies more of this healing army of cells to be available for tissue repair.

The other aspect of mesenchymal stem cells that is remarkable is that their effects, potentially last indefinitely. Whether this effect is from the stem cell itself, or simply mediated by the cell, it can lead to tissue repair over very long periods of time.

5 STEM CELLS LIMIT INFLAMMATION

Stem cells have remarkable characteristics, one of which is the ability to lay down a barrier, inside which they can limit inflammation, this known as Immune Modulation. Inflammation, is what initially leads to the enzymatic degradation of proteins which can cause arthritis long term. Stem cells clearly have the potential to limit this.

6 Clinical Studies have shown favorable outcomes in the treatment of arthritis when comparing stem cell to knee arthroplasty

Phillipe Hernigou, a stem cell researcher in France, compared outcomes with knee arthroplasty and stem cell in treating knee osteonecrosis. Patients included in the study had bilateral knee arthritis from osteonecrosis, agreed to have surgery on one leg and stem cell on the other, and were followed for up to 16 years. In the end, 21/30 Patients favored the stem cell knee over the surgical knee replacement.

A study of bone marrow concentrate for stem cell treatment of arthritis was presented at TOBI conference 2018. The following was the conclusion:

Subchondral autologous bone marrow concentrate was an effective procedure for treating young patients with knee osteoarthritis following secondary ON of the knee related to corticosteroids with a lower complication rate and a quicker recovery as compared with TKA.

4 reasons Why sooner is better than later for stem cell treatment of arthritis

You're likely reading this because you, or someone you know, does in fact suffer from Arthritis pain. We all know that arthritis can be a crippling disease, but much of our thinking about the development of arthritis has changed in recent years, and there are promising new treatments that might even help us prevent arthritis after serious injury, in the near future.

What if your arthritis issues are mild to moderate, and not severe. What if you have found that if changing your lifestyle, limiting some of the activities you like and leading a more sedentary lifestyle, is enough to really decrease your pain. Is it still worth considering stem cell treatments, or should you simply wait until your arthritis worsens?

Here are 4 reasons you might should consider having stem Cell Therapy now, and NOT later.

1 Arthritis is a progressive disease

Once we begin to develop arthritis, our joints continue to change. The enzymatic destruction of cartilage, and bony enlargement of stressed bone growth, continues to happen, leading to worsening of the structural changes. As the pain and stiffness progress and patients "feel" more symptoms, it is likely that the level of severity of the arthritic joint changes are progressing as well. The cartilage certainly continues to degrade, and subsequently the bone underneath the cartilage (subchondral bone) feels more of the stress of weight bearing, and begins to develop more serious changes, often including bony edema (or swelling) and bone cyst formation and bone spurs. Once this has happened, stem cell treatments may still help, but the likelihood of complete recovery is significantly reduced.

2 Stem Cells can block inflammation

Stem cells have remarkable characteristics. They have the potency to develop into many different cell types of cells, they are self-replicating, they have the ability to "conduct" other cells and orchestrate repair.

But one of the more interesting characteristics is that they have the ability to lay down a barrier, inside which, they can stop inflammation, and thus arrest the arthritis progression

3 Stem cells work, but their benefit takes some time

There is little doubt that stem cells can repair many different tissues, but this repair takes time. Stem cells arrive on the scene of injured tissue and almost immediately begin

a: to lay down a barrier to inflammation

b to replicate

c to initiate change in nearby cells, which leads to repair

Stem cells induce changes in other cells. These other cells then begin to perform duties they were previously incapable of performing and the stem cells act as the Maestro, conducting the orchestra (other cells) in their efforts to resolve problems and repair injured tissue. But these repairs take time. There is much data to suggest that many weeks to months are required for significant tissue improvement.

4 Stem cells can decrease pain

We have already discussed how stem cells have so many unusual characteristics. They have incredible ability to self-replicate, they stop inflammation, they change and direct other cells, but they also have another characteristic and that is *the ability to decrease pain*.

Stem cells actually have the ability to attach to mu receptors (similar to pain medications). This attachment then causes the patient to feel less pain. So even before repair begins to occur, patients may feel much improvement in the pain in an affected area.

“What does the FDA say about stem cells?”

If you're thinking about the use of stem cells, there are lots of things to consider like who is offering the procedure? What is their experience? Are they a licensed physician with experience in Regenerative Medicine? Is it reasonable to believe stem cell treatments can solve my issue?

But one of the things you might wonder is What does our national regulatory body, the FDA, think about stem cell treatments?

Scott Gottlieb, chairman of the FDA recently made his thoughts on stem cell clear:

We're at the beginning of a paradigm change in medicine with the promise of being able to facilitate regeneration of parts of the human body, where cells and tissues can be engineered to grow healthy, functional organs to replace diseased ones; adult stem cells can generate replacements for cells that are lost to injury or disease,” The ability to facilitate the regeneration of parts of the human body is “no longer the stuff of science fiction”, the cell based therapies and their use in regenerative medicine is one of the most promising fields of science already producing “improbable advances.”

Clearly the commissioner understands the incredible healing potential of stem cell therapy.

The FDA recognizes that there is an entire industry built around regenerative medicine and stem cell and this industry needs to be regulated, just as physicians and drug companies are regulated. With that in mind, there was a statement issued by the FDA in the fall of 2017, which gave guidance as to their long-term regulatory plans. In those plans they suggested that in the future they may only allow autologous (cells from the same individual) and homologous (cells used for the same purpose) treatments. They have allowed a 36 month grace period. But this suggests that in the future, only clinics offering autologous stem cells may be allowed to remain in business.

You can read the entire first draft guidance here:

<https://www.fda.gov/downloads/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/CellularandGeneTherapy/UCM585417.pdf>

and the entire second draft document here:

<https://www.fda.gov/downloads/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/CellularandGeneTherapy/UCM585414.pdf>

At Southcoast Regenerative Medicine, regenerative therapy is all we offer, because we believe it works. We recognize that regenerative medicine clinics have sprung up throughout the United States and that patients have many options. Unfortunately, many of those providing these services are not physicians, and many of those who are physicians, have very limited experience in the treatment of these painful conditions.

At Southcoast Regenerative Medicine, we think our qualifications speak for themselves.

- Only licensed, board certified, physicians coordinate and provide care
- Our physicians have over 20 years experience treating acute and chronic painful musculoskeletal conditions
- Our physicians have years of experience with regenerative therapies
- We perform all procedures with ultrasound or fluoroscopic guidance to assure proper placement of cells
- We offer Autologous (your cells) and Allogenic (donor cells) stem cells, and a variety of other Regenerative Products.....(PRP, PRF, A2M, Exosomes,)
- We are the only provider of Catalyst Alpha 2 Macroglobulin for arthritis
- Regenerative Medicine is ALL we do
- In an effort to provide only the best and latest regenerative options, we have become part of the Bluetail Medical Network, one of the premier Regenerative Medical Practices in North America, having provided over 35,000 stem cell treatments and having published, and continuing to publish outcome data

OUR ETHICAL MEDICAL PLAN

We Promise to:

- Have only licensed medical physicians coordinate and provide care
- Promise that all physicians involved in treatment will have substantial experience in treating musculoskeletal pain and injury and will be well trained in regenerative techniques
- Make sure each patient has a plan established for them, which is based on sound medical evidence and allows the greatest chance for success
- Use image guidance for all procedures (ultrasound, Fluoroscopy) to assure proper delivery of cells
- Offer ONLY procedures and services that we would consider ourselves, were we the patient
- Provide services at a reasonable cost and assist the patient financially by making available payment and financing plans.
- ALWAYS Put patient wellness and long term health first
- Commit our staff to ongoing medical education in the rapidly changing science of Regenerative Medicine, to assure we offer the latest and best techniques
- Commit to enter patient outcomes in a National Registry, in order to better follow, be aware of, and publish outcome data
- Develop a post procedure plan, involving the patient, that allows for the best chance of improvement

