



Amniotic Stem Cell Therapy

Joint Pain & Sports Injuries

Dr. Colin Kingston M.D.

Dr. Colin Kingston, Orthopaedic Surgeon with Tidewater Orthopaedics, specializes in Sports Medicine, General Orthopaedic Surgery, Joint Replacement, and is now offering ReNu, an innovative **Non-Operative** treatment option for common painful conditions, such as **Tendonitis, Small Stable Rotator Cuff Tears, Joint Inflammation, Arthritis, and Damaged Cartilage.**

ReNu, by NuTech Medical, is a revolutionary, non-invasive treatment in which human amniotic tissue and cells are injected into injured tissue to provide relief from pain and stimulate the body's natural healing process. This amniotic tissue has mesenchymal stem cells that are thought to help regenerate damaged tissue such as cartilage, tendons and ligaments. The growth factors in the amniotic tissue provide anti-inflammatory, anti-adhesive, and anti-microbial properties to the injured area, and can significantly help reduce scarring for quicker healing. Amniotic tissue is also immune-privileged, which means there is virtually no chance that your body will reject the treatment. Amniotic tissue has been used as a medical therapy since the early 1900's and has had no reported side effects since its first documented case in 1910.

For clarification, this type of stem cell comes from the amniotic sac of donated placentas following childbirth – it is not embryonic. The amnion is removed and harvested from the placenta of prescreened and tested donors. It is then sterilely processed and undergoes further rigorous testing to assure safety and efficacy. While some people may have ethical issues with embryonic stem cell therapy, most everyone agrees that the use of amniotic stem cell therapy raises no ethical or moral questions.

For more information or to schedule an appointment with Dr. Kingston to see if you are a candidate for this treatment call **757-827-2480**.

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FAQ's

Stem Cell Therapy For Knee Pain, Arthritis, Tendonitis & More

For many patients with debilitating knee osteoarthritis, treatment options are limited and include steroid injections, hyaluronic acid injections (viscosupplementation), physical therapy, and joint replacement surgery. Rotator cuff tendonitis is also a common problem and again, treatment is often limited to intermittent steroid injections, physical therapy and possibly surgery when conservative management fails. Steroid injections have frequently been met with either ineffectiveness, short-term pain relief and the risk of tendon atrophy and rupture. Dr. Kingston offers new cutting-edge treatment options like amniotic membrane stem cell injections which can be used to as an alternative to surgery to successfully treat patients with degenerative arthritis (knee and shoulder), rotator cuff tendonitis, lateral epicondylitis (tennis elbow) and other tendon and joint disorders.

How does amniotic stem cell therapy work?

Stem cell treatment takes advantage of the body's ability to repair itself. A stem cell is a type of cell the body uses to create new tissues and structures. Stem cells have the ability to differentiate into any kind of cell that the body might need: skin, bone, blood, cartilage, etc. They also remain stable for many years and have the ability to divide and regenerate.

With amniotic stem cell therapy, Dr. Kingston injects stem cells from amniotic tissue into your affected area. This has been sterilely processed and converted into a flowable injectable form. For the knee, this is placed sterilely within the joint. For the shoulder it is either placed subacromially (above the rotator cuff) for tendonitis or into the joint under ultrasound if treating osteoarthritis. These stem cells have potent anti-inflammatory properties. Amniotic tissues are also a rich source of collagen, elastin, fibronectin, mesenchymal stem cells and growth factors that can support tissue repair and regeneration. This is the tissue that protects the baby in utero during pregnancy. While similar in concept to steroid injections, stem cell therapy is thought to have a longer and greater impact. At this stage we do not know if this will actually repair or restore damaged cartilage but preliminary data has been promising. A recent scientific paper published in January of 2014 out of University of Southern California showed a benefit in pain control and possibly in regeneration of meniscus tissue after knee arthroscopy for meniscus tears. Applications of this therapy are still being researched and implemented around the world.

While cortisone and other drugs only provide temporary pain relief, stem cells have the ability to restore degenerated tissue while providing pain relief. The growth factors in amniotic stem cells may replace damaged cells in your body. Additionally, stem cell injections contain hyaluronic acid, which lubricates joints and tendons, easing the pain and helping restore mobility. The hope and thought is that because of their regenerative capacity and stability, the impact and pain relief may be much longer than previously obtained with past treatments (steroid, viscosupplementation, etc.).



Are stem cell injections safe?

Yes. Amniotic tissue has been used as a medical therapy since the early 1900's and has had no reported side effects since its first documented case in 1910. Amniotic stem cell treatment has been used by ophthalmologists to aid with corneal surgery for over 20 years. It also has applications in plastic surgery assisting in burn patient healing. As with all treatment options, the biggest risk of a stem cell injection is that it does not alleviate all your pain but does afford one more option prior to surgical intervention.

Amniotic stem cell therapy is a preferred type of stem cell therapy because the cells come from an immunoprivileged site. This means that patient-rejection is extremely rare. The use of amniotic stem cells is well researched, safe, and effective. All amniotic stem cell donors go through a rigorous screening process, as determined by the Food and Drug Administration (FDA) and American Association of Tissue Banks (AATB).

What benefits does amniotic stem cell therapy offer?

Amniotic stem cell therapy is very safe and effective. Learn more about several benefits this treatment has to offer:

- Amniotic stem cells contain no steroids. Instead, the injections rely on naturally occurring anti-inflammatory agents, such as cytokines.
- Amniotic stem cells contain hyaluronic acid, which lubricates cartilage and promotes new cartilage growth.
- Amniotic stem cells contain growth factors, which stimulate tissue growth.
- With amniotic stem cells, there is no threat of patient rejection.
- Lastly, amniotic fluid is a highly concentrated source of stem cells, which makes this type of stem cell injection preferable over embryonic stem cells and the patient's own stem cells (from fat or bone marrow).

Am I a candidate for stem cell therapy?

Patients suffering from any kind of joint, tendon, or ligament pain may be considered as candidates for amniotic stem cell therapy. Patients with severe degenerative osteoarthritis may not be eligible for stem cell therapy. Upon evaluation, Dr. Kingston may be able to provide you with recommendations for other types of treatment options.

Does insurance cover stem cell therapy?

Most insurance companies do not cover Amniotic Tissue injections at this time. As such, this is fee for service due at the time of treatment. Dr. Kingston can help review the advantages, costs, and indications for amniotic stem cell treatments to help you select which is best for you.

