

BREAKING FREE

Stem Cell Therapy for Arthritis



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Stem Cell Therapies

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The term is derived from *arthr-* (from Ancient Greek: ἄρθρον, translit. *áarthron*, lit. 'joint, limb') and *-itis* (from -ίτις, *-ítis*, lit. 'pertaining to'), the latter suffix having come to be associated with inflammation.

The word 'arthritis' denotes the collective group of arthritis-like conditions.

What is Arthritis?

Arthritis is a term often used to mean any disorder that affects joints, and can have different causes. It is a disease that affects bones in both sides of the articular space and diminishes its size. Symptoms generally include joint pain and stiffness. Other symptoms may include redness, warmth, swelling, and decreased range of motion of the affected joints.



- There are over 100 types of arthritis.
- By conservative estimates, about 54 million adults have doctor-diagnosed arthritis.
- The most common type of arthritis is osteoarthritis, which affects an estimated 31 million Americans.

Classification of Arthritis

There are several diseases in which joint pain is the main symptom. Generally, when a person has "arthritis" it means that they have one of these diseases, which include: osteoarthritis, rheumatoid arthritis, gout, septic arthritis, ankylosing spondylitis, juvenile idiopathic arthritis or Still's disease. Joint pain can also be a symptom of other diseases; in these cases, the arthritis is considered to be secondary to the main disease, such as: psoriasis, reactive arthritis, Ehlers-Dandoss syndrome, haemochromatosis, hepatitis, Lyme disease, Sjögren's syndrome, Hashimoto's disease, celiac disease, non-celiac gluten sensitivity, Chron's disease, ulcerative colitis, Henoch–Schönlein purpura, Hyperimmunoglobulinemia D with recurrent fever, sarcoidosis, Whipple's disease, TNF-receptor associated periodic syndrome, granulomatosis with polyangiitis, familial Mediterranean fever or systemic lupus erythematosus.



- Health care services worldwide will face severe financial pressures in the next 10 to 20 years due to the escalation in the number of people affected by musculoskeletal diseases.
- By the year 2040 the number of individuals in the US older than 65 is projected to grow from the current 15% to 21% of the population.
- People 85 and older will double from the current 2% to 4%.

How Stem Cell Treatment Helps Arthritis Patients

Mesenchymal stem cells from bone marrow have been used by researchers in patients with arthritis and these cells not only developed into tissues of mesenchymal origin, but also possess immune-regulating mechanisms. T-cell and B-cell activation is suppressed and the use of mesenchymal stem cells in auto-immune diseases has proved to be successful. Also, recent research suggests that stem cell therapy can help restore a normal cartilage and bone function. Mesenchymal stem cells are preferred as they are multipotent, found in several tissues, including the fluid inside the joints and are able to maintain their multipotency in vitro and in vivo. They produce chondrogenic cells. Bone-marrow stem cells infused with natural growth factors and stimulants provide nutrition to the cartilage, promoting its regeneration.



Osteoarthritis, also referred to as OA or degenerative joint disease, is a type of arthritis that occurs when flexible tissue at the end of the bones (cartilage) wears down. Osteoarthritis is the most common form of arthritis, affecting about 237 million (3.3% of the population).

Stem Cell Treatment for Osteoarthritis

To treat osteoarthritis, stem cells are injected directly into the joint (intra-articular injection). The practicing doctor's experience is a key factor at this step to avoid injecting on nearby, non-related tissue, as well as managing for the stem cells to stay in the area of care and not traveling out of the damaged zone. When in doubt, ultrasound machines could be useful to guide the doctor through such injection.



Rheumatoid Arthritis is a chronic inflammatory disorder affecting many joints including those in hands and feet.

In rheumatoid arthritis patients, the body's immune system attacks its own tissue, including joints. In severe cases, it attacks internal organs as well.

Rheumatoid arthritis affects joint linings, causing painful swelling. Over long periods of time, the inflammation associated with rheumatoid arthritis can cause bone erosion and joint deformity. While there's no cure for rheumatoid arthritis, stem cell treatment can help slow the disease's progression.

Stem Cell Treatment for Rheumatoid Arthritis

When treating Rheumatoid Arthritis (RA) with stem cell therapy, autologous stem cells are infused intravenously into the blood stream. By not injecting the stem cells on every joint of the body –large and small ones-, we avoid poking the patient multiple times, and the stress & discomfort of such injections. Stem cells are carried through the bloodstream everywhere in the body, which helps cover more ground of the immune system.



Psoriatic Arthritis is a form of arthritis that affects some people with psoriasis, a skin condition. Psoriatic arthritis is a type of inflammatory arthritis.

Symptoms include joint pain, stiffness and swelling, which may flare and subside. Many people with the condition are affected by morning stiffness. Even mild skin psoriasis can have a significant degree of arthritis.

Stem Cell Treatment for Psoriatic Arthritis

Several clinical studies have shown that stem cell therapy has not only retarded the progression of psoriatic arthritis and psoriasis, but has ameliorated the disease altogether, with a prognosis of a 12-to-16-year remission phase. When treating psoriatic arthritis an intravenous infusion of stem cells is administered. Results are extremely promising with remission of psoriasis and prompt alleviation of arthritis. By not injecting on every swollen site of the body, the stress and discomfort of several injections is avoided. Stem cells are carried by the bloodstream to all areas of the body where stem cells are required.



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