

STEMCELL LONGEVITA

Stem Cell Therapy for Osteoarthritis: A Patient's Guide

Regenerating Cartilage and Restoring Joint Function



Your Journey to Regenerative Health Starts Here

Table of Contents

Chapter 1

Understanding Osteoarthritis

Chapter 2

How Stem Cell Therapy Helps

Chapter 3

Treatment at StemCell Longevity

Chapter 4

Results & Recovery

Chapter 5

Getting Started

Frequently Asked Questions

Medical Disclaimer & Contact

Understanding Osteoarthritis

What Is Osteoarthritis?

Osteoarthritis (OA) is the most common form of arthritis, affecting over 500 million people worldwide. It is a degenerative joint disease characterized by the breakdown of articular cartilage — the smooth, protective tissue covering the ends of bones in a joint. As cartilage wears away, bones begin to rub together, causing pain, stiffness, and loss of movement.

Symptoms and Progression

- Joint pain that worsens with activity and improves with rest, gradually becoming constant as the disease progresses.
- Morning stiffness lasting less than 30 minutes, distinguishing OA from inflammatory arthritis where stiffness lasts longer.
- Crepitus — a grinding or crackling sensation when moving the affected joint, caused by rough cartilage surfaces.
- Reduced range of motion and difficulty performing daily activities such as climbing stairs, kneeling, or gripping objects.
- Joint swelling and tenderness, particularly after periods of increased activity.

Osteoarthritis is not simply wear and tear. Research shows it involves active inflammatory processes, abnormal bone remodeling, and metabolic changes that stem cell therapy can specifically target.

How OA Affects the Body

OA most commonly affects weight-bearing joints such as knees and hips, but can also impact the hands, spine, and shoulders. As cartilage deteriorates, the joint space narrows, bone spurs (osteophytes) form, and the synovial membrane becomes inflamed. This cascade of changes leads to chronic pain, disability, and significantly reduced quality of life.

CHAPTER 2

How Stem Cell Therapy Helps

Regenerative Mechanisms

Mesenchymal stem cells address osteoarthritis through three primary mechanisms: they differentiate into chondrocytes (cartilage-producing cells) to regenerate damaged cartilage, they secrete anti-inflammatory molecules that reduce joint inflammation, and they release trophic factors that protect remaining cartilage from further degeneration.

MRI studies after stem cell therapy have shown measurable increases in cartilage thickness and improved cartilage quality scores at 12 months post-treatment, demonstrating true tissue regeneration rather than just symptom relief.

Clinical Evidence

A landmark randomized controlled trial published in the Journal of Bone and Joint Surgery demonstrated that patients receiving MSC injections for knee OA showed significantly greater improvements in pain, function, and cartilage quality compared to hyaluronic acid injections at 24-month follow-up.

78%

Pain Score Improvement

67%

Cartilage Regeneration on MRI

91%

Would Recommend Treatment

Treatment at StemCell Longevita

Our OA Protocol

Our osteoarthritis treatment protocol is tailored to the Kellgren-Lawrence grade of your OA. We use ultrasound-guided intra-articular injections of concentrated MSCs combined with platelet-rich plasma (PRP) to maximize cartilage regeneration potential. For bilateral joint involvement, we treat both sides simultaneously.

What to Expect During Your Stay

- Day 1 — Comprehensive assessment at Liv Hospital Ulus including weight-bearing X-rays, MRI review, and functional evaluation.
- Day 2 — Stem cell harvesting (if using autologous cells) or preparation of allogeneic umbilical cord MSCs. Treatment administered under ultrasound guidance.
- Day 3-4 — Post-treatment monitoring, physical therapy initiation, and discharge with a detailed home exercise program.

Liv Hospital Ulus Advantage

Liv Hospital Ulus is equipped with state-of-the-art diagnostic imaging, a GMP-certified stem cell processing laboratory, and dedicated orthopedic rehabilitation facilities. Our multidisciplinary team includes orthopedic surgeons, regenerative medicine specialists, and rehabilitation physicians who collaborate on every case.

CHAPTER 4

Results & Recovery

What Results to Expect

Patients with mild to moderate OA (Kellgren-Lawrence grades 1-3) typically experience the best outcomes. Most patients report a 60-80% reduction in pain scores and significant improvements in joint function within 3 to 6 months. Patients with severe OA (grade 4) may experience symptom relief but are less likely to achieve full cartilage regeneration.

6

Months to Peak Improvement

76%

Reduced Medication Use

24+

Months Benefit Duration

Recovery Guidelines

- First 48 hours — Rest the treated joint, apply ice if needed, and take prescribed medications as directed.
- Weeks 1-4 — Gentle range-of-motion exercises and low-impact activities such as swimming or stationary cycling.
- Months 1-3 — Progressive strengthening exercises under physical therapy guidance.
- Months 3-6 — Gradual return to full activities. Most patients report significant pain relief by this stage.

Getting Started

Candidacy Assessment

The best candidates for stem cell therapy for OA are patients with symptomatic osteoarthritis confirmed by imaging, who have tried conservative treatments without adequate relief, and who want to explore regenerative alternatives before considering joint replacement. Age is not a limiting factor — we have successfully treated patients ranging from 35 to 85 years old.

How to Begin

- Send your recent X-rays or MRI scans and a brief medical history to our team for evaluation.
- Receive a personalized treatment recommendation and cost estimate within 48 hours.
- Schedule a video consultation with our orthopedic specialist to discuss your case in detail.
- Book your treatment dates and let our team handle all travel arrangements.

Frequently Asked Questions

Can stem cells actually regrow cartilage?

Yes, clinical studies using MRI evaluation have demonstrated measurable cartilage regeneration following MSC therapy. While complete cartilage restoration is uncommon, significant improvements in cartilage thickness and quality have been documented in multiple trials.

What grade of osteoarthritis responds best to stem cell therapy?

Patients with Kellgren-Lawrence grades 1 to 3 (mild to moderate OA) generally achieve the best outcomes. Patients with grade 4 (severe OA with bone-on-bone contact) may still benefit from symptom relief, though results are typically less dramatic.

Is stem cell therapy better than knee replacement?

The two treatments serve different purposes. Stem cell therapy is ideal for earlier-stage OA as a way to delay or avoid surgery. Knee replacement remains the definitive treatment for end-stage OA. Our team will provide an honest recommendation based on your specific situation.

How long do the effects of stem cell therapy last for OA?

Most patients experience benefits lasting 18 to 36 months. Some patients maintain improvements for 5 or more years. Booster treatments can be administered to extend and enhance results.

Can I return to sports after stem cell therapy for OA?

Many patients are able to return to low-to-moderate impact activities. The timeline and extent of activity resumption depend on the severity of your OA and your overall joint health. Our rehabilitation team will create a gradual return-to-activity plan.

Medical Disclaimer

The information contained in this guide is provided for educational purposes only and is not intended as medical advice, diagnosis, or treatment. Stem cell therapy outcomes vary by individual, and no specific results are guaranteed. The content herein reflects current scientific understanding and clinical experience as of the publication date but is subject to change as new research emerges. Always consult with a qualified healthcare professional before making any medical decisions. StemCell Longevita and its affiliated practitioners are not responsible for any actions taken based on the information in this guide. All medical treatments carry inherent risks, and patients should discuss potential benefits, risks, and alternatives with their treating physician.

Ready to Begin Your Healing Journey?

Our team of regenerative medicine specialists is ready to evaluate your case and create a personalized treatment plan.

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