

STEMCELL LONGEVITA

Stem Cell Therapy for Bone Fractures: A Patient's Guide

Accelerating Bone Healing Through Regenerative Medicine



Your Journey to Regenerative Health Starts Here

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Understanding Bone Fractures

Types of Fractures and Healing Challenges

While most fractures heal naturally within 6 to 12 weeks, approximately 5-10% of fractures develop delayed union or non-union, where the bone fails to heal properly. Non-union fractures can cause persistent pain, disability, and may require multiple surgeries. Risk factors include poor blood supply, infection, smoking, diabetes, and advanced age.

When Fractures Don't Heal

- Delayed union — The fracture takes significantly longer than expected to heal, often beyond 3-4 months.
- Non-union — The fracture fails to heal completely, typically defined as no healing progress after 6-9 months.
- Malunion — The bone heals in an incorrect position, causing deformity and functional impairment.
- Avascular necrosis — Loss of blood supply to the bone leads to bone death and collapse.

Non-union fractures affect approximately 100,000 patients per year in the United States alone. Stem cell therapy offers a biological solution that can jumpstart the stalled healing process without invasive surgery.

CHAPTER 2

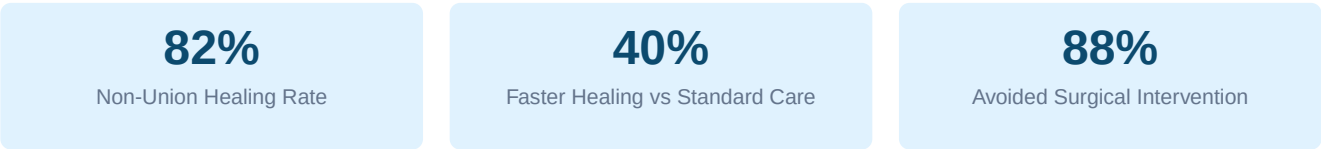
How Stem Cell Therapy Helps

Bone Regeneration Mechanisms

Mesenchymal stem cells are the body's natural bone-building cells. When injected at a fracture site, they differentiate into osteoblasts (bone-forming cells) and chondrocytes (cartilage cells) that rebuild the bridge between bone fragments. They also secrete bone morphogenetic proteins (BMPs) and vascular endothelial growth factors (VEGF) that promote new blood vessel formation essential for bone healing.

A study in the Journal of Orthopaedic Research showed that MSC injection at non-union fracture sites achieved bone healing in 82% of cases where conventional treatment had failed.

Clinical Evidence



Our Fracture Healing Protocol

We use percutaneous injection of concentrated MSCs directly at the fracture site under fluoroscopic or ultrasound guidance. Treatment may be combined with platelet-rich plasma (PRP) to enhance the biological healing environment. For complex non-unions, we may combine stem cell therapy with bone grafting procedures.

Treatment Process

- Day 1 — Diagnostic evaluation including CT scan of the fracture site and blood work at Liv Hospital Ulus.
- Day 2 — Stem cell preparation and percutaneous injection under imaging guidance.
- Day 3 — Post-procedure assessment, immobilization guidance, and discharge planning.

CHAPTER 4

Results & Recovery

Healing Timeline

Following stem cell injection, most patients show radiographic evidence of new bone formation within 4 to 8 weeks. Complete fracture union is typically achieved within 3 to 6 months. Pain at the fracture site generally decreases as healing progresses.

4-8

Weeks to New Bone Formation

3-6

Months to Complete Union

85%

Overall Success Rate

Post-Treatment Care

- Follow immobilization and weight-bearing instructions carefully as directed by your orthopedic surgeon.
- Regular follow-up imaging at 4, 8, and 12 weeks to monitor healing progress.
- Gradual return to weight-bearing and activities as bone union progresses.
- Nutritional optimization with calcium, vitamin D, and protein supplementation.

Who Should Consider This Treatment?

Stem cell therapy for fractures is particularly beneficial for patients with non-union or delayed union fractures, elderly patients with impaired healing capacity, patients with fractures in areas of poor blood supply, and individuals who want to accelerate normal fracture healing.

Contact Us

- Send your fracture imaging (X-rays, CT scans) and medical history for evaluation.
- Receive an expert assessment and treatment recommendation within 48 hours.
- Schedule your treatment and let our team coordinate your visit to Istanbul.

Frequently Asked Questions

Can stem cells heal a fracture that surgery couldn't fix?

Yes, in many cases. Stem cell therapy has shown success in healing non-union fractures that failed to respond to surgical fixation. The biological approach addresses the underlying cellular deficiency that prevents healing.

How soon after a fracture can I receive stem cell therapy?

For acute fractures, stem cell therapy can be administered within the first few weeks to accelerate healing. For non-union fractures, treatment can be initiated at any time once non-union is confirmed.

Do I need to have hardware removed before stem cell treatment?

Not necessarily. Stem cells can be injected around existing hardware. In some cases, however, removal or adjustment of hardware may be recommended to optimize the healing environment.

Is stem cell therapy for fractures covered by insurance?

Most insurance plans do not currently cover stem cell therapy for fractures. Our team provides detailed documentation that you can submit to your insurer for potential reimbursement consideration.

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.

Email: info@flytocure.com

Website: stemcelllongevita.com

Liv Hospital Ulus, Istanbul, Turkey