

Stem Cell Therapy for Cardiovascular Disease: A Patient's Guide

Regenerating Heart Tissue and Restoring Cardiac Function



Your Journey to Regenerative Health Starts Here

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Understanding Cardiovascular Disease

What Is Cardiovascular Disease?

Cardiovascular disease (CVD) encompasses a group of conditions affecting the heart and blood vessels, including coronary artery disease, heart failure, cardiomyopathy, and peripheral vascular disease. CVD is the leading cause of death globally, responsible for approximately 17.9 million deaths annually. Heart muscle damaged by heart attack or chronic disease does not regenerate naturally, leading to progressive heart failure.

How CVD Affects the Heart

- Coronary artery disease narrows the arteries supplying blood to the heart, leading to chest pain (angina) and heart attacks.
- Heart failure occurs when the heart can no longer pump blood efficiently, causing fatigue, shortness of breath, and fluid retention.
- Reduced ejection fraction — the percentage of blood pumped out with each heartbeat — indicates declining heart function.
- Scar tissue from heart attacks replaces functional heart muscle, permanently reducing the heart's pumping capacity.

The heart has very limited natural regenerative capacity. Once heart muscle cells (cardiomyocytes) are lost to injury or disease, they are replaced by non-functional scar tissue. Stem cell therapy offers the potential to regenerate functional heart tissue.

CHAPTER 2

How Stem Cell Therapy Helps

Cardiac Regeneration Mechanisms

Stem cells promote cardiac repair through multiple mechanisms: paracrine signaling that stimulates resident cardiac progenitor cells, angiogenesis (new blood vessel formation) to improve blood supply to damaged areas, anti-fibrotic effects that reduce scar tissue, and potential differentiation into functional cardiomyocytes. These combined effects can improve heart function and reduce symptoms.

The POSEIDON clinical trial demonstrated that MSC therapy improved ejection fraction by an average of 7-8 percentage points in heart failure patients — a clinically significant improvement that translates to better exercise capacity and quality of life.

Clinical Evidence



Treatment at StemCell Longevita

Our Cardiac Protocol

Our cardiovascular stem cell therapy protocol uses high-dose IV infusion of umbilical cord-derived MSCs. For selected patients, we may combine IV administration with targeted intracardiac delivery in collaboration with our interventional cardiology team at Liv Hospital. Treatment is personalized based on the type and severity of cardiac disease.

Treatment Process

- Day 1 — Comprehensive cardiac evaluation including echocardiography, ECG, cardiac biomarkers, and review of previous cardiac imaging.
- Day 2 — Stem cell IV infusion administered over several hours with continuous cardiac monitoring.
- Day 3-4 — Additional treatment sessions if indicated, post-treatment cardiac assessment, and discharge planning.

Expected Improvements

Patients typically report improvements in exercise tolerance, reduced shortness of breath, and better overall energy levels within 4 to 12 weeks. Echocardiographic improvements in ejection fraction are often measurable at 3 to 6 months. Quality of life improvements are reported by the majority of patients.

4-12

Weeks to Feel Improvement

82%

Improved Quality of Life

70%

Reduced Heart Failure Symptoms

Post-Treatment Care

- Continue all cardiac medications as prescribed by your cardiologist.
- Gradually increase physical activity under medical guidance.
- Follow-up echocardiography at 3 and 6 months to assess cardiac function improvements.
- Heart-healthy diet and lifestyle modifications to support ongoing cardiac health.

Getting Started

Who Can Benefit

Stem cell therapy may benefit patients with heart failure, post-heart attack damage, cardiomyopathy, and reduced ejection fraction. Patients should have stable cardiac status and be on optimized medical therapy. Our cardiology team reviews each case to ensure safety and suitability.

Begin Your Evaluation

- Submit your cardiac imaging, lab results, and medical history for expert review.
- Receive a detailed treatment plan and candidacy assessment within 48 hours.
- Consult with our cardiology specialist via video call to discuss your case.

Frequently Asked Questions

Can stem cells repair heart damage from a heart attack?

Clinical studies show that MSC therapy can improve heart function after myocardial infarction by reducing scar tissue, promoting new blood vessel growth, and stimulating repair of damaged heart muscle. While complete regeneration is not yet achievable, meaningful functional improvements are well-documented.

Is stem cell therapy safe for heart patients?

Yes, when administered by experienced specialists with proper cardiac monitoring. Multiple clinical trials have confirmed the safety of MSC therapy in cardiac patients, with no increased risk of arrhythmias or other cardiac complications.

Can I continue my heart medications during treatment?

Absolutely. You should continue all prescribed cardiac medications. Stem cell therapy is complementary to standard cardiac care, not a replacement.

How soon after a heart attack can I receive stem cell therapy?

For acute myocardial infarction, optimal timing is typically 5 to 14 days after the event, once the patient is stabilized. For chronic heart failure, treatment can be performed at any time when the patient is in stable condition.

Will I need repeat treatments?

Some patients benefit from additional treatments at 6 to 12 month intervals. The decision is based on your response to initial treatment and the severity of your cardiac condition.

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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