

Walk into any modern sports or orthopedic clinic and you are likely to see the words “stem cells” or “regenerative medicine” somewhere on a wall or brochure. Over the past decade, I have watched patients come in after hearing about dramatic recoveries: a torn meniscus that never went to surgery, a shoulder that finally stopped aching, or Joe Rogan talking about flying to Panama for stem cell treatment and getting “a whole new body.”

Then the practical questions start. Does this really work? What is the success rate of regenerative medicine, especially stem cell injections? Will insurance pay for it? Who is actually a good candidate, and who is wasting time and money?

The honest answer is more nuanced than the marketing suggests. Stem cell injections can be very effective for some problems and disappointing for others. The skill and judgment of the regenerative medicine doctor matters as much as the biologic itself.

Let us unpack what experienced regenerative doctors mean when they talk about “success rate,” and what that means for a real person deciding whether to sign up, fly overseas, or walk away.

What is a regenerative medicine doctor, really?

Before talking about success rates, it helps to understand who is giving those numbers.

A regenerative medicine doctor is not a single official specialty. It is a clinical focus that usually grows out of another field. The most common backgrounds are:

Family medicine or internal medicine doctors who add musculoskeletal and pain training, then learn regenerative techniques.

Physical medicine and rehabilitation (PM&R) specialists who already focus on function, movement, and non surgical treatments. Sports medicine physicians trained in ultrasound guided injections and joint care. Orthopedic surgeons or neurosurgeons who begin offering biologic options alongside or instead of surgery.

In other words, regenerative medicine is an overlay. Some physicians pursue formal fellowships in regenerative and interventional orthopedics, or in cell therapies and biologics. Others attend weekend courses and start offering platelet rich plasma (PRP) or stem cell injections with much less depth.

That variation is one of the biggest problems with regenerative medicine today. A well trained doctor with a strong background in anatomy, imaging, and evidence based practice will quote different success rates, select different patients, and design different treatments than a clinic that mainly advertises on billboards.

When you hear any success statistic, you should always ask: “According to which doctors, using which methods, on which patients?”

How regenerative doctors define “success”

When regenerative physicians talk about success rate, they are usually not talking about a cure. They are talking about measurable improvement. In clinic notes and research papers, success often means some combination of:

At least 50 percent reduction in pain scores.

Meaningful improvement in function: walking farther, climbing stairs, playing a sport again. Avoiding or delaying surgery in a high percentage of patients. Patient satisfaction: would you do this again or recommend it to a friend?

A common pattern goes like this. A regenerative doctor reviews their knee osteoarthritis patients who received a particular stem cell protocol. They look 6 to 12 months later and see how many reached at least a 50 percent improvement in pain and function. That number, perhaps 65 to 80 percent in a well selected group, becomes their "success rate."

Notice what is missing. These rates are not usually randomized trials against sham injections. They are not cure rates. They are not lifetime outcomes. They are snapshots of clinically meaningful improvement in a real world clinic.

What is the success rate of regenerative medicine for common problems?

The numbers below are not absolutes. They reflect a blend of published data and what experienced regenerative doctors actually see. They also assume that the physician uses image guidance, appropriate protocols, and selects patients who are plausible candidates.

Knee osteoarthritis

Stem cell injections for moderate knee arthritis are one of the most studied uses. Here is what a reasonable, experienced regenerative doctor might say:

For mild to moderate knee osteoarthritis, roughly 60 to 80 percent of patients can expect significant improvement in pain and function for at least 1 to 3 years. Some patients maintain benefit longer, especially if they also address weight, strength, and movement patterns.

For severe bone on bone arthritis with extensive deformity, realistic success rates drop to 30 to 50 percent for meaningful relief, and the effect is less durable. Many still go on to need joint replacement, although some may delay it.

This is very different from the sales pitch of "grow a brand new joint." At best, we are often improving the joint environment, calming inflammation, nudging cartilage and other tissues to repair, and helping the patient move more comfortably.

Hip osteoarthritis

Hips are less forgiving. In practice, stem cell injections for hips:

Work reasonably well in early to moderate degeneration, with perhaps 50 to 70 percent of patients noticing clear and worthwhile improvement.

Are far less reliable in advanced collapse or major deformity. Success rates in those cases may fall below 30 to 40 percent.

Many thoughtful regenerative physicians are cautious about promising too much for advanced hip arthritis. They may even redirect some patients straight to orthopedic surgery rather than taking cash for a slim chance.

Shoulder tendon and rotator cuff injuries

Tendons respond differently than cartilage. For partial thickness rotator cuff tears, biceps tendinitis, or chronic shoulder pain that has not responded to cortisone or physical therapy, cell based injections and PRP can be powerful.



Across practices that track outcomes, you often hear:

Around 70 to 85 percent of well selected patients report meaningful relief and functional gains, especially if paired with targeted rehab.

Full thickness tears that are retracted or severely degenerated respond far less often, and surgery may still be the better path.

The key here is structural reality. If the tissue is simply inflamed or partially torn, regenerative techniques can help it heal. If it is completely detached and frayed, expecting an injection to bridge that gap is unrealistic.

Low back pain and spinal issues

Back pain is where numbers become much fuzzier. The spine is complex. A single MRI can show disc bulges, facet arthritis, muscle deconditioning, and nerve irritation, all at once.

Honest regenerative doctors tend to frame spine success like this:

Disc related back pain without major nerve compression may respond in perhaps 50 to 70 percent of well selected cases.

Facet joint pain and some ligament or muscle injuries can do better, sometimes in the 60 to 80 percent range.

Severe spinal stenosis with leg weakness, bowel or bladder symptoms, or structural instability is poorly served by injections and usually needs surgery.

Just as important, many people labeled as “good candidates” by aggressive marketing clinics are not actually good candidates when their imaging and exam are read carefully.

Who is a good candidate for regenerative medicine?

The best candidates have three things in common.

First, they have a clear, localized structural problem that matches their symptoms: a partial tendon tear, moderate joint arthritis, a specific ligament injury. Vague, whole body pain without clear focal pathology is a poor fit.

Second, they have failed reasonable conservative care, such as structured physical therapy, appropriate medications, and sometimes limited steroid injections. Regenerative medicine is not meant to replace good basics.

Third, they have realistic goals. Improving function by half, delaying surgery for several years, or returning to recreational sports are realistic. Demanding a 25 year old joint in a 70 year old body is not.

On the other hand, a poor candidate is someone who:

Has advanced joint collapse, significant deformity, or severe nerve compression on imaging.

Has serious untreated systemic illness such as uncontrolled diabetes or active cancer. Cannot or will not engage in rehabilitation and lifestyle changes after the procedure. Is being rushed into treatment by high pressure sales tactics rather than a thoughtful consult.

When regenerative doctors quote their success rate, the quality of their screening shapes those numbers. Strict selection tends to produce better outcomes and fewer disappointed patients.

How painful are stem cell injections?

Patients often whisper this question at the end of the consultation: "Is regenerative medicine painful?"

The discomfort varies with the procedure. Harvesting bone marrow from the back of the hip, for example, is louder than it is painful if the doctor uses proper local anesthesia and, sometimes, light sedation. Most patients describe it as pressure and a brief ache, not agony.

Joint injections themselves range from mildly uncomfortable to briefly sharp. Ultrasound or fluoroscopic guidance allows the doctor to be precise and fast, which helps. Most people walk out of the clinic the same day, sore but functional.

The real discomfort often arrives later. Inflammatory flares during the first 24 to 72 hours can bring pain levels above baseline. This is usually managed with rest, bracing, ice, and medications that do not blunt the regenerative process, such as acetaminophen or limited opioids, rather than classic NSAIDs.

When patients recall the experience months later, many will say the procedure was manageable, but the flare felt like a bad injury for a few days. Good pre procedure counseling makes this far less frightening.




What is the biggest problem with regenerative medicine?

The single biggest problem is not the science. It is the gap between science and marketing.

Regenerative medicine sits at an awkward intersection. The underlying biology and early clinical data are promising. At the same time, regulatory frameworks are strict for true cell therapies, insurance coverage is minimal, and revenue from cash pay procedures can be very high.




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That combination attracts both serious physician scientists and aggressive, sometimes undertrained operators.

This leads to several downstream problems:

Highly variable protocols. One clinic may use carefully processed bone marrow concentrate under strict sterile and dosing standards. Another may use a vague “stem cell” amniotic product that, in reality, contains no living stem cells.

Exaggerated claims. Some centers promise cure rates, regrowth of cartilage in bone on bone joints, or reversal of advanced neurologic disease without supporting evidence. Confused patients. People hear about Joe Rogan’s stem cell treatment in Panama, which involved high dose umbilical cord derived mesenchymal stem cells at a well known institute, and assume that a local IV “stem cell” drip at a spa is comparable. It is not.

Until regulations and professional standards catch up, patients need to interrogate both the data and the clinic carefully.

Where did Joe Rogan get his stem cell treatment?

Joe Rogan has spoken repeatedly about traveling to Panama for stem cell therapy. He has named the Stem Cell Institute in Panama City and Dr. Neil Riordan, who is well known in that space.

Those treatments used culture expanded mesenchymal stem cells derived from donated umbilical cord tissue, given in high doses intravenously and sometimes by local injections. That is different from what is legally permitted in most U.S. Clinics, where doctors are generally limited to “minimally manipulated” autologous tissues such as bone marrow concentrate or fat derived cells.

Most regenerative doctors in the United States will not be offering the exact treatment Rogan received, both for regulatory and logistical reasons. The success or failure of offshore therapy does not automatically transfer to stateside procedures.

What country is best for stem cell treatment?

Patients often ask which country is “best” for stem cell treatment. That is the wrong question.

The key variables are:

What condition you are treating.

What cell source and processing you need. What level of regulation and oversight you are comfortable with.

The United States, Canada, and much of Western Europe tend to be more restrictive about cell expansion and allogeneic stem cell use, but have higher overall medical standards and legal protections. Panama, Mexico, and some Asian countries allow more aggressive cell therapies, including culture expanded umbilical cord or placental cells, in specialized centers. Within each country, quality varies tremendously from one clinic to another.

Thoughtful regenerative doctors usually advise patients to prioritize [Regenerative Medicine Doctor Scottsdale](#) safety, transparency, and evidence, rather than chasing the most exotic destination.

What are the 4 types of regeneration?

In basic biology, textbooks sometimes describe four types of regeneration, such as epimorphosis, morphallaxis, compensatory regeneration, and super regeneration.

Clinically, when regenerative doctors talk about types of regeneration, they tend to think in practical categories:

Endogenous repair, where therapies like PRP or local stem cells stimulate the body’s own cells to repair tissue.

Cell therapy, where cells are added or concentrated, such as bone marrow derived mesenchymal cells. Tissue engineering, where cells are combined with scaffolds or biomaterials to grow or restore structures. Gene or molecular therapy, where signals that control cell behavior are altered to promote repair.

Most current stem cell injections for orthopedic or sports problems sit in the first two categories. Tissue engineering and gene level approaches are still mostly research or highly specialized.

Does fasting for 72 hours regenerate cells?

You might have seen viral claims that fasting for 72 hours “regenerates your immune system” or produces brand new stem cells. There is some real science behind this idea, but the story is more limited than headlines suggest.

In mice, prolonged fasting cycles have been shown to trigger changes in hematopoietic stem cells and immune cell populations, essentially shifting the body toward a more regenerative, youthful profile. In humans, small early studies and mechanistic extrapolations suggest that multi day fasting or fasting mimicking diets might promote some cellular cleanup (autophagy) and beneficial shifts, but we do not have large, robust trials confirming that 72 hour fasts regenerate tissues in the way patients usually imagine.

Most regenerative medicine doctors I know see fasting as potentially supportive, especially for metabolic health, but not as a stand alone therapy that replaces targeted cell based treatments. It can be a useful adjunct for some patients, provided it is medically safe and supervised when necessary.

Money questions: cost, insurance, and physician income

Once people understand the potential benefits and limits, the next question is financial: What is the average cost of regenerative medicine, and will insurance pay?

What is the average cost of regenerative medicine?

Prices vary by region, provider expertise, and type of procedure. In many U.S. Clinics focused on orthopedics and sports medicine, typical ranges look like this:

Simple PRP injection for a single joint may run from about 500 to 1,500 dollars.

Bone marrow concentrate injections for a major joint such as a knee or hip often range from about 3,000 to 7,000 dollars per joint. More complex spine or multi site protocols can climb to 8,000 to 15,000 dollars or more.

Package pricing, follow up visits, imaging, bracing, and rehab can add to that. This is why patients need written, transparent quotes before proceeding.

Will insurance pay for regenerative medicine?

At the moment, insurance coverage for regenerative orthopedic and sports procedures is limited.

Platelet rich plasma is sometimes partially covered in specific scenarios, but often remains an out of pocket expense. Autologous stem cell procedures from bone marrow or fat are usually considered experimental by major insurers and are not covered.

Likewise, branded offerings such as Kinetix and similar regenerative packages are typically cash pay. If someone asks "Does insurance cover Kinetix?", the conservative answer is that most traditional plans do not, though health savings accounts may sometimes be used.

Patients sometimes get partial reimbursement if aspects of the care, such as imaging, braces, or physical therapy, are billable through regular codes, but the core injection is generally an out of pocket procedure.

How much do regenerative medicine doctors make?

Doctor income in this area is highly variable. A regenerative medicine doctor who operates a busy cash based practice in a high demand urban area can earn more than **Regenerative Medicine Doctor Scottsdale** a standard primary care physician, sometimes substantially more. Others fold regenerative procedures into a broader orthopedic or sports practice and maintain incomes similar to peers in their base specialty.

To place this in context:

The highest paid doctor specialty categories in the United States are typically neurosurgery, thoracic surgery, orthopedic surgery, and interventional cardiology. These often average in the 600,000 to over 1 million dollar range annually in high volume roles.

The lowest paying doctor specialty categories are usually primary care fields such as pediatrics, family medicine, and some internal medicine roles, often in the 200,000 to 260,000 dollar range.

A regenerative physician might sit anywhere between those, depending on training, practice model, location, and how aggressively they commercialize their services. That financial incentive is part of why patients should pay attention to how a clinic presents options. A doctor who earned their living before regenerative procedures and simply added them as a tool tends to counsel differently than a clinic that exists primarily to sell them.

What are the disadvantages of regenerative medicine?

Regenerative therapies are not magic. They carry real downsides that experienced doctors discuss openly.

Cost is a major disadvantage. With limited insurance coverage, patients can spend thousands on a treatment that may not work as hoped.

Lack of guaranteed outcomes is another. Even in the “best” candidate groups with published 60 to 80 percent success rates, there is still a sizable group who see little or no benefit. Regulatory gray zones exist, particularly for clinics offering off label or offshore therapies. Patients may have little recourse if something goes wrong. Risks, while lower than major surgery, are not zero. Infection, bleeding, nerve irritation, and pain flares can occur. There are also theoretical risks with some cell products that are not fully characterized. Time and opportunity cost matter. Spending a year trying serial injections for a condition that really needed timely surgery can lead to worse outcomes.

A responsible regenerative medicine doctor weighs those disadvantages against potential gains, rather than glossing over them.

How regenerative doctors think about success rate, in practice

When a patient sits across from a seasoned regenerative doctor and asks, “What is the success rate of stem cell injections for someone like me?”, the best answers share several traits.

They are specific. Instead of a generic 90 percent claim, you hear something like: “In patients your age with this degree of knee arthritis and your activity goals, about two thirds of my patients report at least 50 percent reduction in pain and better function at one year.”

They acknowledge uncertainty. A good doctor will say, “I cannot promise that you will be in that group. These are probability ranges, not guarantees.” They frame alternatives. You should hear how those odds compare to surgery, continued conservative care, or doing nothing. They incorporate your values. For someone desperate to avoid joint replacement for a few years and comfortable spending savings to try, a 50 percent chance of major improvement might be worth it. For someone tightly constrained financially, it might not be.

Experienced regenerative physicians are also quick to say no. An older patient with severe deforming hip arthritis and advanced collapse on imaging might be told, “Stem cell injections here have a low likelihood of helping. I do not recommend you spend money on that. Let us talk to a surgeon.”

That willingness to decline business is, ironically, one of the best indicators that a clinic’s “success rate” numbers reflect reality, rather than marketing dreams.

Pulling it together

Stem cell injections and broader regenerative medicine strategies do work, but not evenly, and not for everyone. Success rates in the real world hinge on the specific condition, the severity of damage, the biologic used, the technique, and the discipline of the doctor in choosing appropriate candidates.

For many musculoskeletal problems, especially moderate knee arthritis, partial tendon tears, and certain spine and shoulder conditions, regenerative physicians see roughly 60 to 80 percent of carefully selected patients report worthwhile improvement. For advanced, structurally devastated joints or poorly defined pain, the numbers drop sharply.

The gap between those reality based estimates and the glossy promises on billboards is where people get hurt, financially and emotionally.

If you are considering stem cell injections, your best strategy is to treat the consult as a two way interview. Ask what the doctor's training is, how they define success, what numbers they have for patients like you, what the alternatives look like, what the total cost will be, and how they will support you if things do not go as planned.

The science of regeneration will almost certainly keep improving. For now, the wisest approach is to combine that emerging power with clear eyed realism, sober math, and a doctor whose primary loyalty is to your long term function, not to their marketing brochure.

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