When Joe Rogan first started talking about his stem cell treatments, my clinic phones rang more than usual the next week. Patients came in asking for "what Joe had in Panama," hoping it might fix a bad knee, a degenerative disc, or a lingering shoulder tear that had not responded to surgery or physical therapy.

That reaction captures both the promise and the confusion around regenerative medicine. High-profile stories make stem cells sound almost magical. My day-to-day reality as a regenerative medicine doctor is more nuanced: some patients do remarkably well, some notice modest improvement, and a few feel no change at all.

Rogan's experience is a useful starting point to explain what regenerative medicine actually is, what it can and cannot do, and how a thoughtful patient should approach it.

What Joe Rogan Actually Did With Stem Cells

Joe Rogan has described on his podcast and in interviews that he traveled to Panama for stem cell treatment at the Stem Cell Institute in Panama City, founded by Dr. Neil Riordan. That clinic uses allogeneic mesenchymal stem cells derived from donated umbilical cord tissue that are expanded in a lab and delivered by intravenous infusion and, in some cases, targeted injections.

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Rogan has talked about:

- Previous orthopedic issues, including chronic shoulder and knee problems from years of training and combat sports.
- Receiving large numbers of stem cells intravenously over several sessions.
- Subjective improvements in pain, mobility, and general well-being after the treatment.

From a medical standpoint, his story is consistent with what I see in a subset of patients who travel abroad for high-dose allogeneic stem cell infusions. Some feel a clear difference in pain, energy, and recovery. Others feel nothing dramatic, or only a subtle change that is hard to distinguish from placebo or natural fluctuation.

Here is the key point that gets lost online: Rogan's individual response does not guarantee similar results for you. His age, training level, genetics, underlying joint pathology, and the exact protocol used all matter. Stem cells are not a uniform product, and no two patients are identical.

What Is a Regenerative Medicine Doctor?

Patients often ask me, "What is a regenerative medicine doctor, exactly? Are you an orthopedist, a pain doctor, a stem cell doctor, or something else?"

Regenerative medicine is not a single residency like internal medicine or surgery. It is a field that pulls from several specialties. Most physicians in this space trained first in orthopedic surgery, sports medicine, physical medicine and rehabilitation, anesthesiology (especially pain management), internal medicine, or neurology, then added additional training in biologic therapies.

In practical terms, a regenerative medicine doctor is a physician who focuses on:

- Using biologic tools such as platelets, stem cells, growth factors, and scaffolds to help the body repair or modulate damaged tissues.

- Delaying or reducing the need for more invasive procedures like joint replacement or spinal fusion when appropriate.
- Designing rehab, exercise, and lifestyle plans built around tissue healing rather than just symptom suppression.

In my own clinic, a typical day might include a platelet-rich plasma (PRP) injection for a tennis elbow, a bone marrow aspirate concentrate procedure for knee arthritis, and a consultation about whether a patient is a good candidate for off-label stem cell therapy in the United States or for a more aggressive protocol abroad.

Regenerative medicine doctors still use traditional diagnostics: imaging, lab work, physical examination. The difference is in the treatment philosophy. Instead of asking "What drug blocks this pain signal?", we ask "What environment does this tissue need to heal or stabilize?" That may sound simple. Actually doing it well is hard.

The Four Broad Types of Regeneration in Medicine

Biologists use several frameworks to describe regeneration. In clinical practice, I usually explain it in four broad categories that patients can relate to:

1. Cellular therapies. This includes stem cells, bone marrow aspirate concentrate, and other cell-based products. The goal is to introduce cells that can secrete growth factors, modulate inflammation, and, in some contexts, differentiate into the needed tissue.
2. Tissue engineering. Here we combine cells with scaffolds or biomaterials, such as cartilage patches, collagen scaffolds, or 3D-printed structures that provide a framework for new tissue to grow.
3. Growth factor and signaling therapies. Examples include PRP, concentrated growth factor preparations, and emerging biologics that aim to nudge existing cells into a more regenerative mode without adding new cells.
4. Gene and molecular modulation. This involves altering genes or molecular pathways that control cell survival, inflammation, and repair. In orthopedics this is still mostly in trials, while in some blood and eye disorders gene therapy has become standard of care.

When people hear "regeneration," they often assume stem cells are the only game in town. In reality, stem cells are just one tool, and often not the first one I reach for.

What Is the Biggest Problem With Regenerative Medicine?

The science is fascinating. The biggest problem with regenerative medicine in practice is not a lack of ideas. It is the collision of three issues: evidence, regulation, and marketing.

First, the evidence is uneven. For some conditions, like mild to moderate knee osteoarthritis treated with PRP, we now have reasonably solid randomized trials that show better pain and function compared with placebo or hyaluronic acid injections. For others, such as systemic intravenous stem cells for "anti-aging" or vague fatigue, the evidence is thin at best.

Second, regulations vary wildly between countries and, within the United States, between what is FDA-approved, what counts as "minimally manipulated" autologous tissue, and what is essentially offered under the radar. This creates a gray zone where some clinics stretch claims or skirt guidance without outright breaking the law.

Third, marketing has outpaced science. "Stem cell" has become a buzzword. I routinely meet patients who paid five figures for a single injection of something labeled stem cells that, when you look closely, was either a poorly processed product or a biologic with almost no actual viable cells.

That combination is the biggest problem with regenerative medicine: patients are asked to pay significant money for treatments that range from well-supported to speculative, and it is hard for a non-expert to tell the difference.

Who Is a Good Candidate for Regenerative Medicine?

Most of my job in consultation is not about the injection itself, but about deciding who is likely to benefit and who probably will not. As a rough guide, good candidates share several traits:

1. A focused problem that matches an area where regenerative therapies have at least some supportive evidence. Examples include knee osteoarthritis, certain tendon injuries, mild to moderate disc-related back pain, and specific ligament tears.
2. Structural damage that is significant but not completely end-stage. A knee with moderate arthritis may respond. A knee with bone on bone collapse, large deformity, and instability usually needs surgery rather than stem cells.
3. A willingness to commit to the rehab and load-management side. Biologic injections do not work if you go back to heavy deadlifts 48 hours later because it “felt good.”
4. Realistic expectations. The goal is improvement in pain and function, not magically growing a new joint or regenerating a severely degenerated disc back to age 20.
5. Medical stability. Uncontrolled autoimmune disease, active infection, certain cancers, and severe systemic illness can be red flags or absolute contraindications, depending on the specific therapy.

This is why a careful assessment matters. A healthy 40-year-old athlete with a focal cartilage defect is a different candidate than a 75-year-old with multi-joint arthritis, diabetes, and cardiovascular disease.

Is Regenerative Medicine Painful?

Pain is one of the first practical questions patients ask. The answer depends on what is being done.

Simple PRP injections into a tendon or joint are usually uncomfortable but tolerable. The blood draw is like any blood test. The injection itself feels like a deep, aching pressure that can spike for a few seconds. Most of my patients drive themselves home.

Bone marrow aspiration from the pelvis is more intense. With good local anesthesia and, when appropriate, light sedation, patients usually describe it as a sharp, short discomfort followed by a deep ache for a few days.

Intravenous stem cell infusions, like what Rogan describes in Panama, are often the easiest physically: an IV line, a few hours in a chair, and you are tired more than anything. Targeted spine or intra-disc injections are on the higher end of the discomfort scale, which is why we often perform them with image guidance and some level of sedation.

So yes, parts of regenerative medicine can be painful. But with proper preparation, numbing, and expectation setting, it is rarely unbearable. Most people handle it better than a major surgical recovery.

What Is the Success Rate of Regenerative Medicine?

There is no single number, because “regenerative medicine” covers many conditions and procedures. When patients ask about success rate, I break it down by their specific diagnosis and the exact therapy.

For example, in mild to moderate knee osteoarthritis treated with PRP, studies commonly show that 60 to 80 percent of patients experience clinically meaningful pain reduction over 6 to 12 months, often with improved function. With more advanced arthritis, those numbers drop.

Bone marrow concentrate for focal cartilage lesions or early arthritis can show improvement in a similar percentage of carefully selected patients, but techniques and processing vary. For back pain related to degenerative discs, some small trials of biologic injections show benefit, while others do not.

There is far less rigorous data for whole-body intravenous stem cell infusions, which is the type of thing that attracts medical tourism. Many reports are anecdotal: “I feel younger,” “I recover faster from workouts,” or “My joints hurt less.” Those narratives are valuable but **Regenerative Medicine Doctor Scottsdale** not the same as controlled trial data.

This is why I caution people: you are buying a probability curve, not a guarantee. Any clinic promising a 90 or 100 percent success rate across the board is selling more hope than science.

Costs, Insurance, and Physician Income: The Financial Reality

Money shapes this field more than most people realize, and patients deserve blunt answers.

What Is the Average Cost of Regenerative Medicine?

In the United States, typical prices in reputable clinics are approximately:

- PRP for a single joint or tendon: often 500 to 2,000 dollars per session, depending on the preparation and region.
- Bone marrow aspirate concentrate for a major joint: commonly 3,000 to 8,000 dollars.

- Adipose-derived cell procedures: generally in the several-thousand-dollar range, though many have been restricted by FDA enforcement actions.
- Intravenous allogeneic stem cell infusions abroad, like in Panama or Mexico: package prices often run from 10,000 to 25,000 dollars or more for multi-day, high-dose protocols.

Prices outside the U.S. Can be lower or higher depending on the country, quality of the facility, and scale of the program. Rogan has not itemized his bills publicly, but given the clinic and protocol, it is reasonable to assume it was a five-figure investment.

Will Insurance Pay for Regenerative Medicine?

For most patients, insurance will not pay for regenerative medicine as a primary therapy. Commercial insurance and Medicare in the U.S. Generally consider PRP and stem cell injections "investigational" for musculoskeletal conditions, which means no coverage.

There are a few exceptions:

- Some plans cover limited PRP indications, such as lateral epicondylitis, if specific criteria are met.
- Certain cell-based therapies that the FDA has approved for very specific blood or immune disorders are covered, but these are not what people usually mean when they talk about sports-medicine-style regen treatments.
- Kinetix and similar branded biologic or stem cell products are typically not covered. When patients ask "Does insurance cover Kinetix?", the honest answer is almost always no, unless a rare plan has a specific arrangement.

So for the average patient asking about PRP for a knee, or stem cell treatment for a disc, the expectation should be that this is an out-of-pocket expense.

How Much Do Regenerative Medicine Doctors Make?

Income in this field depends far more on the underlying specialty and practice model than on the phrase "regenerative medicine" itself.

Orthopedic surgeons, interventional pain physicians, and some sports medicine specialists who incorporate regenerative procedures can earn in the range of 300,000 to over 700,000 dollars per year, sometimes more if they own their facility, manage ancillary services, or run high-volume cash practices.

At a national level, surveys consistently show that some of the highest paid doctor specialty categories are orthopedics, plastic surgery, cardiology, and certain procedural subspecialties. On the other end, the lowest paying doctor specialty areas tend to include pediatrics, family medicine, and some primary care fields, often in the 200,000 to 260,000 dollar range, depending on region and experience.

Being a "regenerative medicine doctor" is not a separate pay scale. A family doctor doing a few PRP injections will earn at the lower end of the physician income spectrum. An orthopedic surgeon who offers advanced biologics on top of surgery may be at the high end.

The uncomfortable reality is that high fees for regenerative procedures can create perverse incentives. A clinic that depends on selling expensive packages might recommend injections where conservative care or surgery would be more appropriate. This is one reason I push patients to seek second opinions.

Safety, Disadvantages, and Ethical Trade-offs

Patients are usually told about the upside. I make it a point to spell out the downside as clearly as I describe the benefits.

What are the disadvantages of regenerative medicine?

The first is cost, which we just discussed. You may spend thousands of dollars on a therapy that helps only modestly or not at all.

The second is uncertainty. Unlike a hip replacement, which has a fairly predictable mechanical result, biologic treatments are more variable. Two people with essentially identical MRI findings can respond very differently.

The third is the risk of complication. Most PRP and autologous bone marrow procedures have low complication rates when done correctly, but they are not zero. Infection, bleeding, nerve irritation, and increased pain can occur. With systemic stem cell infusions, there are theoretical risks of immune reactions, clot formation, or unwanted cell growth, although serious events are rare in reputable programs.

The fourth is lost time. If you pursue months of regenerative treatment for a joint that clearly needs surgery, you may allow the condition to worsen, making the eventual surgery more challenging and the recovery longer.

The ethical challenge for physicians is balancing innovation with prudence. I have certainly had cases where I advised against a biologic procedure, even though it would have been profitable, because the odds of meaningful benefit were simply too low.

Does Fasting for 72 Hours Regenerate Cells?

Rogan has also talked about fasting, low-carb diets, and various recovery hacks, which blends into a broader conversation about natural regeneration.

There is some interesting research suggesting that prolonged fasting in the 48 to 72 hour range can trigger changes in immune cell populations, autophagy, and stem cell activity in animals and, to a lesser extent, in humans. Some studies have shown that repeated cycles of prolonged fasting or fasting-mimicking diets can reduce markers of inflammation and may promote regeneration of certain immune cells.

However, “Does fasting for 72 hours regenerate cells?” is an oversimplified question. The answer is: it can influence cellular turnover and stress responses, but it does not regrow cartilage or reverse decades of joint wear. For most people, prolonged fasting is a lifestyle or metabolic tool, not a substitute for targeted regenerative treatments, physical therapy, strength training, and proper sleep.

Anyone considering long fasts should also consider medical supervision, especially if they have diabetes, heart disease, or take medications that interact with food intake.

What Country Is Best for Stem Cell Treatment?

Rogan’s trip to Panama has led many patients to ask about medical tourism. No country is best in a blanket sense. Each has pros and cons.

The United States has strict regulations, which limit some therapies but also protect patients from the worst abuses. Evidence-based clinics here often focus on autologous PRP and bone marrow treatments for joints and spine. The downside is fewer high-dose allogeneic stem cell options and, in many cases, higher prices.

Panama, Costa Rica, and Mexico have become hubs for allogeneic mesenchymal stem cell therapy. Some centers are run by serious physicians and scientists, with decent quality control and published safety data. Others are little more than marketing machines with glossy websites.

Countries in Europe and parts of Asia have pockets of excellence, particularly in academic hospitals, but access is often restricted to specific diseases and clinical trials.

If a patient insists on going abroad, I advise them to look for:

- A track record of published clinical data, not just testimonials.
- Clear sourcing and processing information for the cells.
- Transparent discussion of risks, not only benefits.
- Real medical oversight, not just sales representatives.

Stem cell therapy is not like buying a supplement. The quality of the lab, the handling of the product, and the depth of clinical judgment matter enormously.

The Role of Regenerative Medicine in a Lifelong Plan

When you strip away the hype, regenerative medicine is neither magic nor fraud. It is a set of tools that, used appropriately, can reduce pain, improve function, and delay or complement surgeries for a meaningful subset of patients.

Joe Rogan's story shows the upside: an active middle-aged man, committed to training and recovery, able to leverage his resources to access intensive stem cell therapy and reporting tangible benefits. My clinic experience fills in the rest: the middle-aged woman who avoided knee replacement for several years after PRP and careful strength work, the runner whose Achilles finally healed with a combination of biologics and loading changes, and also the patient who spent thousands with almost no change and wished he had saved the money for a surgical copay.

The future of this field will depend on better trials, clearer regulations, and honest conversations between doctors and patients. Until then, if you are considering regenerative medicine, approach it like any other major investment of time and money: ask hard questions, seek second opinions, and remember that the most powerful regenerative tools you control are still your daily habits, not just what goes into a syringe or an IV bag.

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