

I still remember the week Joe Rogan's stem cell story started circulating in patient conversations. Within a few days, I had three different people in clinic mention "what Joe did in Panama" as if it were a new household treatment. For a field that has been grinding along in the trenches for years, that kind of pop culture exposure is a double edged sword. It brings hope and attention, but it can also distort expectations.

As a regenerative medicine physician, I think it helps to walk carefully through what actually happened, what it means for a typical patient, and where the science really stands.

## **Where did Joe Rogan get his stem cell treatment?**

Rogan has repeatedly described traveling to Panama City, Panama, to a facility known as the Stem Cell Institute. The clinic has been associated in public reporting and in his own discussions with Dr. Neil Riordan, who has long promoted umbilical cord derived mesenchymal stem cell infusions for a wide range of conditions.

According to Rogan's own account, he received high dose intravenous infusions of allogeneic (donor derived) stem cells, along with targeted injections to problem joints. He has said that his joint pain, especially in his shoulders and knees, improved dramatically in the weeks after treatment.

Several details here are worth teasing apart.

First, this is not the same thing that a typical orthopedic or sports medicine doctor in the United States offers. In the U.S., most legitimate regenerative treatments are autologous. That means we use your own cells and tissues: platelet rich plasma (PRP), bone marrow aspirate concentrate, or microfragmented fat. These are regulated as procedures, not as mass manufactured products.

Second, Rogan's treatment used expanded umbilical cord derived cells from donors. That type of treatment is restricted in the U.S., largely because the FDA classifies expanded stem cell products as biological drugs. To market them broadly, a company needs traditional drug level approval, including large clinical trials. In Panama, the regulatory framework is different, which allows clinics like the Stem Cell Institute to offer expanded cell infusions sooner, with far less published high quality data behind them.

Third, Rogan is a single, self reported case. His experience is interesting and his improvement might be real, but it cannot tell you what the average benefit, risk, or cost effectiveness looks like for you.

## **What is a regenerative medicine doctor?**

Patients use the term "stem cell doctor" loosely, but the more accurate phrase is "regenerative medicine doctor." At its core, this is a physician who uses biologic therapies that aim to repair or regenerate damaged tissue instead of simply reducing symptoms.

In real clinical practice, that typically means a doctor trained in one of a few home specialties - physical medicine and rehabilitation, sports medicine, orthopedics, pain medicine, sometimes rheumatology or interventional radiology - who then adds focused training in regenerative procedures. That training may be fellowships, courses, or years of supervised practice.

In my own clinic, a normal week might include:

Autologous procedures, like PRP injections for chronic tendinopathy or early arthritis, bone marrow cell concentrates for focal cartilage defects, or fat derived cell preparations for joint degeneration.

Biologic adjuncts, such as prolotherapy for ligament laxity or percutaneous tenotomy to stimulate tendon healing.

Noninvasive supports, including loading programs, physical therapy, bracing, and sometimes medications, because regenerative medicine works best when integrated into a full plan, not delivered as a magic bullet.

Patients sometimes imagine a regenerative medicine doctor as a lab scientist in a white coat holding glowing test tubes. In reality, most of us spend our days in exam rooms and procedure suites, ultrasound probe in one hand and a very practical awareness of anatomy, biomechanics, and patient goals in the other.

## Why Panama, and why are people flying out of the U.S.?

Rogan is far from the only American who has flown abroad for stem cell treatment. The main reasons usually fall into four categories: regulatory limits, cost, dose, and marketing.

Regulation comes first. The FDA allows “minimally manipulated” autologous products for homologous use. Translated, that means you can concentrate a patient’s own blood, marrow, or fat, as long as you do not fundamentally alter the cells or repurpose the tissue far from its original function. Expanded, culture grown stem cells, or off the shelf donor products, typically do not fit that rule and are treated like drugs. In the U.S., such products are almost entirely restricted to clinical trials.

Countries like Panama, Mexico, parts of the Caribbean, and some European and Asian nations have looser frameworks. They allow clinics to culture cells, bank them, and give high dose repeated infusions without the same drug approval pathway. That gives patients access, but with less rigorous proof.

Cost then enters the equation. Ironically, a full “Rogan style” protocol in Panama is not cheap. Package prices of 15,000 to 40,000 USD are commonly cited by patients I see who have shopped around. What you often avoid, however, is the drawn out, insurance driven process of prior authorizations and denials, because you simply pay cash.

Dose matters too. Clinics abroad frequently tout very high cell counts - “hundreds of millions” of cells in a single visit. Sounds impressive, but the evidence that more automatically equals better is **Regenerative Medicine Doctor Scottsdale** [ispwscottsdale.com](http://ispwscottsdale.com) still lacking in most conditions.

Finally, the marketing is aggressive. Offshore clinics know that U.S. Patients are frustrated with the slow pace of regulation and the pain of chronic conditions. When you pair that with high profile testimonials from celebrities or athletes, it is not surprising people start asking if they should follow.

## What is the biggest problem with regenerative medicine right now?

From a physician’s perspective, the biggest problem is the mismatch between hype and evidence. The biology is genuinely promising. You can look at early data in knee osteoarthritis, tendon injuries, and some autoimmune and neurologic diseases and see real signals. But those signals are not yet uniform, large, or long term for many uses.

Several practical problems grow from that core issue.

Clinical heterogeneity makes it hard to know what you are actually getting. “Stem cell therapy” can mean anything from a carefully prepared bone marrow concentrate injected under ultrasound guidance into a focal lesion, to a for profit clinic in a strip mall giving you a vial of amniotic fluid with very few, if any, live stem cells. Both might cost several thousand dollars, but the underlying product and technique differ wildly.

Regulatory gaps allow some bad actors to flourish. In the U.S., the FDA has started cracking down on the worst offenders, including clinics that caused serious harm with unproven injections into eyes or spinal spaces. Abroad, enforcement is often looser.

Data scarcity remains a chronic issue. A few conditions have reasonably good evidence for certain regenerative approaches. Mild to moderate knee osteoarthritis with PRP, specific tendon injuries, and some spinal conditions have randomized trials and meta analyses that support careful use. Many other indications, including systemic autoimmune diseases, neurodegenerative disorders, and anti aging uses, rely primarily on early phase trials, registries, or anecdote.

Patient expectations are understandably high. When someone hears "regeneration," they often picture a joint restoring itself to teenage cartilage quality. In practice, most of what we see is improvement, not full reversal. Pain can drop by 30 to 70 percent. Function improves. MRI changes are subtle, if present at all. A therapy can be helpful and worthwhile even if it does not literally grow brand new tissue on command.

## **What are the 4 types of regeneration people talk about?**

Biologists use the word "regeneration" in a narrower sense than marketers. When patients and clinicians talk about regenerative medicine, we are often actually referring to four overlapping ideas.

Tissue repair focuses on improving the body's normal healing response, for example using PRP to deliver concentrated growth factors to a tendon that keeps re tearing. Here you are not creating new organs, just nudging a stuck process forward.

Cellular replacement, which is closer to what people imagine from stem cells. In theory, transplanted or mobilized stem cells help replace damaged cells in cartilage, muscle, or even brain and spinal cord. In practice, most injected stem cells appear to act more as "drug factories," secreting signals that influence nearby cells, rather than directly turning into new tissue at large scale.

Immune modulation, especially with mesenchymal stem cells. There is evidence that certain cell therapies can dampen harmful immune responses and shift inflammatory profiles. That is why you see stem cells studied in conditions like graft versus host disease, Crohn's disease, and multiple sclerosis.

Structural scaffolding, which is common in orthopedics and dentistry. Here, regenerative medicine uses biomaterials, sometimes seeded with cells, to provide a framework where the body can rebuild tissue, such as bone defects after trauma or tumor removal.

The treatments at the clinic Rogan visited fall mostly in the cellular replacement and immune modulation categories, though again, the actual degree of replacement versus signaling is still being teased out in lab and clinical work.

## **Is regenerative medicine painful?**

For most musculoskeletal procedures, the actual experience is more about brief discomfort than true pain, but it varies with the technique and with individual tolerance.

PRP injections into a joint or tendon feel similar to a steroid shot, though sometimes more achy afterward. Bone marrow aspiration from the back of the pelvis has sharp pain during the numbing and pressure during the draw. Many patients describe it as uncomfortable for a few minutes, manageable with local anesthetic and sometimes light sedation.

High dose intravenous stem cell infusions, like those done in Panama, are usually less painful in the immediate sense. They feel like a long IV session. Some patients report transient flu like symptoms: fatigue, chills, or low grade fever in the day or two afterward, which may relate to immune activation.

In my practice, I tell people that if a procedure is intolerable without heavy anesthesia, something about the technique needs to be reconsidered. Careful local anesthesia, ultrasound guidance to avoid unnecessary tissue trauma, and clear expectations go a long way.

## **What is the success rate of regenerative medicine?**

There is no single number, because “regenerative medicine” is an umbrella, not a single therapy. Success also depends on how you define it: complete cure, meaningful symptom reduction, return to sport, delay of surgery, or simply safety.

For context, in mild to moderate knee osteoarthritis, higher quality trials of PRP find that somewhere between about 50 and 70 percent of patients report clinically meaningful pain reduction at 6 to 12 months, often beating hyaluronic acid injections and approaching or sometimes exceeding corticosteroid in durability. That does not mean everyone avoids knee replacement, but many delay it.

For chronic tennis elbow, PRP and related interventions show success rates in that same general range, often 60 to 80 percent of patients reporting significant improvement at one year compared with traditional care.

Stem cell based approaches are more variable. Some early studies of bone marrow cell injections for focal cartilage defects show improvement in pain and function in most patients, but with smaller sample sizes and shorter follow up than we would like. For systemic conditions such as autoimmune disease or neurologic injury, the evidence is much thinner, and success rates are harder to quantify, especially outside trials.

Celebrity stories, like Rogan’s, often represent the favorable end of that spectrum. The less dramatic outcomes are less likely to be discussed on podcasts.

## **Does fasting for 72 hours regenerate cells in the same way?**

Fasting has become another popular topic among people chasing regeneration. The short answer is that prolonged fasting, including 48 to 72 hour windows, can activate processes such as autophagy and may influence stem cell activity, particularly in immune cells. Some human studies show changes in white blood cell counts and markers of metabolic health after multi day fasts.

That said, fasting for 72 hours does not “regenerate cells” in the same sense that an injected stem cell preparation does. You are not adding new cells from outside. You are changing the environment the existing cells live in, pushing some to recycle damaged components and perhaps stimulating stem cell niches to repopulate immune cells after refeeding.

I tell curious patients that thoughtful fasting, if medically safe for them, can be one tool among many to support cellular health. It does not replace targeted regenerative procedures for structural problems like advanced joint arthritis or tendon tears.

## **Who is a good candidate for regenerative medicine?**

The patients who tend to do best share several characteristics, both medical and behavioral.

First, the underlying condition is structurally amenable. A knee with moderate cartilage thinning, some meniscal fraying, and pain with activity is a very different target from a knee with no cartilage at all and bone grinding on bone. Regenerative injections often shine in that mild to moderate window, or in focal problems like specific tendon tears, more than in end stage destruction.

Second, comorbidities are reasonably controlled. Diabetes, smoking, uncontrolled inflammatory disease, obesity, and certain medications can all blunt healing. I do treat patients with these issues, but I counsel them that success rates may be lower and that optimizing those factors first enhances any biologic procedure.

Third, expectations are realistic. A good candidate understands that improvement might mean less pain and more function, not a complete rewind to age 20. They are willing to participate in rehab, modify training loads, and give the therapy months, not days, to show effect.

Fourth, financial risk tolerance matters. Since many regenerative treatments are not covered by insurance, a patient needs to be in a position where spending, for example, 2,000 to 8,000 dollars on a procedure is a considered investment, not a desperate last gamble that will create financial harm if the outcome is modest.

Finally, follow through is key. The best biologic injection can still fail if the patient ignores post procedure instructions, resumes heavy loading too early, or neglects the strengthening and mobility work that allows new tissue and improved signaling to translate into durable function.

Checklist style, the core elements are: a structurally appropriate target, manageable medical risk, aligned expectations, financial clarity, and willingness to engage in rehab and lifestyle work.

## **Will insurance pay for regenerative medicine, and does insurance cover Kinetix?**

This is one of the most practical questions I hear, and the answer is usually not what patients hope.

In the United States, most commercial insurance plans and Medicare classify common regenerative injections such as PRP, bone marrow aspirate concentrate, and many branded protocols as experimental or investigational. That means they do not pay for the biologic portion of the treatment.

They may, however, cover related services such as the office visit, imaging, physical therapy, or bracing. Some plans have started to cover PRP for very specific indications, such as certain tendinopathies, but this remains the exception, not the rule.

As for Kinetix, which is a branded regenerative offering some clinics market as a package of biologic injections and rehabilitation protocols, the situation is similar. In my experience, and based on payer policy documents I have reviewed, insurers almost never cover the proprietary, regenerative part of those programs. They might cover associated physical therapy or imaging if billed separately with standard codes, but the core "Kinetix" procedure itself is treated as self pay.

Given how fast policies change, I always advise patients to call their insurance directly, ask about coverage for the specific CPT codes the clinic plans to use, and get any verbal pre authorizations noted in the insurer's system. Surprises around bills tend to sour even good clinical outcomes.



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DR. ASHU GOYLE

## **What is the average cost of regenerative medicine?**

Costs vary widely by region, physician expertise, and the specific procedure, but a few ranges are typical in the U.S.

PRP injections usually range from about 500 to 1,500 dollars per treatment, depending on the complexity of the preparation and whether ultrasound guidance is used. Many protocols involve one to three sessions per body part.

Bone marrow aspirate concentrate treatments tend to fall in the 2,500 to 6,000 dollar range per major joint or region, reflecting both the time and equipment involved in the aspiration and processing.

Fat derived cell preparations often land in a similar or slightly higher bracket, 3,000 to 7,000 dollars, partly due to the need for liposuction style harvesting and more involved processing systems.

Travel abroad for high dose donor derived stem cells, like Rogan's trip to Panama, stretches that range. It is common to hear patient reported quotes around 15,000 to 40,000 dollars for multi day infusion packages, not including flights, lodging, and lost work time.

Compared to surgery, these numbers can still be competitive, but because so much is out of pocket, the psychological impact feels different. For many patients, the key decision point is whether the potential benefit and the chance to delay or avoid surgery are worth a several thousand dollar investment that may or may not succeed.

## **What are the disadvantages of regenerative medicine?**

It is easy to focus on potential [Regenerative Medicine Doctor Scottsdale](#) upside and celebrity testimonials. In clinic, I spend just as much time on drawbacks, because those shape whether a treatment fits a particular person's situation.

The main disadvantages usually fall into five buckets.

First, cost and lack of insurance coverage. Most regenerative procedures remain out of pocket. That alone makes them inaccessible to many.

Second, imperfect and uneven evidence. We have good data for some indications, modest data for others, and almost no data for a long tail of conditions that aggressive marketers still advertise.

Third, procedural risks, while generally low, are real. Infection, bleeding, flare of inflammation, nerve irritation, and, in rare cases, serious complications such as clots or neurologic injury can occur, especially when injections are done into high risk areas like the spine by undertrained providers.

Fourth, time and opportunity costs. A patient who spends money and months invested in a regenerative program that does not help may delay other treatments, such as surgery or disease modifying medications, that would have been more appropriate earlier.

Fifth, regulatory and quality issues, particularly with certain amniotic, umbilical, or "stem cell" products sold in the U.S. And abroad that contain few or no viable cells. Patients are sometimes paying for the idea of stem cells more than an actual, well characterized biologic product.

When regenerative medicine is offered transparently, within the bounds of evidence, and by experienced clinicians, those disadvantages can be managed and weighed. When it is sold as a guaranteed fix, they are often ignored.

## **How much do regenerative medicine doctors make, and how does that compare?**

Patients sometimes ask this bluntly, especially when they are considering a several thousand dollar cash procedure. They want to know if their doctor is incentivized to recommend more treatments than medically necessary.

There is no single salary for a "regenerative medicine doctor," because it is not a primary specialty. Income depends heavily on the underlying field and practice model. A physiatrist or sports medicine physician who integrates regenerative procedures into a larger insurance based practice might earn in the range of 250,000 to 450,000 dollars annually. An orthopedic surgeon who runs a partly concierge, procedure focused clinic may earn more.

In broader surveys, the highest paid doctor specialty in the U.S. Typically includes procedural fields such as orthopedics, plastic surgery, cardiology, and some neurosurgical disciplines, with average incomes in the 500,000 to 800,000 dollar range, sometimes higher in private practice. The lowest paying doctor specialty is often primary care pediatrics, family medicine, or public health focused fields, which may cluster between about 200,000 and 275,000 dollars, depending on region and setting.

Regenerative medicine sits across that spectrum. It can be a modest adjunct or a significant profit center, which is precisely why transparency about indications, pricing, realistic outcomes, and alternatives is so important. Patients should feel free to ask doctors how they are paid, whether they have ownership in particular labs or products, and what less expensive options exist.



## What country is best for stem cell treatment?

People often phrase this as if there is a global ranking: Panama first, Germany second, the U.S. Third, and so on. Reality is more nuanced.

The U.S. Has strong regulation and some of the best clinical trial infrastructure in the world. For indications where evidence based autologous procedures are appropriate, you can receive high quality care without leaving the country. For experimental donor derived therapies, clinical trials here are carefully monitored, but access is limited and often restricted to specific diseases.

Panama, where Rogan went, along with Mexico and several Caribbean destinations, offers broader access to high dose, culture expanded stem cells, especially from umbilical cord tissue. The upside is availability and the ability to treat multiple conditions under one protocol. The downside is that many of these uses are not backed by large, controlled trials, and regulatory oversight is less robust.

Some European countries, like Germany and the United Kingdom, occupy a middle ground, with centers that offer sophisticated autologous and some allogeneic therapies within more controlled frameworks. Japan has also built a regulated pathway for certain regenerative products.

The “best” country depends more on your diagnosis, risk tolerance, and ability to participate in trials than on national borders. For many orthopedic and sports problems, excellent regenerative care can be obtained domestically in the U.S., Europe, or other developed healthcare systems. For systemic, high dose stem cell infusions similar to Rogan’s, the only legal options often involve travel, with all the attendant trade offs.

Regenerative medicine sits at an interesting crossroads. The story of a high profile patient flying to Panama for stem cells captures the imagination, but it is not a template for everyone. The field contains real promise, genuine

progress, and a fair amount of noise.

A careful conversation with an experienced regenerative doctor, grounded in your specific anatomy, goals, and constraints, will take you much further than any single celebrity testimonial, Rogan's included.

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