Fasting and regenerative medicine have started to cross paths in clinic conversations. I hear it weekly. A patient comes in for stem cell or platelet rich plasma therapy and asks, often with real hope in their voice:

“If I do a 72 hour fast, will it regenerate my cells the same way as these treatments?”

There is a lot wrapped inside that question. It touches on what regenerative medicine actually is, what we can genuinely do with biologic therapies, how lifestyle fits in, and how much of the viral fasting content is built on shaky extrapolation rather than solid human data.

As someone who works in regenerative medicine and spends much of the week talking about stem cells, cartilage, tendons, nerves, and degenerative joints, I want to unpack this honestly. No hype, no dismissal, just what we can say with confidence and where we are still guessing.

What a regenerative medicine doctor actually does

Patients often ask, “What is a regenerative medicine doctor?” as if it is a distinct, stand alone specialty like cardiology. It is not. It is more of a clinical focus that sits on top of another foundational specialty.

Most physicians who practice regenerative medicine originally trained in areas such as:

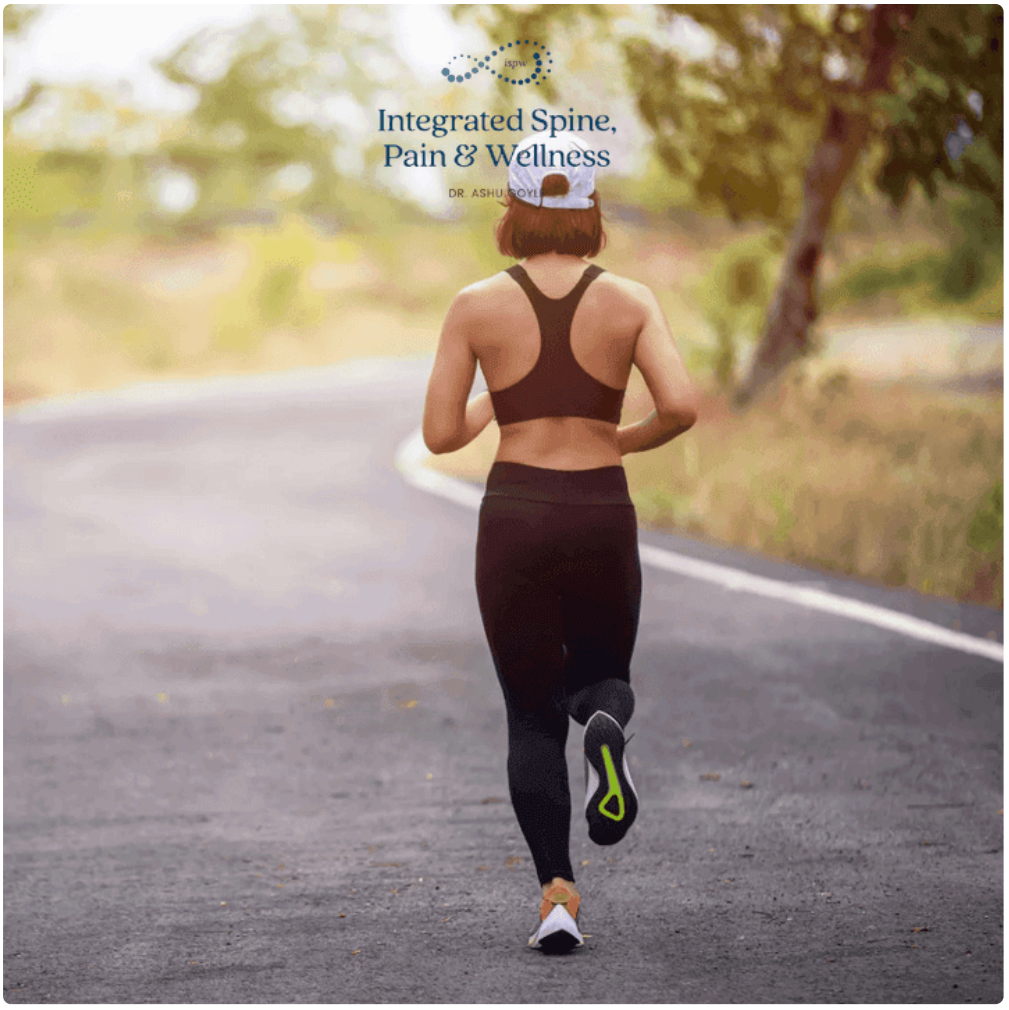
- orthopedics
- physical medicine and rehabilitation
- sports medicine
- pain management
- rheumatology

That is one allowed list.

They then add advanced training in the use of biologic materials to help the body repair or modulate damaged tissue. In day to day practice this can involve:

Injecting platelet rich plasma into a partially torn tendon or arthritic joint.

Harvesting bone marrow or fat tissue, concentrating the cellular fraction, and injecting it under image guidance.



Using lab processed products, such as amniotic or umbilical cord derived tissues, in contexts where regulation allows. Integrating these interventions with physical therapy, strength training, nutrition, and sometimes medications.

It is less about “magical stem cells” and more about creating a biologically favorable environment for repair while mechanical load and movement are optimized. When I speak to colleagues across the United States and Europe, the common theme is that success depends as much on diagnosis, technique, and rehab as it does on what is inside the syringe.

So when we evaluate things like a 72 hour fast, we are thinking in that same integrated way: does it change the biologic environment in a way that is relevant to tissue level regeneration in a patient with a real problem, such as knee osteoarthritis or a degenerative disc?

What researchers actually mean by “regeneration”

Regenerative medicine gets used in marketing copy as a catch all. Biologically, we are more precise. When we talk about “What are the 4 types of regeneration?” in a general biology sense, we mean broad categories:

Epimorphic regeneration, classic salamander limb regrowth, where a full structure returns.

Compensatory regeneration, like the liver enlarging after part is removed. Morphallactic regeneration, where existing tissue remodels itself into a new structure. Physiologic cell turnover, the ongoing replacement of blood cells, skin, and gut lining.

Most human regenerative medicine lives in the last two categories. We are trying to influence how a joint remodels, how tendon cells replace themselves, how nerves sprout new branches, or how scar tissue is remodeled into more functional tissue. We are not regrowing a whole knee or an entire spinal disc.

That nuance matters when you see a headline that suggests a 72 hour fast “resets” your immune system or “regenerates” your body. At the cellular level, there may be changes in cell populations and signaling. That is not the same as regrowing cartilage that has been worn down over 20 years.

What we know about 72-hour fasting and cell regeneration

The specific question, “Does fasting for 72 hours regenerate cells?” touches several related areas of research. Here is what we have reasonable evidence for in humans and animal models.

Prolonged fasting, roughly 48 to 72 hours, can lower circulating insulin and IGF 1, increase ketone bodies, and trigger autophagy. Autophagy is a cellular housekeeping process where damaged components are broken down and recycled.

Some mouse studies suggest cycles of prolonged fasting may reduce certain immune cell populations and then trigger rebound production from stem or progenitor cells in the bone marrow. This has been loosely described as “immune system regeneration”. Human studies are far more modest. We see changes in inflammatory markers, insulin sensitivity, and sometimes white blood cell counts. The phrase “regeneration” is often an interpretive stretch placed by commentators, not what cautious researchers claim.

Where patients get misled is in assuming that cellular level changes equal organ level repair. Losing some senescent cells and improving autophagy is positive. It does not mean a degenerated meniscus suddenly thickens or a long standing neuropathy disappears.

Most regenerative medicine doctors I know fall into a similar stance. Fasting, when done safely and under proper supervision, can be a useful tool among many that improve metabolic health and reduce systemic inflammation. Healthier metabolism and lower inflammation make our biologic treatments more likely to succeed. They also reduce the background “noise” of pain.

But can a 72 hour fast replace a well done platelet rich plasma series for a high grade tendon tear? No evidence says that it can. We Regenerative Medicine Doctor Scottsdale use fasting, nutrition, sleep, and activity plans as support, not as solo miracle cures.

Where the 72-hour fast story overreaches

When I trace YouTube or podcast claims back to actual papers, several patterns repeat.

First, small sample sizes. Studies with under 50 humans or just a few dozen mice are used to support broad claims that sound definitive.

Second, surrogate markers. Researchers measure things like IGF 1, white blood cell counts, or gene expression. Influencers then jump straight from these shifts to language about “rejuvenating the body” or “resetting your stem cells.” There is often no direct imaging or biopsy proof of tissue level regeneration.

Third, short time frames. Changes measured over one or two weeks may not persist. Patients are seeking durable improvements in arthritis pain, tendon function, or neurologic status that must last months to years.

This does not make fasting useless. It simply means regenerative physicians are cautious about attaching the word “regeneration” to early metabolic or immune findings.

If a patient with knee osteoarthritis asks me whether a 72 hour fast will help, my answer is usually: it might help you feel lighter, less inflamed, and more mentally clear for a time. It might shift some biomarkers in a favorable direction. It will not rebuild cartilage by itself, and you should not push an aggressive fast if you have diabetes, heart disease, are frail, or take certain medications.

How this intersects with stem cell therapy and high profile cases

No conversation about regenerative medicine seems complete without someone asking, “Where did Joe Rogan get his stem cell treatment?” He has talked openly about traveling to Panama and receiving umbilical cord derived mesenchymal stem cell infusions at a clinic associated with Dr. Neil Riordan.

That is an example of a trend: many athletes and public figures go to countries like Panama or Mexico for stem cell procedures that are not allowed in the same form in the United States under current FDA rules. This leads to another question I hear almost weekly: “What country is best for stem cell treatment?”

There is no single best country. There are different regulatory approaches. The United States, Canada, and most of Western Europe are conservative. They allow autologous procedures where your own cells are minimally manipulated, and they limit expansion or significant lab processing outside of formal clinical trials or approved products.

Places like Panama, Mexico, parts of Eastern Europe, and some Asian countries permit broader use of allogeneic, donor derived cells, sometimes expanded in culture, with less stringent oversight.

From a clinical perspective, the reality is mixed. I have seen genuinely impressive recoveries in patients treated abroad, and I have also seen people come back with no benefit or even with complications. Often the same aggressive marketing that oversells 72 hour fasting is present in stem cell tourism. That is why most responsible regenerative medicine doctors focus on realistic outcome ranges, not miracle stories.

How much regenerative medicine really costs and who pays

Once patients move past the science questions, the next ones are blunt:

“What is the average cost of regenerative medicine?”

“Will insurance pay for regenerative medicine?” “Does insurance cover Kinetix or other branded clinics?”

Across North America, pricing varies, but some patterns hold. A single platelet rich plasma injection for a joint or tendon may range from a few hundred dollars to a couple of thousand dollars, depending on the system used, the practice overhead, and whether ultrasound or fluoroscopy guidance is included. Bone marrow concentrate or adipose derived cell procedures often land higher, sometimes in the USD 3,000 to 8,000 range for a single region, occasionally more for extensive spine work.

Insurance coverage lags the evidence. Some carriers will cover specific uses of platelet rich plasma, such as for certain tendon injuries, but many classify most regenerative injections as experimental. In my own practice, I see patients spend significant time on the phone with insurers, only to be told that regenerative treatments fall under policy exclusions.

Regarding specific clinics, when someone asks, “Does insurance cover Kinetix?” or any similarly branded center, the answer is almost always: coverage depends on the exact service, the code used, and the specifics of your plan. In many cases, the consultation or imaging might be covered as standard care, while the biologic injection itself is not. I advise every patient to ask for CPT codes and check them directly with their insurer rather than relying on a quick yes or no from a marketing brochure.

One question that comes up among younger clinicians is financial: “How much do regenerative medicine doctors make?” There is no direct salary category for this. Income depends far more on the base specialty, geographic location, practice model, and procedural volume. Orthopedic ***Regenerative Medicine Doctor Scottsdale*** surgeons and interventional pain doctors who add regenerative services are often already in higher earning brackets.

Which ties to another pair of curiosities I hear from medical students: “Who is the highest paid doctor specialty, and what is the lowest paying doctor specialty?” Survey data shift year to year, but in the United States, orthopedic surgery, interventional cardiology, and some surgical subspecialties tend to top income charts. At the lower end, pediatrics, family medicine, and some psychiatry roles often land near the bottom, especially in non procedural, insurance dependent outpatient settings.

Regenerative medicine crosses these lines. It can be a niche within a low paying specialty or a profitable add on in a high paying one. From the patient side, what matters more is transparency. If you are paying several thousand

dollars out of pocket, you deserve a frank conversation about success rates, risks, and alternative standard therapies that would be covered.

What is the success rate of regenerative medicine?

Patients sometimes hope for a single number here. The reality is messier, and honest doctors will say so. “What is the success rate of regenerative medicine?” depends entirely on the condition, the technique, the product, and the patient.

For knee osteoarthritis treated with high quality platelet rich plasma in properly selected patients, multiple randomized trials show clinically meaningful improvement in pain and function in a majority of patients, often in the range of 60 to 80 percent reporting significant benefit over six to twelve months. Long term cartilage preservation is less clear, but symptom relief is real.

For advanced bone on bone arthritis, where the joint space is essentially gone, response rates drop. I see some improvement in pain and swelling, but far fewer patients avoid eventual joint replacement.

For partial tendon tears or chronic tendinopathy in the elbow, patellar tendon, or Achilles, success rates can be high if load management and rehab are done correctly. Many of my patients return to prior activity within months.

For severe neurologic conditions, such as advanced spinal cord injury or long standing multiple sclerosis, current regenerative injections have far less predictable outcomes, and large placebo controlled trials are sparse. Here I am particularly cautious about unrealistic claims.

There is also the personal response variability. Two patients with seemingly similar MRI findings can have very different trajectories. That is one of the biggest problems with regenerative medicine as it is practiced today: heterogeneity in both the underlying biology and the interventions.

The biggest problems and disadvantages of regenerative medicine

When someone bluntly asks, “What is the biggest problem with regenerative medicine?” I usually highlight three interlocking issues.

First, inconsistent standards. Platelet rich plasma can mean widely different platelet concentrations, leukocyte content, and activation protocols depending on the kit and technique. Stem cell preparations vary even more. This makes it hard to compare studies and results.

Second, regulatory and ethical gray zones. Some clinics market “stem cell” therapies that are really amniotic or cord derived products with very few, if any, living stem cells. Others push aggressive claims far ahead of evidence, targeting vulnerable patients with neurodegenerative diseases or advanced arthritis as if a single injection could reverse years of damage.

Third, cost and access. High out of pocket costs and poor insurance coverage make regenerative options available mostly to those who can afford to pay. Meanwhile, many lower cost but high impact interventions, such as meticulous physical therapy programming, high quality strength training, nutrition, and sleep coaching, are undervalued and under reimbursed.

When patients ask specifically, “What are the disadvantages of regenerative medicine?” I add more tangible points. Some procedures are painful, at least briefly.

So, is regenerative medicine painful? It depends. Platelet rich plasma in a shallow tendon can sting, particularly during the first 24 to 48 hours. Deep joint injections, especially in the hip or spine, may produce a sore, pressure like discomfort for several days. Bone marrow aspiration from the pelvis is not pleasant, though with good local anesthesia and sedation most patients tolerate it, and lingering soreness usually fades over a week or two.

There is also no guarantee of success. You can spend thousands and still end up needing surgery later. Compared with a 72 hour fast, which costs very little but has systemic stress, regenerative injections trade higher cost and local discomfort for a shot at focused tissue improvement. That trade off should be explicit.

Who is and is not a good candidate for regenerative medicine

Not every person with pain is a suitable candidate. A question I examine with each new patient is, “Who is a good candidate for regenerative medicine?” Patterns emerge.

A good candidate usually has a clearly defined structural problem that matches symptoms and exam findings, such as a partial tendon tear, early to moderate joint arthritis, or focal cartilage damage. They are medically stable enough to tolerate an injection and the rehab that follows. They have realistic expectations, hoping for meaningful improvement rather than a guarantee of cure.

To make this concrete, here is a short checklist I walk through:

1. Imaging and exam match the pain story, so we are not chasing incidental findings.
2. The patient has attempted, or at least seriously considered, non invasive options like targeted therapy, strength work, and basic lifestyle interventions.
3. There is a clear biologic rationale for the chosen treatment, not just a generic “stem cells fix everything” mindset.
4. The person understands costs, likely timelines, and the possibility of partial or no response.
5. There are no major contraindications, such as active infection, certain blood disorders, or inability to stop specific medications.

That is the second and final list.

Patients with diffuse pain without clear structural drivers, severe deformity, or advanced instability sometimes do better with surgical or systemic approaches rather than localized injections. Very frail or medically complex patients may face higher risk from procedures or from aggressive fasting.

Where fasting fits practically, from a regenerative physician’s view

So, does fasting have a place in a regenerative medicine plan? In my experience, yes, but as one tool among many, not as a stand alone cure.

Patients with metabolic syndrome, prediabetes, or obesity often respond very well to structured eating patterns that include time restricted feeding or occasional longer fasts, as long as they are medically supervised. When their blood sugars improve, systemic inflammation falls, and weight comes down, joint loads drop, and pain often softens. At that point, biologic injections, if still needed, work in a more favorable environment.

For lean, highly stressed endurance athletes, an aggressive 72 hour fast might be counterproductive, impairing recovery and compounding hormonal stress. For older patients on multiple medications, unsupervised prolonged fasting can lead to hypotension, electrolyte shifts, or drug related complications.

The key is not to pit 72 hour fasting against regenerative procedures as an either or. It is to see both as potential levers in the larger system of tissue health. The strongest outcomes I see tend to come from patients who:

Sleep consistently and protect their recovery days.

Train smart, with progressive strength and mobility work around the injured area. Eat in a way that keeps blood sugar stable and inflammation reasonably low, sometimes using intermittent or periodic fasting if appropriate. Address psychosocial factors, including fear of movement and work stresses. Select targeted biologic treatments only when the expected benefit justifies cost and risk.

The marketing engine loves a single hero: the miracle stem cell vial or the mythical 72 hour fast that resets everything. Real regenerative medicine, in clinic rooms and rehab gyms, looks more like the careful stacking of multiple moderate wins over months.

If you are considering both regenerative injections and a serious fasting protocol, speak honestly with your treating physicians. Ask them not only about potential benefits, but what they would recommend if you were their sibling or parent. Then weigh the modest but real promise of both against the stories and slogans that travel faster than the data.

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