When people ask, “Is regenerative medicine painful?” they usually are not just curious about discomfort. They are trying to weigh hope against fear. They want to know whether the promise of healing is worth the needles, the downtime, and the bill that almost always lands outside insurance.

I have sat across from patients who could not climb stairs without wincing, athletes desperate to avoid surgery, and grandparents trying to get through a grandchild’s wedding without limping. The same questions come up every week: How bad does it hurt? How long does it last? Does it actually work?

Let’s walk through what patients really experience, where the pain shows up, and how to judge if these treatments make sense for you.

What a regenerative medicine doctor actually does

People often start by asking, “What is a regenerative medicine doctor?” It is not a single board-certified specialty like cardiology or dermatology. Instead, it is an area of practice that sits on top of other core specialties.

Most physicians who focus on regenerative medicine come from:

- Physical medicine and rehabilitation
- Sports medicine
- Orthopedic surgery
- Interventional pain management
- Rheumatology

They use tools like platelet-rich plasma (PRP), bone marrow concentrate, fat-derived cell preparations, and sometimes biologic scaffolds to help the body repair or modulate damaged tissues. A good regenerative medicine doctor does more than inject something “special” into a sore joint. They:

- Diagnose the actual source of pain using exam and imaging
- Decide if a regenerative approach fits the condition and the patient
- Choose the right biologic preparation and guide the injection precisely, often with ultrasound or fluoroscopy
- Plan rehab around the procedure so the new tissue or improved environment actually has a chance to take hold

Financially, patients sometimes ask, “How much do regenerative medicine doctors make?” There is no single number. A sports medicine physician who occasionally offers PRP inside a large health system might earn in the range of a typical non-surgical specialist, often around 220,000 to 350,000 USD annually. A high-volume private clinic doing only cash-pay regenerative procedures can generate more revenue, but overhead, staff, and malpractice costs are also higher. It is far from a guaranteed goldmine, and income varies widely by region and practice model.

Compared with broader physician income data, the highest paid doctor specialty tends to be neurosurgery or thoracic surgery in most American surveys, often exceeding 700,000 USD annually in busy practices. At the other end, the lowest paying doctor specialty is usually primary care fields like pediatrics or family medicine, frequently under 250,000 USD per year.

Those numbers matter because they shape Integrated Spine, Pain and Wellness Regenerative Medicine Doctor Scottsdale the market around regenerative medicine, including why some clinics push aggressive marketing or inflated promises. Understanding that context helps patients separate trustworthy care from sales tactics.

Where the pain actually comes from

Most patients picture one big painful moment. In reality, discomfort around regenerative medicine usually falls into three windows:

1. The harvest or collection
2. The injection itself
3. The “flare” period afterward, as the body responds

Each window feels different depending on the procedure.

PRP: blood draw plus focused soreness

Platelet-rich plasma starts like a basic lab test. The blood draw itself feels like any routine venipuncture. For almost everyone, that part is low on the pain scale.

Once the blood is spun down and the PRP is prepared, it is injected back into the target area. Here the experience diverges based on location.

For a knee joint, I usually warn patients that there will be 10 to 30 seconds of sharp pressure as the fluid goes in, then a feeling like the joint is fuller or tight. With a good local anesthetic and gentle technique, many describe it as “uncomfortable but tolerable.” People who are needle-phobic feel it more intensely, mentally and physically.

Tendon or ligament injections, such as for tennis elbow or Achilles tendinopathy, can feel sharper. The needles are going into already irritated tissue. For those patients, numbing the skin and deeper tissues helps, but there is still a period of strong ache as the PRP is dispersed. Once the numbing medicine wears off, the area often feels more sore for 24 to 72 hours, then gradually eases.

Most people do not describe PRP as agony, but they do notice a clear spike in discomfort for a few days. Oral pain medication, icing (when allowed by the protocol), and relative rest usually manage this well.

Bone marrow and fat-derived preparations: harvest is the main hurdle

When patients ask if “stem cell treatments” are painful, they are usually talking about two parts: taking cells out and putting them back in. Technically, in most orthopedic clinics in the United States, the cells used are not the expanded laboratory stem cells available in other countries, but rather “minimally manipulated” concentrates from bone marrow or fat.

Bone marrow aspiration, most often from the back of the pelvic bone, is the step people fear. Here is the practical reality:

- With proper local anesthesia down to the bone surface, the skin and superficial tissues are well numbed.
- The pressure of the needle entering the bone is odd, more a deep push than a sharp stab.
- The real intensity comes when the physician aspirates the marrow. Patients often feel a crampy, pulling sensation in the low back or buttock, sometimes radiating down the leg. That part lasts seconds, but can be memorable.

About 20 to 30 percent of patients describe that aspirate moment as “quite painful but brief.” Another half call it “weird pressure, not fun but manageable.” A small minority have very little discomfort. Sedation, when available and appropriate, makes this significantly easier, particularly for anxious patients.

Fat-derived cell harvest, usually from the abdomen or flanks, feels similar to minor liposuction. With good numbing, the motion of the cannula is mostly pressure and vibration. Afterward, bruising and soreness across the

harvest area can last several days.

The subsequent injection of marrow or fat concentrate into a joint or tendon feels somewhat similar to PRP, though the volume and viscosity of what is injected can add to the sense of pressure.

Prolotherapy: more needle work, more short-term ache

Prolotherapy involves injecting an irritant solution, often dextrose-based, into ligaments and tendon insertions. The pain profile is defined by multiple small needle sticks around a joint or along the spine.

Patients tolerate this range fairly well, but the aggregate of multiple injections does add up. The following 48 to 72 hours are frequently more painful than the days after a single PRP injection, because the whole point of prolotherapy is to create an inflammatory response. For some, that flare is modest. For others, especially in the low back or sacroiliac region, it can feel like a strong, deep bruise that makes certain movements unpleasant for several days.

Non-injection regenerative approaches: shockwave and beyond

Not every regenerative technique uses needles. Extracorporeal shockwave therapy is a common example, especially for plantar fasciitis, tennis elbow, and chronic tendon problems.

Shockwave treatments sting. The device delivers rapid pressure waves into the tissue. Early sessions often feel like repeated snapping against the skin and deep ache in the tendon. As intensity is increased over a course of therapy, people adapt, but few would call it comfortable. Sessions are short, though, typically under 20 minutes, and there is no needle anxiety.

Other modalities, such as low-level laser or certain biologically active scaffolds, usually cause less acute pain, though they may still trigger a mild flare as tissues respond.

What most patients actually feel: a realistic pain spectrum

Individual tolerance varies, but after watching hundreds of patients go through regenerative procedures, a pattern emerges. On a 0 to 10 pain scale, where 0 is nothing and 10 is unbearable, most orthopedic regenerative therapies live in the 3 to 7 range during the procedure, and 2 to 6 in the days that follow.

Here is a broad, experience-based summary:

1. Numbing shots and blood draws hover around 1 to 3 for most people.
2. Joint injections (PRP or similar) usually sit around 3 to 6 during the needle and pressure portion, with a “heavy ache” afterward.
3. Bone marrow aspiration can spike to 6 to 8 for several seconds if done without sedation, though it is brief.
4. The post-procedure flare, especially for PRP and prolotherapy, bothers people most in the first 72 hours, then steps down gradually.

Importantly, pain is more than sensation. Anxiety amplifies everything. Patients who come in terrified of needles experience the same physical stimuli as sharper and more overwhelming. Those who understand what will happen, have coping strategies, and trust their physician tend to rate the same procedures lower on the pain scale.

When I counsel patients, I frame regenerative medicine as “short-term controlled discomfort in exchange for a chance at long-term function,” not as a painless miracle.

Who is a good candidate for regenerative medicine?

Not every person with joint or tendon pain should rush toward PRP or bone marrow injections. Some conditions respond beautifully. Others show modest benefit at best. A few are simply not good indications.

Research and day-to-day practice roughly agree on the following patterns:

- Mild to moderate osteoarthritis of the knee, hip, or shoulder often responds reasonably well to PRP and related approaches, especially in younger or middle-aged patients who still have preserved joint space.
- Focal tendon problems, like lateral epicondylitis (tennis elbow), patellar tendinopathy, and plantar fasciitis, often improve with PRP or shockwave after conservative rehab has failed.
- Advanced, bone-on-bone arthritis, large structural tears, or joints already severely deformed typically have lower success rates. Sometimes the best option really is joint replacement.

Age, general health, metabolic conditions, smoking status, and activity level all influence outcomes. Someone asking, “Who is a good candidate for regenerative medicine?” needs a detailed conversation, not a website quiz.

A practical checklist many of my colleagues use informally looks like this:

1. The diagnosis is clear and matches what regenerative therapies can plausibly help.
2. Conservative care such as physical therapy, activity modification, and simple injections has been tried and either plateaued or failed.
3. The patient can tolerate several days of increased pain and reduced activity to give the treatment a fair shot.
4. There is realistic understanding of success rates and no expectation of an instant cure.

Speaking of outcomes, patients frequently ask, “What is the success rate of regenerative medicine?” The honest answer is that it depends on the specific treatment and body region.

For knee osteoarthritis, for example, randomized trials of PRP show that around 60 to 80 percent of patients achieve meaningful pain improvement at 6 to 12 months, often better than hyaluronic acid injections but not a miracle fix. For tendinopathies, the range is similar, with some studies reporting 70 percent or higher satisfaction, while others show more modest benefit. For bone marrow and fat-based preparations, high quality data are fewer, and reported success varies widely, from 40 percent up to 80 percent or more, depending on definition and patient selection.

Anyone promising a 100 percent cure rate is selling something, not practicing medicine.

The biggest problems and disadvantages of regenerative medicine

Alongside pain, people deserve an honest answer to “What is the biggest problem with regenerative medicine?” and “What are the disadvantages of regenerative medicine?”

Several stand out.

The first is evidence quality. While the field has grown rapidly, the research is still uneven. There are good randomized trials for some uses of PRP, but far fewer for bone marrow or adipose cell preparations in orthopedic indications. Many protocols are based on small studies, case series, or expert experience rather than large, definitive trials.

The second is variability. “PRP” is not one thing. Platelet concentration, presence or absence of white blood cells, activation method, and injection technique all differ between clinics. The same is true, to an even greater extent, for

so-called “stem cell” treatments. This makes it hard for patients to know what they are really getting, and hard for doctors to compare outcomes.

The third is cost. Most of these procedures are cash-pay. When people ask, “What is the average cost of regenerative medicine?” they usually mean orthopedic PRP or marrow/fat procedures. In many parts of the United States, a single PRP injection into a joint ranges from about 500 to 1,500 USD. Bone marrow concentrate injections into a major joint can run from 2,500 up to 6,000 USD or more, especially when multiple joints or areas are treated.

This naturally leads to the insurance question: “Will insurance pay for regenerative medicine?” In general, health insurance in the United States does not cover PRP, bone marrow concentrate, or adipose-derived cell injections for orthopedic use. A handful of plans cover PRP for specific indications like chronic lateral epicondylitis, but that is the exception. Patients asking “Does insurance cover Kinetix?” usually learn that branded protocols like Kinetix are treated as elective, not covered medical care. Policies vary a little by carrier, but the default position is non-coverage.

The fourth problem is regulatory and ethical inconsistency. Some clinics advertise stem cell cures for nearly every condition under the sun, from autism to dementia, without solid evidence. Others enroll patients into research registries and report outcomes transparently. Patients often cannot tell the difference.

Regarding, “What country is best for stem cell treatment?” the honest medical answer is that no country holds a magic key. Some nations, like Panama, have allowed expanded mesenchymal stem cell therapies under regulation that is less restrictive than in the United States. This is one reason high-profile figures such as Joe Rogan have traveled there for infusions. Public reports place his stem cell treatment at the Stem Cell Institute in Panama City. That does not mean Panama is objectively “best.” It means its laws permit treatments that are still under tighter restriction in the U.S., Europe, and other regions.

The final disadvantage is that regenerative medicine is not benign simply because it comes “from your own body.” Infections, nerve irritation, bleeding, and worsened pain can occur if procedures are done poorly or on the wrong patients. While major complications are uncommon in capable hands, repeated failed procedures cost money, time, and hope.

What about fasting and “natural” regeneration?

The phrase “Does fasting for 72 hours regenerate cells?” shows up in online discussions alongside stem cells and PRP. The connection comes from animal studies and small human studies suggesting that extended fasting can influence immune cells and hematopoietic stem cells.

In mice, prolonged fasting cycles have shown some regeneration of immune cell populations in the bone marrow and blood. In humans, evidence is more limited. A few small trials suggest that multi-day fasts may shift white blood cell counts and metabolic markers, but claiming that a 72-hour fast “regenerates cells” in a clinically meaningful way stretches the data.

From a practical standpoint:

- Short-term fasting can be safe for healthy adults if done carefully.
- It should be avoided or medically supervised in people with diabetes, eating disorders, significant cardiovascular disease, pregnancy, or frailty.
- Any benefit on tissue repair or joint pain is theoretical at this point, not a substitute for targeted regenerative therapies.

Food, sleep, and exercise do influence your body's intrinsic regeneration, but they do so gradually and systemically, not as dramatic on-off switches.

Understanding "regeneration": medical and biological types

The phrase "What are the 4 types of regeneration?" usually comes from biology textbooks, not clinic brochures. In classical terms, scientists talk about:

- Morphallaxis, where an organism reconstructs lost parts mainly by remodeling existing tissue, as in hydra.
- Epimorphic regeneration, where cells at the wound site de-differentiate and proliferate to rebuild structures, such as salamander limb regrowth.
- Compensatory regeneration, where remaining cells grow or divide to restore function without recreating the exact original structure, like liver regrowth in humans.
- Super-regeneration or aberrant regeneration, where healing overshoots or misdirects, leading to structures that do not match the original.

In human medicine, we rarely use those exact labels in conversation with patients. Instead, we think in terms of cell-level repair, tissue-level repair, and organ-level adaptation. Regenerative medicine tries to push our limited human capacity a little closer to the impressive feats seen in simpler organisms, but within clear constraints.

PRP, marrow aspirate, and similar treatments typically work by modulating inflammation and improving the microenvironment for cells that are already there. They do not regrow entire joints or ligaments from scratch. That is an important expectation to set, especially when the term "stem cell" evokes images of salamander-like limb regrowth.

How painful is it relative to surgery and standard injections?

Patients often try to compare regenerative procedures with something they understand better, like corticosteroid injections or arthroscopic surgery.

Compared with standard steroid shots, regenerative injections usually hurt more and for longer. A cortisone injection may sting briefly, but it often provides pain relief within hours to days. PRP and similar therapies bring more post-injection ache because they lack anesthetic steroids and are designed to provoke a healing response.

Compared with arthroscopic surgery, on the other hand, regenerative procedures are clearly less invasive. There is no general anesthesia, no portals into the joint under fluid pressure, and no surgical trauma to tissue beyond the needle tracks. Recovery timelines differ too. A patient might be on crutches for a few days after a bone marrow concentrate injection into a knee, versus several weeks of structured rehab after meniscus surgery. Pain intensity over time tends to be lower with injections than with elective orthopedic operations, though the relief is less certain.

For many patients, regenerative medicine occupies a middle ground: more discomfort than conservative care, less than surgery. Whether that trade makes sense depends on the specific diagnosis, expectations, and financial realities.

Making a decision you can live with

The most useful conversations about regenerative medicine rarely start with technology. They start with the person in front of you.

Someone with a mild knee arthritis, a job that allows flexible movement, and a strong desire to avoid steroids might happily accept a few days of increased pain and a 1,000 to 1,500 dollar bill for a reasonable shot at 50 to 70 percent pain reduction. Another person, with more advanced joint damage, limited funds, and a job that demands heavy labor, might be better served by bracing, medications, and planning toward joint replacement instead of speculative biologic injections.

A few closing practical points for anyone weighing these treatments:

- Pain is real, but usually manageable with clear expectations, proper numbing, and short-term medication. The most intense moments are brief.
- The more severe your joint damage, the lower your chance of dramatic benefit, and the more the pain and cost might feel wasted.
- Ask your physician exactly what product will be used, how it is prepared, and how many similar procedures they have personally done. Technique affects both pain and success.
- Be wary of any clinic that promises guaranteed outcomes or claims that their proprietary mix is far superior to everything else without data.

Regenerative medicine is not painless, not uniformly proven, and not cheap. Yet in the right patient, for the right problem, it can deliver meaningful, lasting relief with fewer long-term risks than chronic steroid injections or premature surgery. The key is to walk into the process fully informed, prepared for some short-term discomfort, and clear about ***Regenerative Medicine Doctor Scottsdale*** both the potential and the limits of what your own biology, carefully nudged, can do.

Integrated Spine, Pain and Wellness
7425 E Shea Blvd Suite 102, Scottsdale, AZ 85260
4806608823