Consumer Guide to R3 Stem Cell Injection Program™*

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HYPE OR HOPE?

Overview

Regenerative medicine refers to therapies that are able to repair, restore and regenerate damaged tissues in the body. These treatments represent a significant advancement from traditional ones that only offer symptom relief as a proverbial "band-aid".

The aging process affects everyone, with changes that are either minor or major. Some age-related changes are benign, such as graying hair. Others result in declines in function of the senses and activities of daily life and increased susceptibility to and frequency of disease, frailty, or disability. In fact, advancing age is the major risk factor for a number of chronic diseases in humans.

The main way that humans achieve repair during the aging process is through stem cells. But just as one needs more and more stem cells for tissue repair, less are available to assist! This is why stem cell therapy has been such an exciting option, as it can help fill the gap between what's needed and what's available.

Regenerative procedures come in two forms. Those that require a biologic harvest from the patient (bone marrow or adipose tissue), or those that come from an external source (e.g. amniotic fluid, exosomes, and umbilical cord blood/ tissue).

There are significant myths and misinformation that have been propagated regarding the external source regenerative biologics. A lot of these myths are disseminated by industry competitors who have presented biased and manipulated data to confuse prospective patients.

In this Consumer Guide, R3 Stem Cell will debunk these myths so consumers can make an educated decision regarding their healthcare options. In addition, information is presented on the R3 Stem Cell Injection Program™, which is the first of its kind program where patients receive joint injections with 10 million stem cells for only $2,995!

Disclaimer: R3 Stem Cell has Centers globally. In the USA, no claims are made regarding regenerative therapies. The FDA considers stem cell therapy experimental and has not approved it for non malignant use.

What do the donor biologics (allograft) contain?

Known as the "products of conception", the regenerative materials from umbilical cord tissue include the following:

- Amniotic Fluid
- Placental Membrane
- Umbilical Cord Tissue
- Umbilical Cord Blood
- Wharton's Jelly

A lot of the functions provided during fetal growth translate into patient benefits during regenerative procedures such as preventing infection and promoting tissue growth of all types such as collagen, tendon, lung, kidney, heart, etc.

- High numbers of Stem Cells
- Concentrations of Growth Factors
- High numbers of Cytokines
- Exosomes, microsomes, secretomes, mRNA.

The best analogy applicable is that the products of conception produce regenerative materials that contain a full "orchestra" of components to help patients!

Note: You may see competitor marketing materials that state "products of conception" do not contain live cells. This is true if the biologics are radiated during processing or contain too much

preservative. But it is not true if the materials have been processed without significant radiation or preservatives. This is why R3 is VERY careful about the labs we work with so patients receive products that are safe and of the highest quality to produce the best outcomes possible!

How are they acquired?

The umbilical cord tissues are obtained from healthy, consenting donors who are undergoing a scheduled c-section. The FDA strictly regulates the process of how these tissues are acquired, tested, processed and stored to ensure the highest level of patient safety.

During a normal, scheduled c-section, the products of conception are normally discarded. This includes the amniotic fluid, placenta, umbilical cord and accompanying materials. In this case, the products of conception are donated by the mother, with the baby being fine. The materials are placed in a sterile container and taken to the nearby FDA registered laboratory right away.

Are there any ethical issues with these biologics?

No there are not. None of the biologic materials come from "aborted fetuses". During the biologic acquisition, the babies are fine and the material donated and used is normally discarded as "medical waste".

In addition, no embryonic stem cells are used in the US anymore legally. There is no fetal tissue, no cloning and all donors are consented and screened according to FDA regulations.

So what this means is there are NO ethical concerns with the materials being used from the products of conception.

R3 Stem Cell offers regenerative therapies for a lot of conditions INTERNATIONALLY. Over 70 of them, in fact. These include chronic conditions for orthopedics, autoimmune issues, neurologic conditions, urology, autism, GI, diabetes, and organ failure (kidney, liver, heart, lungs). Free consultations are offered to see if a person is a candidate.

How does the R3 Stem Cell Injection Program Work?

After close to a decade of offering regenerative therapies worldwide, R3 has seen many clinics offering suboptimal regenerative procedures. The problems we have seen include:

- Poor Quality Biologics leading to poor results.
- Overpriced Injections
- Inexperienced providers
- Inaccurate injections.
- Very poor customer service.

Patients deserve a better experience! So the R3 Stem Cell Injection Program™ solved these problems by combining the first rate quality of our providers with the best biologics available.

R3's Centers worldwide have performed over 23,000 procedures to date. By leveraging its considerable buying power, R3 has been able to transfer considerable savings to patients.

In the R3 Stem Cell Injection Program™, patients receive a joint injection with 10 million stem cells for only $2,995. If a patient needs two joint injections, the price is only $4,995 with 10 million stem cells each. This is HALF of what most clinics nationwide charge for an inferior stem cell biologic!

Any painful joint can be injected as part of the program, such as the knee, hip, shoulder, ankle, elbow, back, neck, etc.

Not only does R3 use the best stem cell biologic available anywhere, the providers are highly skilled in using image guidance to ensure accuracy (with ultrasound or fluoroscopy). Up to 40% of joint injections are inaccurately placed by providers who do not use image guidance. So it's important!

As part of the R3 Stem Cell Injection Program™, patients have access to a dedicated Patient Concierge Representative (PCR). The PCR will answer questions and be extremely responsive to each patient's unique needs.

What Kind of Outcome Can I Expect With Each Injection?

R3's Centers worldwide have been offering stem cell injections for over a decade. Year over year, patient satisfaction has remained 85% at the one year point. When patients are asked, 85 out of 100 say they would have the procedure done again, or recommend it to friends and family.

Are There Any Discounts Available?

Due to the fact that the R3 Stem Cell Injection Program™ is already the most cost effective for joint procedures nationwide, no coupon codes are accepted. However, if a patient desires a repeat procedure we do offer a discount of $300.

Does insurance cover regenerative procedures?

Currently insurance does not cover regenerative procedures. There are several reasons for this and it is not because they "don't' work." Over the next few years, insurance coverage will start to occur as with all new technology, it just takes time!

What is the difference between these products and PRP Therapy?

PRP stands for platelet rich plasma and involves a simple blood draw from the patient. This blood is placed into a kit and spun quickly for 10-15 minutes in a centrifuge machine. What this does is separate the blood into several layers.

The middle layer is termed the "buffy coat" and contains concentrated platelets, white blood cells, and 8-12 growth factors. There are minimal stem cells in PRP, if any, so it is a very helpful regenerative biologic but NOT a stem cell therapy.

Umbilical cord tissue contains over 100 growth factors along with an extensive amount of cytokines, mRNA, exosomes, secretomes and additional biologic elements including stem cells. The amount of these elements varies depending on the lab that processes the material and depends on the amount of preservative, radiation, etc.

What is Power Plasma® Therapy?

R3 Stem Cell developed Power Plasma® as a way to activate stem cells in a person's blood. Normally, the PRP procedure concentrates growth factors along with platelets. But it doesn't activate stem cells in the blood!

The development of Power Plasma® has changed this. During the person's blood preparation, several wavelengths of light are transmitted through the plasma. This turns the blood's inactive stem cells into activated mesenchymal stem cells!

The addition of Power Plasma® at R3 Stem Cell's Centers benefits patients with an autologous procedure that turns one's own blood into a stem cell biologic. Whether used by itself, or in conjunction with umbilical cord stem cells, the results have been extremely impressive.

Are all umbilical cord products the same?

The short answer is no. While the actual biologic material from the donor is extremely similar, the processing can vary. All donors are heavily screened for diseases according to FDA regulations.

The main differences occur when the material is processed at the FDA Registered lab. While the FDA

is strict about how the materials are processed, there are some significant differences that can take place. For instance, some labs will radiate the biologic which essentially kills all the cells. Others will use a LOT of preservative which will kill all the cells instead of preserving them.

Suffice it to say that not all of these products are the same once processing is complete. So it is critical to receive treatment from an expert provider who is using a quality product. R3 Stem Cell has vetted the materials used extensively, which is just one reason why over 23,000 patients have received procedures at our Centers of Excellence over the past 10 years.

Why are regenerative procedures with these products so popular?

1. No harvest

- Bone marrow derived stem cell procedures require an aspiration from the patient's iliac crest (pelvis). Studies have shown a 29% incidence of chronic pain from the aspiration procedure along with potential for additional complications such as nerve/vessel injury, bowel perforation, fracture.
- In addition, as one ages the quantity and quality of stem cells obtainable from the bone marrow drops exponentially. It is not permitted in the US to culture one's bone marrow to amplify cell counts.

  At birth, 1 in 10,000 cells in one's bone marrow is a stem cell. This drops to 1 in 2 million by age 70. No matter how much one's bone marrow is concentrated, the cell counts are a problem.
- Adipose derived stem cell procedures require a mini-liposuction from the abdomen or buttock. The first problem with this is that plenty of patients simply do NOT have significant adipose tissue to spare
- The second problem with adipose procedures is interesting. Adipose tissue contains VERY HIGH numbers of stem cells. However, once the adipose is processed and moved to your area of treatment, over 80% of them die within two days. So they do not even get a chance to help!

2. Safe

- Studies have shown that bone marrow aspiration procedures have a high incidence of complications. Twenty nine percent of patients end up with chronic pain, which is a real problem when the objective is to actually rid patients of pain. Can you imagine that conversation, "Hey doc my knee feels awesome but what did YOU DO TO MY HIP!"
- Additional complications reported from bone marrow aspirations include infection, bleeding, nerve/vessel injury, bowel perforation, pelvic fracture.
- The mini-liposuction procedure does not have a high incidence of complications. However, as mentioned, most of the stem cells from that procedure die within 48 hours. Real bummer.
- On the other hand, all of these issues are avoided by not having to use a harvesting procedure.
- In addition, the umbilical cord tissue does not have HLA factors in sufficient quantity to cause a rejection in the recipient. Also known as MHC factors, these are the cell components that would lead to a Graft versus Host reaction if they were present in sufficient concentrations. The umbilical cord tissue is immunologically privileged as a result.
- The umbilical cord tissue/blood material could cause a rejection reaction if not treated properly. As an example, if one receives a blood transfusion from an incompatible donor the blood will be rejected with a potentially very serious reaction. To prevent that from happening, all red blood cells are removed from the umbilical cord blood. This removes the HLA factors and prevents the Graft versus Host reaction.

3. Consistent

Umbilical materials are very consistent. When the processing occurs at first rate labs certified by the FDA, the amount of cells is very high and extremely consistent. Unlike adipose and bone marrow, where the cell counts drop big time with aging and the quality of those cells diminishes as well.

- One thing that should be noted is the MYTH that there are no live cells in processed umbilical cord tissue . The FDA does not require the material to be radiated, and if a low amount of preservative is used the cells survive the processing. In addition, cryopreservation does not kill cells. (If it did, egg donor programs would go out of business.) So labs that don't radiate and use minimal preservative get plenty of live cells!

4**. Excellent outcomes**

- There are several studies looking at the effectiveness of umbilical tissue to treat musculoskeletal conditions. Pubmed.com is a great source of data and we have listed some excellent references at the bottom of this Guide.

- When you look at the very high Benefit profile and the very low Risk profile of these materials, in medicine that is called a HOME RUN!

Will stem cell procedures with amniotic/umbilical tissue heal or cure my condition?

It is improper for ANYONE to provide an unrealistic expectation of what these treatments can do.

Using the words "heal" or "cure" is inappropriate and propagates distrust among patients. No study shows 100% effectiveness, and more likely than not patients will see improvement and relief, but NOT a cure. We get asked all the time if our affiliated providers offer a "Guarantee", and the answer is no because medical treatments are never fool proof.

More reasonable words to use are facilitate, mitigate, or improve. The biologic elements in these materials work together to repair damaged tissue and also facilitate one's own body to assist in the process as well. Just how much improvement achieved will vary since people are UNIQUE AND DIFFERENT! In the past ten years, R3's Centers have performed over 23,000 stem cell procedures worldwide. Amazingly, year over year our patient satisfaction has been 85%.

How exactly do these materials work?

The father of modern stem cell therapy is Dr. Arnold Caplan, a researcher at Case Western Reserve University. His extensive work has shown that the regenerative materials used are predominantly acting as signals to one's body, telling the body to "get to work" and repair itself.

He actually recommends changing the abbreviation of MSC's, which normally stands for Mesenchymal Stem Cells, to Medicinal Signaling Cells. The goal is to "more accurately reflect the fact that these cells home in on sites of injury or disease and secrete bioactive factors that are immunomodulatory and trophic (regenerative) meaning that these cells make therapeutic drugs in situ that are medicinal."

He continues, "It is, indeed, the patient's own site-specific and tissue-specific resident stem cells that construct the new tissue as stimulated by the bioactive factors secreted by the exogenously supplied MSCs."

What are the Risks of Amniotic and Umbilical Tissue?

Overall, the risk profile of these materials is exceptionally low. They do not contain steroid, so there is no worry of adrenal gland or blood sugar issues.

Standard procedure risks exist that include infection, bleeding, nerve injury, allergic reaction. As an example, many providers will use contrast to ensure accurate needle placement. Once in a blue moon, this contrast material may spark an allergic reaction.

Additional risks may include disease transmission or allergic reaction to the biologic, but this would be unusual. The FDA has very strict regulations on how the tissue is tested for many diseases. After thousands of cases, R3's Centers have never seen a disease transmission but it needs to be mentioned.

Typical side effects seen, if any, might be a transient headache, nausea or low grade fever for 12-24 hours.

The biggest risk actually with any regenerative procedure, whether performed with bone marrow, adipose, amniotic or umbilical tissue, is that it may not work. While that is a sub-optimal outcome obviously, no bridge has been burned. With a joint replacement, there is no going back. Same with an organ transplant!

Are these procedures FDA Approved?

No they are not. The FDA considers stem cell therapy experimental for injections, and formal approval has not occurred yet. The FDA does not regulate the practice of medicine, and the decision to undergo a regenerative procedure is between you and the doctor.

Where can I find a reputable provider for these procedures?

R3 Stem Cell has Centers of Excellence globally where you can obtain regenerative procedures. You simply will not be able to find a more cost effective program that offers such a high quality biologic with experienced providers starting at only $2,995.

R3 has won many Awards over the past few years, including the USA's Leading Regenerative Therapy Provider in 2022 and 2023. As a trusted provider with an impeccable safety record, we routinely change lives with our cutting edge stem cell procedures.

Visit us at **avoidsurgery.net** and call us at **(844) GET-STEM** to set up your free phone consultation.

R3 Stem Cell… Changing Lives Every Day!

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About R3 Stem Cell

David Greene, MD, PhD, MBA
Founder/CEO

R3 Stem Cell offers treatments that bring patients hope and options. Hope that surgery can be avoided, and tissue injury can be repaired with patients being able to get back to desired activities.

Founder and CEO David Greene, MD, PhD, MBA writes extensively on regenerative medicine and gives many seminars worldwide on a regular basis. With over forty Centers of Excellence globally, R3 is at the forefront of regenerative therapies.

R3's Centers have successfully performed over 23,000 regenerative procedures to date. Call today for your free consultation **(844) GET-STEM!**