

# Umbilical Cord “Stem Cell” Infusion Side Effects: What you need to know...

(reprint)

This weekend I was sent the transcript of a scary back and forth between a knowledgeable stem cell expert and a layperson who wanted to open a stem cell therapy clinic using IV infusions of umbilical cord blood. It got me thinking that a blog was needed on stem cell treatment side effects with a focus on the type of IV umbilical cord “stem cell” treatments being offered at alternative medicine clinics all over the U.S. If you or a loved one have had one of these treatments or plan on getting one, please read this article.

## Umbilical Cord Blood or Tissue

Umbilical cord blood or tissue is taken from the umbilical cord of a live birth. The umbilical cord, placenta, and other birth tissues are normally considered medical waste in a hospital, but they can contain live cells if they are processed immediately and these cells are placed in culture (1). However, that’s not what clinics all across the country offering umbilical cord blood stem cell treatments are using; they instead are using dead (non-viable) umbilical cord products that contain no live stem cells, but may or may not have some other live cells. It’s the cells in these products that pose the biggest potential for stem cell treatment side effects. Let me explain.

## Umbilical Cord Stem Cell Treatments

The type of stem cell treatment side effects we’re discussing here are those associated with clinics that offer to treat everything from neurologic diseases to aging to knee arthritis by offering an infusion of umbilical cord stem cells. The clinic may or may not also offer a local injection of cells, for example, in the knee. The rationale that’s given for using these “stem cells” is that these products contain millions of live and very vital young stem cells which will repair damaged tissue in the patient’s body or rejuvenate it in some way. These therapies are also offered to reduce an abnormal immune response in the patient’s body.

## Urban Myth 1: Umbilical Cord “Stem Cell” Treatments Contain Million of Live and Functional Stem Cells

The classic sales pitch of these clinics is that your stem cells are too old and as a result, you need donor stem cells from a baby’s birth tissues that contain millions of live and vibrant stem cells capable of fixing your body. The problem is that this claim has been shown in multiple studies to be fiction (2-4). Why?

One of the things that these clinics never tell patients and they may also not understand themselves, is that the research showing that umbilical cord tissues contain live stem cells all take fresh tissues and bring them to a lab for immediate processing. This includes isolating and then culturing these cells to get more. This is night and day different from what you’re being offered in these clinics. That product suffers from many issues such as having these birth tissues sit in a fridge in the hospital, transporting those tissues to a processing lab, processing those tissues, freezing the cells, shipping those cells, and then shock thawing all of this in the doctor’s hand at the bedside. Hence, when the products that patients actually get injected with are tested, they usually contain all dead cells with no living or functional stem cells.

## Urban Myth 2: The Umbilical Cord Products Used in these Clinics are “FDA Approved”

We’re all used to the idea that drugs are “FDA Approved” which means that the agency has spent years evaluating the safety and efficacy of the product through many clinical trials. However, umbilical cord tissue products aren’t “FDA Approved” but instead the products are registered without any FDA review (5). While this means that the agency can come and inspect where the

tissues are processed, it doesn't warrant anything about the tissues to the public. That means that these birth tissues are "buyer beware."

A concrete example of the fact that these birth tissues aren't "FDA Approved" just occurred. In this case, dozens of people across the country became seriously ill when they received a Liveyon umbilical cord product. Many ended up in the ICU because the product was contaminated with bacteria. All the FDA and CDC could do was to issue a warning because this product was registered and not approved (11).

### Urban Myth 3: Umbilical Cord "Stem Cell" Treatments Aren't Recognized as Foreign Tissue

The sales pitch for countless chiropractic, alternative, and integrated health clinics is that they can infuse these umbilical cord "stem cells" from another person because the cells won't be detected as foreign by the patient's body. The medical term for this is that the cells are "immune privileged". Meaning that they won't provoke an immune response as would normally be seen with any foreign tissue. Regrettably, this is also medical fiction. Let me explain.

All live cells treatments like umbilical cord blood or other tissues (like Wharton's Jelly) would need to be matched to the patient, similar to a blood transfusion. The medical term for this is called "HLA Matching" (6). For example, in real-world medical settings like pediatric cancer care where umbilical cord blood is used, doctors perform tests on individual lots of umbilical cord blood to find out the kinds markers on these cells and how similar to or different they are from the planned patient. The closer the match, the less the chance there is of rejection (7).

One of the problems with medical clinics using umbilical cord "stem cell" injections is that while the stem cells are dead, they can contain live cells (or dead) that still have these foreign markers. Hence, the more "mismatched" these markers are to the patient, the greater the chance of stem cell treatment side effects. What happens when there is a mismatch? Let's dig in.

### Mismatched Cells and GVHD

The biggest problem with existing umbilical cord "stem cell" treatments is that no attempt is made to match the markers on the cells delivered to the patient with the patient's cells.

Hence, the more mismatched the pairing, the higher the risk is for serious stem cell treatment side effects. One of those is known as Graft vs. Host disease or GVHD for short (8).



The earliest symptom of GVHD that patients often notice is a skin rash or mouth sores. In fact, the severity of GVHD can be determined by the extent of the skin rash:

- **Stage 1** (mild GVHD): a skin rash over less than 1/4 of the body
- **Stage 2** (moderate GVHD): a skin rash over a more than 1/4 of the body plus mild liver, stomach, and/or intestinal disorders
- **Stage 3** (severe GVHD): more diffuse redness of the skin (like a severe sunburn), and moderate liver, stomach and/or intestinal problems.
- **Stage 4** (life-threatening GVHD): blistering and/or peeling skin, and severe liver, stomach, and/or intestinal problems.

### How Long Does it Take for GVHD to Start?

Most of the time, you would know you have this type of stem cell treatment side effect right after a treatment. However, GVHD can also present anywhere from three months to more than a full year following an infusion of umbilical cord "stem cells" (9). This type of chronic GVHD can range from mild to severe and as a result, may be long-lasting and debilitating. For example, chronic GVHD can cause skin problems and hair loss or can also damage organs like the lungs and liver.

### Can GVHD be Treated?

First, the best treatment for GVHD and stem cell treatment side effects is to avoid getting a mismatched umbilical cord treatment in the first place. Why? Even in highly matched patients, the decision to use someone else's cells is never taken lightly as patients can still develop side effects. Hence, using these cells to treat incurable cancer is one thing, but using them to treat aging or your bum knee presents an unacceptably high risk.

If you have been a victim of an umbilical cord "stem cell" treatment and do develop GVHD, what are your treatment options? The biggest single therapy is usually

high dose steroids to suppress the inflammatory response (10), the problem is that this is a side effect-laden treatment. Other options include immunosuppressive drugs like the ones used for patients that need an organ transplant, but these drugs also have major side effects. Hence, as I said above, the only elegant way to treat GVHD is not to get a mismatched cell therapy in the first place.

## What Recourse Do You Have if You Develop Stem Cell Treatment Side Effects from an Umbilical Cord Therapy?

First, you need to get treated ASAP. Second, you need to report your case to the FDA, which has a program called MedWatch for products that cause serious side effects. As already revealed, while these umbilical cord products are not FDA approved, they are only registered, they still fall under the FDA's jurisdiction. Hence, here's a link to the FDA MedWatch website. Third, you may have a malpractice case against the doctor, nurse practitioner, physician's assistant, or naturopath that performed the infusion. Why? Every medical school program in the developed world would include education on how placing mismatched cells in a patient's body may cause GVHD. Hence, infusing cells that have not been matched to treat a non-life threatening illness is likely malpractice.

The upshot? It's amazing that we have physicians who should know better than to offer patients mismatched umbilical cord "stem cell" treatments and tell them that there are no side effects. In the meantime, do your homework to protect yourself. If you have been treated by a clinic and develop GVHD symptoms, please report these as soon as possible to the FDA's MedWatch system.

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<https://regenexx.com/blog/stem-cell-treatment-side-effects-iv-umbilical-cord-risks/>