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Key elements found inside every dose of our products

Each has therapeutic properties that work in-sync with a patient's immune system and innate physiology to aid in the regeneration of tissue, bone, nerves, cartilage and skin.

IT'S ALL IN THERE

Therapeutic Components of Utah Cord Bank's Post-Natal Derived Stem Cell Products

"Before you give me that injection, what's exactly in those stem cells?"

01-Multipotent Mesenchymal Stem Cells (MSCs)

Undifferentiated immunologically privileged stem cells capable of developing into different cell types – skin, bone, nerves, cartilage, muscle, tissue, and fat for example, which do not elicit an inflammatory immune response or graft-host reaction.

02-Hematopoietic Stem Cells (HSCs)

Multipotent, self-renewing stem cells that give rise to all types of blood cells.

03-Growth Factors/Growth Proteins

These push developing cells into becoming the various types of cells required in the regeneration of damaged organs and tissues. There are more than 70 growth factors found in umbilical cord blood, tissue, and amniotic membrane, including platelet-derived growth factor, vascular endothelial growth factor, epithelial cell growth factor and nerve growth factor.

04-Immune Cells/(TIMP)-2 Regulatory T Cells

A subpopulation of T cells which modulate the immune system, maintain tolerance to self-antigens, and prevent autoimmune disorders.

05-Hyaluronic Acid (HA)

HA is an anionic, non-sulfated glycosaminoglycan distributed widely throughout connective, epithelial, and neural tissues.

06-Micro RNA/miRNA

A cellular RNA fragment that prevents the production of a particular protein by binding to and destroying the messenger RNA that would have produced the protein.

07-Keratinocytes

Cells that protect the human body from pathogenic bacteria, parasites, fungi, viruses, heat, UV radiation, and water loss.

08-Cytokines

Small proteins that are important in cell signaling and regulate and mediate immunity, inflammation, and hematopoiesis.

09-Fibroblast Growth Factor (FGF)

Multifunctional proteins that regulate cell proliferation and gene expression as well as angiogenesis, keratinocyte organization, and wound healing processes.

10-Extracellular Matrix (ECM)

ECM provides structural and biochemical support/scaffolding to surrounding cells. ECM is composed mostly of protein and includes collagen, elastin, reticulin, glycoproteins, proteoglycans, fibronectin, laminins, and osteopontin.

11-Cord Blood Serum

Cord blood serum facilitates the preservation of stem cells and other key elements and enhances viability post-thaw. Serum is rich with growth factors, neurotropic factors, vitamin A, fibronectin, prealbumin, and lipids.

12-Collagen Scaffolding

The most abundant protein in the human body, collagen gives skin strength and elasticity. Involved in wound healing by providing structure for living elements to grow from.

13-Cryopreservative

To create a flowable allograft for transplantation the post-natal derived stem cells are suspended in Dimethyl sulfoxide (DMSO) or glycerol. DMSO has been shown in studies to help rebuild and repair cells, increase oxygen supply in the blood and decrease muscle and joint pain. Important for preserving cell membranes during freezing and thawing.

Utah Cord Bank (UCB) produces the world's finest FDA compliant, minimally manipulated stem cell allografts to assist the healing and regeneration process. UCB uses state of the art technology and a proprietary method to consistently yield millions of cells in multiple sized vials after thawing, suspended in a cytokine and growth factor rich medium. Currently known to be the only product on the market to contain this complete spectrum of therapeutic factors including viable cells, exosomes, growth factors, and much more.

COMPONENTS	Stemii [®]	StemVive [®]	StemCB [™]	BONE MARROW PRP	BLOOD DERIVED PRP	ADIPOSE PRP	OTHER CBO PRODUCTS
GROWTH FACTORS	★	★	★	★	★	★	★
CYTOKINES	★	★	★	★	★	★	★
PLATELET RICH PLASMA	★	★	★	★	★	★	—
HEMATOPOIETIC STEM CELLS	★	★	★	★	—	—	★
FIBRIN	★	★	★	—	—	—	—
ENDOTHELIAL CELLS	★	★	★	—	—	—	—
miRNA	★	★	—	—	—	—	—
EXOSOMES	★	★	—	—	—	—	—
MESENCHYMAL STEM CELLS	★	★	—	★	—	★	—
COLLAGEN SCAFFOLDING	★	—	—	—	—	—	—
HYALURONIC ACID	★	—	—	—	—	—	—
FIBROBLASTS	★	—	—	—	—	—	—
ECM	★	—	—	—	—	—	—

Advantages of Post-Natal Allogenic Stem Cell Therapies

- **Higher quality** and quantity of stem cells.
- **More potent** stem cells capable of more divisions, more neuroprotective, more anti-inflammatory.
- **Immune privileged** - No HLA matching necessary.
- **Undifferentiated** - Express few surface markers.
- **Saves time**
- **Longer telomeres** - Young cells have longer telomeres which means far greater number of divisions and daughter cells as well as fewer DNA mutations.
- **Consistent dosing** - Rigorous normalization between product lots means reliable **clinical protocols** with **predictable results**.