Stem Cells

**self renewal, ability to differentiate, innate intelligence**

Every cell in our bodies can trace its origin to the ultimate stem cell – a fertilized egg.

* Each cell division moves the cells down a path to their final cell type
* cells make commitments that are typically irreversible.
* our body requires stem cells for tissue regeneration

Unique advantage of birth tissue stem cells:

* Cells are young, more therapeutically active.
* Secret more growth factors, with higher speed of differentiation, longer telomeres (more protected chromosomes), more future cell generations, greater plasticity (i.e. able to differentiate into a more diverse range of cell types).
* No matching necessary (these young cells have little surface markers and are considered immune-privileged)
* convenient, consistent dosage, allows for higher and repeated dosages
* excellent safety record
* robust angiogenic potential
* comparative studies have demonstrated that stem cell derived rom birth tissue are superior in many way to stem cells derived from an adult's bone marrow or fat, that birth tissue-derived stem cells are more potent, senesce (get old) at slower rate, secrete more anti-inflammatory factors, and are more neuro-protective.

These tissue transplant products are not classified as drugs by the FDA as long as they are “minimally manipulated,” and must be used for a homologous function.

Umbilical cord tissue

* dense source of MSCs
* MSCs (mesenchymal stem cells) are regulatory cells, with robust clinical research demonstrating benefit, has diverse differentiation potential, ideal for inflammatory and degenerative diseases, and can activate local stem cells.
* able to home in to areas of inflammation & injury
* has anti-microbial & anti-apoptotic (preventing programmed cell death)
* high anti-inflammatory, immunomodulatory and revascularization potentials

*Currently stem cells have been shown to have clinical benefits in the following conditions:*

*Osteoarthritis  
Autoimmune Disorders (122 known, including Rheumatoid Arthritis, Lupus, Crohn’s Disease, Hashimoto’s Thyroiditis)  
Neurological Diseases (Parkinson’s, Alzheimers, Multiple Sclerosis, ALS, etc.)  
Type II Diabetes  
Heart Diseases  
Erectile Dysfunction  
Dermatological Disorders  
Lung Diseases (COPD, asthma, etc.)  
Athletic Injuries  
Autism  
Pain Management  
Spinal Cord Injuries  
Wound Care, Limb Salvage  
Anti-Aging (such as skin, hair, energy improvement, etc.)*

*Advantages of Chara cell products*

*the most complete therapeutic profile of similar products on the market (extracted from both umbilical cord tissue and blood)*

*3rd party-tested, proven to contain 20% MSC's, compared to most competitors' 1%*

*the only product that has been proven of MSC presence on definitive CFU assay*

*high cell potency, quality & concentration*

*delicate & proprietary extraction process leading to maximal preservation of cytokines/growth factors & extracellular matrix*

*well-established safety record*

*fully FDA compliant, produced at US-based FDA-inspected laboratory*