▶ Diseases Treated with Stem Cells

Today, there are many diseases that can be treated with umbilical cord blood stem cells. Cord blood stem cells have been used for over 20 years to treat nearly 80 life-threatening diseases and disorders. As research continues to evolve in stem cell therapies, the list will continue to increase and many more treatments and cures will be developed from this source.

Below is a list of treatable diseases that have been successfully treated utilizing umbilical cord blood stem cells:

Cancers

- Acute lymphoblastic leukemia (ALL)
 Acute myeloid leukemia (AML)
- · Burkitt's lymphoma
- Chronic myeloid leukemia (CML)
- · Juvenile myelomonocytic leukemia (IMML)
- Non-Hodgkin's lymphoma

Bone Marrow Failure

 Cvclic neutropenia Diamond-Blackfan anemia

· Evan's syndrome Fanconi anemia

· Red cell aplasia

· Glanzmann's disease · Juvenile dermatomyositis

Kostmann's syndrome

Schwachman syndrome

Syndromes

- · Hodgkin's lymphoma Lymphomatoid granulomatosis
- Myelodysplastic syndrome (MDS)
- · Chronic myelomonocytic leukemia

Amegakaryocytic thrombocytopenia

Autoimmune neutropenia (severe)

- Maroteaux-Lamy syndrome
 - - type A and B
- · Congenital dyserythropoietic anemia

 - Lesch-Nyhan diseasé

- · Ataxia telangiectasia
- · Chronic granulomatous disease

- · Severe aplastic anemia · Congenital sideroblastic anemia
- · Mucolipidosis, Type II · Thrombocytopenia with absent
- radius (TAR syndrome)
- Dyskerátosis congenitá

Blood Disorders/

Hemoglobinopathies

- Sickle-cell anemia (hemoglobin SS)
- HbSC disease Sickle b°Thalassemia
- a-thalassemia major (hydrops fetalis)
- b-thalassemia major (Cooley's
- b-thalassemia intermedia
- · E-b° thalassemia
- F-b+ thalassemia

Metabolic Disorders

- Adrenoleukodystrophy
- · Gaucher's disease (infantile) · Metachromatic leukodystrophy
- · Krabbe disease (globoid cell
- leukodystrophy) Gunther disease
- Hermansky-Pudlak syndrome
- Hurler syndrome
- · Hurler-Scheie syndrome
- Hunter syndrome
- · Sanfilippo syndrome
- · Mucolipidosis Type II, III
- · Alpha mannosidosis
- Niemann Pick Syndrome,
- Sandhoff Syndrome
- Tay-Sachs Disease
- Batten disease (inherited neuronal)
- ceroid lipofuscinosis

Immunodeficiencies

- DiGeorge syndrome
- IKK gamma deficiency
- Immune dysregulation
- polyendocrineopathy X-linked
- Myelokathexis
- X-linked immunodeficiency
- · Severe combined immunodeficiency
- · Adenosine deaminase deficiency
- · Wiskott-Aldrich syndrome
- · X-linked agammaglobulinemia
- X-linked lymphoproliferative disease
- · Omenn's syndrome · Reticular dysplasia
- · Thymic dysplasia
- · Leukocyte adhesion deficiency

Other

- · Langerhans cell histiocytosis Hemophagocytic lymphohistiocytosis

- **Emerging Treatments**
- Cerebral Palsy



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► The GeneCell Advantage

GeneCell International is the only bank that offers an array of stem cell services at the same state-of-the-art facility with a higher acceptance criteria than most other banks. The services include Cord Blood, Cord Tissue, Dental Pulp and Adipose Tissue Stem Cell Banking Services.

- · Highly Experienced Laboratory Technicians
- · High Standards in it's Processing and Cryogenic Technology
- · Stem cells stored under proper temperatures at all times
- · Cryogenic storage devices are connected to alarm systems with high-tech video monitoring devices
- Monitoring systems with backup generators
- · Heparin Free Processed Units

Registrations, Accreditations and **Memberships**









Supported Organizations:





▶ The way it works:

- 1. The first step is to enroll with us online, by phone or fax. Once the contract is received, GeneCell International will promptly provide you with your collection kit.
- 2. Once you receive your collection kit, please inform your physician and keep it at room temperature with your birthing materials. At the delivery room, please provide your collection kit to the delivering physician. After the birth of your child and the umbilical cord has been cut, your physician will commence the collection of the cord blood.
- 3. After the collection is complete, please contact us at 1-888-994-3632 to arrange for pickup transportation from your hospital room to our facilities for processing and cryogenic storage of your newborn's umbilical cord blood unit.
- 4. After the unit is processed, you will receive a laboratory Certificate of your baby's cord blood unit in approximately 30 days.

► Affordable Payment Plans

GeneCell offers several payment plans to help ensure every family are able to take advantage of these cord blood banking opportunities. Save your baby's cord blood for only **\$62.29/month** for 24 months.

- Storage Plan Available for 1, 5, 10 and 20 years!
- Extended plans with low monthly payments
- Short term, interest free payment plan options of 6,12,18 and 24 months

Additional pricing information is available at www.genecell.com. To create a plan that best works for you, please call 1-888-994-3632 to speak with one of our customer services representative.

The Gift of Life CORD BLOOD STEM CELLS



Processing • Storage • Research STEM CELL LABORATORY

www.genecell.com



► What are Stem Cells?

The blood that remains in the umbilical cord after your baby is born is a rich source of stem cells. These cells can be collected after the birth of your child and may be a life-saving resource

Stem cells are the body's "master cells". They have the ability to divide (self-replicate) and the potential to develop into various different cell types that make up the human body, such as organ tissue, blood and the immune system. Stem cells also serve as a form of internal repair system, dividing and differentiating to replace damaged or dead cells and tissues in

Stem cells found in cord blood

Stem cells in cord blood are currently used to treat nearly 80 life-threatening diseases. These diseases include certain cancers. bone marrow failure syndromes, immunodeficiencies, blood disorders, and metabolic disorders. With developments in the fledgling field of regenerative medicine, that number will continue to grow rapidly as there are numerous on-going clinical trials using cord blood stem cells to treat a variety of different conditions.

▶ Why Bank your baby's stem cells?

Since 1988, the use of stem cells from umbilical cord blood has increased year after year. Now thousands of those transplants are being carried out throughout the world. However, one of the greatest concerns the transplant field faces is the lack of donors who are a genetic match to the recipient.

Therefore, preserving your newborn baby's umbilical cord blood with GeneCell International will ensure the potential opportunity for your baby and will allow your family to have access to a cell therapy-product that could treat these lifethreatening conditions, including several types of cancers, genetic diseases, blood disorders and immune system deficiencies.

▶ Benefits of Cord Blood Banking

- Cord blood collection is easy and poses no harm to the newborn or the mother
- · Cord blood is collected in advance, prior to the development of any diseases
- · Continued research in cord blood stem cells is demonstrating potential treatment to diseases that were once untreatable, such as brain injuries and juvenile
- · The Cord Blood is cryogenically stored at -321°F, ready for use whenever the need arises. Cryogenically storing your child's cord blood stem cells provides peace of mind knowing you have a potential lifesaving opportunity for you and your family in the future should the need arise
- · Cord blood transplants do not require an exact genetic match like bone marrow
- Cord blood transplants are associated with a lower incidence of GVHD (Graft-versus-host disease). This is due to the fact that immune cells, T-cells, are not mature in cord blood. Hence, they are less likely to attack the recipient if that recipient is different than the donor
- · The stem cells from the umbilical cord blood can be used for the baby and potentially for siblings and other family

► Types of Stem Cell Transplants



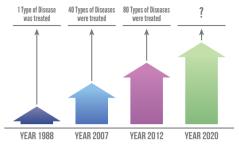
► Cord Blood Matching Percentages

In cord blood, finding a genetic match from a public stem cell bank for individuals of any race, especially those that come from certain mixed ethnicities, such as African Americans, Asians, Hispanics and Native Americans can be quite challenging or next to impossible; therefore, having your own stem cells stored for future use has become increasingly important.

> Match for Donor/Child = 100% Match for Parent = 50% Match for Sibling = 25%

Call us toll-free 1-888-994-3632 or visit www.genecell.com

What have umbilical cord blood stem cells done so far? What will the results be in the future?



Umbilical cord blood stem cells use has considerably increased in the past 20 years, and currently, physicians are highly recommending it to their patients as a potential future therapy.

▶ What is Cord Tissue?

Cord Tissue is a segment of the umbilical cord that is a gelatinous substance surrounding the blood vessels in the umbilical cord and functions as the primary connective tissue of the umbilical cord; it is occasionally referred to as Wharton's Jelly. This segment contains a regenerative type of stem cell called Mesenchymal stem cell. These cells are an excellent candidate for "regenerative medicine" and tissue engineering

Mesenchymal stem cells have shown great promises in the potential treatment of diseases like:

- · Heart attack
- · Parkinson's disease
- · Alzheimer's disease
- Type I Diabetes
- Assist in bone and dental regeneration
- · Expedite wound healing
- Stroke
- · Liver Fibrosis
- Lung Cancer
- Sports Injuries (cartilage)

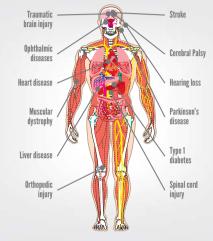
▶ What are the differences between Umbilical Cord Blood Stem Cells and Cord **Tissue Stem Cells?**

Umbilical cord blood is the blood that remains in the vein of the umbilical cord and placenta at the time of birth. This blood is rich in hematopoietic or blood derived stem cells and therefore can be used to treat certain types of diseases. The cord tissue or Wharton's jelly is the tissue surrounding the umbilical vein and vessels in the cord and is rich in mesenchymal stem cells. The mesenchymal stem cells have the capability to differentiate into bone cells, fat cells and cartilage which can be used for other applications that differ from the cord blood stem cells.

▶ Promise of Regenerative Medicine

Currently there is an exciting new field emerging in the realm of medicine referred to as Regenerative Medicine. This new science involves repairing or replacing tissues and organs that have been damaged by congenital defects, disease, trauma, or aging, and restoring their normal functions

Scientists are exploring regenerative medicine for a wide range of diseases



Regenerative Medicine will employ methods to restore the function of damaged tissue and organs. The four main fields in regenerative medicine are:

- · Artificial Organs and Medical Devices.
- Tissue engineering and biomaterials.
 Cellular Therapies.
- Clinical Translation

"Because of the impact cord blood therapies have in an individual's life. I believe cord blood preservation will become exceptionally common among expecting parents"

Fellow of the American College of Obstetrics and Gynecology.

ASK YOUR DOCTOR