

# Sidra Medicine Cord Blood Banking

The only cord blood bank sustaining  
life-saving stem cells in Qatar



سيدة للطب  
Sidra Medicine

The first cord blood transplant was performed in **1988** on a **five-year-old male** patient with Fanconi anemia. This rare but life-threatening genetic disease carries a higher-than-normal risk of cancer and congenital and **developmental disabilities.**

Thankfully unaffected by the disease, the patient's sister donated her cord blood for the life-saving transplant, making her **the world's first "savior sibling."**

The five-year-old was initially not expected to survive, but he is alive today and enjoys motorcycle riding and hiking with his dog.

## Cord Blood Banking – A crucial safeguard for your child's future

With our packages, you can protect your child or your loved ones.

Pricing starts from  
**17,000QR**

### How to Access Sidra Medicine's State-Of-The-Art GMP-Certified Cord Blood Banking Services

1. Consult your Sidra Medicine physician to understand the packages and their benefits.
2. Once you select a package, an agreement will be signed, and you will be invoiced based on your selection.
3. Sidra Medicine doctors and nurses will collect your cord blood when you deliver your baby.
4. Sidra Medicine GMP facility staff will harvest and store the stem cells.
5. If required, the stem cells will be prepared and shipped to your doctor at any time, anywhere in the world.

## The Better Way to Safeguard Your Child's Future

Instead of throwing away the cord blood, cord tissue, and placenta after giving birth, you can store them at Sidra Medicine in our GMP-certified facility, offering you the opportunity to secure your child's health prospectively.

**Cord blood banking, umbilical cord banking, placental tissue banking, amniotic tissue banking, and Mesenchymal Stem Cell (MSC) banking** use preservation to store the newborn's stem cells, which are rich in stem cells and have vast therapeutic utility.

The collection is painless, non-invasive, and risk-free for the mother and baby. It will never interfere with the delivery, whether vaginal or C-section. For instance, with cord blood, the umbilical cord is clamped and cut, and then the blood is collected in a sterile container.

The collected sample is retained in the hospital and transported to Sidra Medicine's Cord Blood Bank. Cryogenic freezing allows it to be stored securely for over 30 years.

## Quality You Can Trust 24/7

Aside from the convenience of on-demand and easily accessible samples stored in Qatar, Sidra Medicine promises quality stem cells. Our highly skilled doctors and nurses collect the umbilical cord blood, placental tissue, and amniotic tissue using high-quality using aseptic techniques. This means that the sample is medically clean and free of contamination.

The sample is processed in an automated, gold-standard cell harvesting device within a cleanroom of a Good Manufacturing Practice (GMP)-compliant facility. A cleanroom meets international cleanliness requirements according to the quantity and size of particles present. Meanwhile, a GMP-compliant facility meets industry standard specifications for production. Other than that, the facility is also certified by the British Standard Institution (BSI) ISO 9001:2015 (# FS689967), licensed by the Qatar Ministry of Public Health, adheres to ISO17025:2017, compliant with AABB and NetCord-FACT (the highest International Standards for Cord Blood Collection, Banking, and Release for Administration Facility) and licensed by ICCBBA standards.

Once harvested, the cells will be stored in 24/7 monitored, highly secured, and advanced cryogenic storage systems. The system uses ultra-cold -196°C temperatures that last for decades. Our highly experienced and well-trained team ensures only the best service and quality cells for you.

## Expect the Extraordinary from Stem Cells

### What makes stem cells unique in cord blood, cord tissue, amniotic tissue, and placental tissue?

Stem cells have several properties that make them unique.

1. They can differentiate into various types of cells.
2. They can regenerate new, healthy cells.
3. They can divide and regenerate throughout life.

The young age and lack of exposure to disease or environmental variables make these stem cells more pure than adult ones. Mesenchymal Stem Cells (MSCs) are found in all these samples. Meanwhile, cord blood also has stem cells called Hematopoietic Stem Cells (HSCs). Both stem cells have proven the promise of treating inherited disorders and several conditions. For example, HSCs used in transplants can restore the body's ability to make new blood cells, thereby treating blood cancers like leukemia and myeloma.



## Your First Choice for Your Child's Tomorrow

### Why should I consider preserving my baby's cord blood, cord tissue, amniotic tissue, and placenta?

- There is no risk of harm to the mother or the newborn
- Preserved stem cells can be crucial for your child or their sibling/s in the future.
- Instead of being discarded, these can be used to treat over 80 diseases, including some cancers.
- Instantly accessible in Qatar or anywhere in the world when needed.
- With the advancement of cell and gene therapy, new cord blood-based therapies are on the horizon. Therapies that are not available today will probably be available in the future. Banking today makes future treatments possible.

Blood-forming stem cells found in the cord blood can restore the immune system and bone marrow, potentially saving the lives of patients suffering from life-threatening blood disorders, including sickle cell disease, leukemia, or lymphoma. Patients with immune deficiency diseases, bone marrow failure, and inherited genetic problems can all be treated with infusions of these cells.

Stem cells found in the umbilical cord, amniotic, and placental tissues have been utilized as potent topical healing aids to treat burns, wounds, ulcers, and eye disorders. Collagen, fibronectin, and hyaluronic acid are potent healing compounds in amniotic placental tissue. The amniotic membrane contains growth factors, cytokines, and anti-inflammatory proteins that can facilitate cell-to-cell communication in disease defense and serve as an additional source of mesenchymal stem cells.

Hospitals worldwide use these samples for therapeutic purposes. The probability of their use has increased over the years. No one wishes to imagine that their child would be born with or develop a life-threatening disease or disorder. Banking assures you that someone in your family did it.

In addition to the likelihood of use, you can participate in emerging clinical trials for stem cell transplants and newly developed regenerative medicine treatments. This offers hope for the greater good by allowing you to look for treatments that may benefit future patients.



## Prioritise Your Future



**Cord Blood Banking**



**Umbilical Cord Tissue Banking**



**Amniotic Tissue Banking**



**Placental Tissue Banking**



**Mesenchymal Stem Cells Banking (Placenta)**



## What is cord blood?

The blood that nourishes your unborn child throughout pregnancy is called cord blood. It is one of three sources of stem cells that build the immune system and blood utilized in transplants. The blood that circulates throughout the body (referred to as ‘peripheral blood’) and bone marrow are the other two sources.

## What is umbilical cord tissue?

A portion of your baby’s umbilical cord removed after the cord blood is called umbilical cord tissue. It has billions of stem cells in the cord lining and surrounding the umbilical vessels.

## What is amniotic tissue?

The thin, elastic membrane that lines the inside of the placental sac is called amnion tissue. It is an essential component of the human placenta and contains growth factors, anti-inflammatory proteins, and many other therapeutic elements.

## What is placental tissue?

The placenta transfers nutrients and oxygen from the mother’s blood supply to the developing fetus via the umbilical cord. Additionally, it returns waste products — like carbon dioxide — to the mother, whose body can eliminate and process them.

In addition to creating hormones that aid your baby’s development, antibodies pass to your child through the placenta, protecting from infections for three months after birth. Like the umbilical cord, cord blood, and amniotic tissue, the placenta contains many stem cells.

## What are Mesenchymal Stem Cells (MSCs)?

Mesenchymal stem cells (MSCs) are stem cells that have biological properties supporting clinical use. They are known to be anti-inflammatory and immunomodulatory, meaning they can reduce inflammation and help the immune system function effectively. Globally, MSCs have regulatory approval for use in tissue defects and spine injuries, among many others.



## How will the banked samples be used?

Sidra Medicine is the only facility in Qatar that stores the sample within the country. The sample is easily accessible in Sidra Medicine or wherever you are on the globe.

Your doctor will receive the stem cells from our facility if they are required for treatment. Treatments can vary between your child using their sample or treating a family member using your child's sample. There are over 80 diseases that can be treated using the banked samples:

### Childhood Cancers - Solid Tumors

- Neuroblastoma
- Retinoblastoma
- Medulloblastoma

### Leukemias

- Acute Lymphoblastic Leukemia (ALL)
- Acute Myelogenous Leukemia (AML)
- Acute Biphentotypic Leukemia
- Acute Undifferentiated Leukemia

### Chronic Leukemia

- Chronic Myelogenous Leukemia (CML)
- Juvenile Chronic Myelogenous Leukemia (JCML)
- Juvenile Myelomonocytic Leukemia (JMML)
- Chronic Lymphocytic Leukemia (CLL)

### Myelodysplastic Syndromes (sometimes called pre-leukemia)

- Acute Lymphoblastic Leukemia (ALL)
- Acute Myelogenous Leukemia (AML)
- Acute Biphentotypic Leukemia
- Acute Undifferentiated Leukemia

### Lymphomas

- Hodgkin's Lymphoma
- Non-Hodgkin's Lymphoma (Burkitt's Lymphoma)

### Inherited Disorders Affecting The Immune System And Other Organs

- Cartilage-Hair Hypoplasia
- Gunther's Disease (Erythropoietic Porphyria)
- Hermansky-Pudlak Syndrome
- Pearson's Syndrome
- Shwachman-Diamond Syndrome
- Systemic Mastocytosis



## Other Disorders Of Blood Cell Proliferation

### Anemias

- Aplastic Anemia
- Congenital Dyserythropoietic Anemia
- Fanconi Anemia
- Paroxysmal Nocturnal Hemoglobinuria (PNH)

### Inherited Red Cell (Erythrocyte) Abnormalities

- Beta Thalassemia Major (also known as Cooley's Anemia)
- Diamond-Blackfan Anemia
- Pure Red Cell Aplasia
- Sickle Cell Disease

### Inherited Platelet Anomalies

- Amegakaryocytosis / Congenital Thrombocytopenia
- Glanzmann Thrombasthenia

### Inherited Immune System Disorders: Neutropenias

- Infantile Genetic Agranulocytosis (Kostmann Syndrome)
- Myelokathexis

### Inherited Immune System Disorders: Severe Combined Immunodeficiency (SCID)

- SCID with Adenosine Deaminase Deficiency (ADA-SCID)
- SCID which is X-linked
- SCID with absence of T & B Cells
- SCID with absence of T Cells, Normal B Cells
- Omenn Syndrome

### Inherited Immune System Disorders—Other

- Ataxia-Telangiectasia
- Bare Lymphocyte Syndrome
- Common Variable Immunodeficiency
- DiGeorge Syndrome
- Leukocyte Adhesion Deficiency
- Lymphoproliferative Disorders
- Lymphoproliferative Disorder, X-linked (also known as Epstein-Barr Virus Susceptibility)
- Wiskott-Aldrich Syndrome

### Myeloproliferative Disorders

- Acute Myelofibrosis
- Agnogenic Myeloid Metaplasia (Myelofibrosis)
- Polycythemia Vera
- Essential Thrombocythemia

### Phagocyte Disorders

- Chediak-Higashi Syndrome
- Chronic Granulomatous Disease
- Neutrophil Actin Deficiency
- Reticular Dysgenesis

### Cancers in the Bone Marrow

- Multiple Myeloma
- Primary Plasma Cell Leukemia (PCL)
- Secondary Plasma Cell Leukemia (PCL)
- Waldenstrom's Macroglobulinemia

## Inherited Metabolic Disorders

### Mucopolysaccharidosis (MPS) Storage Diseases

- Hurler Syndrome (MPS-IH)
- Scheie Syndrome (MPS-IS)
- Hunter Syndrome (MPS-II)
- Sanfilipp Syndrome (MPS-III)
- Morqui Syndrome (MPS-IV)
- Maroteaux-Lamy Syndrome (MPS-VI)

### Lysosomal Storage Diseases

- Niemann-Pick Disease
- Sandhoff Disease
- Wolman Disease

### Inherited Disorders—Other

- Lesch-Nyhan Syndrome
- Osteopetrosis

### Sly Syndrome, Beta-Glucuronidase Deficiency (MPS-VII)

- Mucopolipidosis II (I-cell Disease)

### Leukodystrophy Disorders

- Adrenoleukodystrophy (ALD) / Adrenomyeloneuropathy (AMN)
- Krabbe Disease (Globoid Cell Leukodystrophy)
- Metachromatic Leukodystrophy
- Pelizaeus-Merzbacher Disease

## References

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