

Cord Blood Collection

The blood that remains in your baby's umbilical cord after it has been cut is called **cord blood** which is rich in stem cells. These valuable cells, which are genetically unique to your baby and family, can only be collected in the minutes after your baby's birth. With the option to save stem cells at birth, expectant parents have many questions about this new technology. Following are the most common questions asked about cord blood banking.

What are stem cells?

Stem cells are the body's "master" cells because they give rise to all tissues, organs, and systems in the body. The stem cells' ability to differentiate, or change, into other types of cells in the body, is a new discovery that holds tremendous potential for treating and curing some of the most common diseases such as heart disease, cancers, stroke, and Alzheimer's. Stem cells have already been used to treat nearly 70 diseases, including leukemia, other cancers, and blood disorders.

Are cord blood stem cells different than other types of stem cells?

Yes. Umbilical cord blood stem cells are the "youngest," safely available stem cells and they are the product of another miracle - a live birth. Freezing these cells essentially stops the clock and prevents aging and damage that may occur to the cells later in life. Another source of stem cells, embryonic stem cells, has been at the heart of heated debate. Currently, embryonic stem cells are not being used to treat humans. A third category of stem cells is adult stem cells, such as those found in bone marrow. Adult stem cells serve very specialized roles in children and adults and are not as proliferative as those found in cord blood, and have a lower chance of being a suitable match between family members.

What is the value of cord blood?

Stem cells from umbilical cord blood can be used to treat various genetic disorders that affect the blood and immune system, leukemia, certain cancers, and some inherited disorders of body chemistry. To date, cord blood has been used in lifesaving treatments for nearly 70 diseases including leukemia, other cancers, and blood disorders. Doctors are working to develop stem cell treatments for heart disease, juvenile diabetes, brain injury, and more.

Why do families choose to collect and store their baby's cord blood?

At an increasing rate, expectant parents are storing cord blood for their families, not only as a potential life-saving resource for current uses of stem cells, but also for their future potential. Some families have more defined risk factors, but most often, parents bank for the security in knowing the health benefits stem cells may someday offer their children, themselves, or other family members. Recent clinical studies support the unique suitability of cord blood stem cells for a number of developing technologies. Doctors are especially enthusiastic about the potential use of cord blood stem cells in the emerging fields of gene therapy and cellular repair. When you bank your baby's cord blood stem cells, you are saving what may be a key component to future medical treatments and cures. Additional considerations and unique birthing circumstances include:

- **Family History** – Cord blood banking is a prudent choice if you or your spouse/partner has any family history of a disease that is treatable with stem cells, such as leukemia, lymphoma, or myeloma. It is important to remember, however, that for many cancers and diseases, the causes are unknown and they occur even when there is no family history of the disease.

- **Ethnic Background or Mixed Ethnicity** – Ethnic minorities and families of mixed ethnicity have greater difficulty finding stem cell donors when needed. Many genetic diseases such as sickle cell anemia and thalassemia are more common in certain ethnic populations. Both of these diseases have been successfully treated with stem cells from cord blood.
- **Newborn Adoption** – Families preparing to adopt a newborn choose cord blood banking because, if ever needed, the cord blood may be the only available genetically-related source of stem cells for the adopted baby. In addition, depending upon the terms of the adoption, complete family medical histories are not always available.
- **In Vitro Pregnancies** – Couples using fertility treatments bank cord blood because they face the possibility of not having another opportunity to secure a genetically related sample of cord blood stem cells for their child.

What are the odds that my family will need to use the stem cells?

The odds that your child will need to use stem cells for current treatments during his or her lifetime are estimated at between 1 in 200 and 1 in 400.¹ Those odds significantly increase when you consider that other family members may use the cells and that stem cell therapies to treat conditions such as heart disease continue to be developed. Most importantly, if your family needs stem cells, using your own family's cord blood has been shown to significantly improve outcomes compared to using cord blood from an unrelated donor.²

How is the cord blood collected?

Cord blood banking involves several steps including collection, processing, and storage. Cord blood collection is a simple, safe, and painless procedure that usually takes less than five minutes and can be performed after vaginal or cesarean births. After your baby has been born and the cord has been clamped and cut, the blood will be drawn from the umbilical cord before it is discarded. After your baby's cord blood has been collected the cord blood will then be transferred to a processing facility by an express courier for processing and storage.

What are my options for saving my baby's cord blood?

There are two types of banks; family banks (for one's own family's use) and public donor banks (unrelated or non-family use, i.e. "public"). With private collection, the cord blood is saved for exclusive use by your family for your child or family member. Public donation is not available everywhere, and there is no guarantee that donated cord blood will be saved. If the cord blood is saved, it is available for use by anyone so it may not be available if your family needs it. If you are interested in donating, contact the Cord Blood Donor Foundation at (650) 635-1452 or www.cordblooddonor.org.

Does my insurance cover the cost of collection and storage?

You should check with your insurance carrier. Usually collection and storage are not a covered benefit. Your insurance may reimburse your Ob/Gyn for the professional charges encountered with the collection.

How do I find a cord blood collection company?

Many companies provide this service. A list can be obtained at www.parentsguidecordblood.com. When choosing, look for a company that has a good transplant history and that cryo-preserve the samples in their own facilities such as Cord Blood Registry (www.cordblood.com). Discuss the collection with your Ob/Gyn prior to making a final decision.

