

Umbilical Cord Blood Banking Information

Some states require health care facilities and providers to give pregnant patients information; permit pregnant patients to arrange for donations; and provide for the availability of information regarding umbilical cord blood banking and donation. If you have further questions after reviewing this information, please ask your healthcare provider.

1. What is cord blood?

Umbilical cord blood or cord blood is the blood that stays in the umbilical cord and placenta after the birth of your baby. This blood contains special cells called stem cells that can help treat diseases in children and adults. The stem cells in cord blood are primitive, or undeveloped, and can be transplanted in persons to treat a number of life-threatening diseases. Stem cells from cord blood are different from embryonic stem cells that come from developing human or animal embryos. Cord blood stem cells do not come from embryos. In the past, cord blood was usually discarded after the infant was delivered. Cord blood can now be collected and stored in a cord blood bank for future use.

2. What are the medical processes involved in the collection of umbilical cord blood? Is it safe?

The collection will not affect your baby's health or your birth experience because cord blood is collected after your baby is born. If you would like your baby's cord blood to be collected and stored for future use, you must make arrangements in advance with either a public or private cord blood bank you selected. After your baby is born, cord blood is collected from the umbilical cord and placed in a special container that is sent to a cord blood bank. The cord blood and mother's blood samples are then processed and tested. If the mother's blood sample identifies the presence of infectious disease, she will be notified. Once the cord blood bank determines the cord blood can be used, it is stored for future use.

3. Are there medical risks of umbilical cord blood collection to the mother and the newborn child?

Cord blood donation usually takes place after a baby has been delivered and the umbilical cord is cut. It is considered safe, although in some countries there is discussion about the time at which the umbilical vein should be clamped. The only medical condition that has been reported to take care to avoid is anemia. Apparently, if the cord is clamped too quickly after delivery, there will be more blood in the cord, but it will rob the child of blood that he or she needs to avoid anemia.

4. **What are the options available to a mother regarding stem cells contained in the umbilical cord blood after delivery of the mother's newborn child?**
- (a) Having the stem cells discarded;
 - (b) Donating the stem cells to a public umbilical cord blood bank;
 - (c) Having the stem cells stored in a private umbilical cord blood bank for use by immediate and extended family members; future use.
 - (d) Storing the stem cells for use by the family through a family or sibling donor banking program that provides free collection, processing, and storage of the stem cells where there is a medical need.
5. **What are the current and potential future medical uses, risks, and benefits of umbilical cord blood collection to the mother, newborn child, and biological family?**

Who can benefit from the stem cells in cord blood?

Cord blood transplants can benefit immediate family members, extended family members, and non-related children and adults with certain conditions. Cord blood also may be able to help persons who are waiting for life-saving treatments. According to the National Marrow Donor Program, transplants of cord blood cells have already saved the lives of thousands of Americans with a variety of diseases.

What medical treatments use cord blood?

Transplants of cord blood stem cells have been used for many years to treat disorders that include malignant and non-malignant conditions such as blood cancers, rare inherited disorders of metabolism, diseases of the immune system, and more. Treatment of these disorders using cord blood is not experimental. Research on emerging therapies in which the patient's own cells are used to repair the body may expand the application of cord blood that is stored for personal use. Scientists are studying whether cord blood can be used to treat other common disorders of the heart, bones, liver, brain, as well as other conditions including diabetes, and Parkinson's Disease.

How can cord blood help?

The stem cells in cord blood are important because they make many different types of cells in the body. Stem cells in cord blood can help build new, healthy cells and can be transplanted in persons to treat a number of life-threatening conditions. Cord blood can be used in autologous transplants (when an individual receives his or her own cord blood) or more often, allogeneic transplantations (when a person receives umbilical cord blood donated from someone else).

6. What are the costs that may be incurred by a pregnant woman who chooses to make an umbilical cord blood donation?

What are the choices for storing cord blood? What is the right way for my family?

Donate your baby's cord blood to a public bank, where it is made available to others, much like blood banks. Donating to a public cord blood bank should not cost you any money. Ask your provider if there will be any charge to collect the blood.

Save your baby's cord blood in a private or family cord blood bank where it will be available to your baby and family members. Storing the cord blood in a private bank for future use by your baby or family usually costs between \$1,000 to \$2,000 when your baby is born. A yearly storage fee is approximately \$100 to \$150, and private banks do not charge a fee for the release of the cord blood to your family. There are some family banking programs available for free for those who have a sibling or family member with a condition treated by stem cells.

Public Cord Blood Banking

Public cord blood banks collect and store donated cord blood stem cells for use for those who are in need of a stem cell transplantation and are a close enough match to the cord blood donor. Transplantations are anonymous and no information about your baby is provided to the patient receiving the cord blood. Every year thousands of Americans seek an unrelated stem cell donor. Cord blood does not have to be exactly matched to the patient, and hence, cord blood donations are particularly important to provide transplants for patients who are of minority or mixed heritage. Not all families are eligible to donate cord blood and not all cord blood collections will meet the requirements for public storage. However, there is no guarantee that the cord blood will be used in the future.

Private or Family Cord Blood Banking

Private cord blood banking provides you with the option to have your baby's cord blood collected and stored for your baby or another close family member if ever needed. Whereas publicly donated cord blood is used for unrelated transplants and research, cord blood stem cells stored with a private bank are available for the exclusive use of your family. Banking your baby's cord blood in a private bank provides an exact match for your baby and can potentially be a match for siblings and parents. However, there is no guarantee that the cord blood will be used in the future.

Choosing either a public or private cord blood bank is a personal decision that you should make for yourself after reviewing information and having a discussion with your health care provider.

How do families decide if they want to save or donate cord blood?

Families can contact their health care provider to discuss which options are available. In addition, they may contact the resources provided from this brochure for more information on public and private cord blood bank

7. Where can I get more information about umbilical cord blood banking?

The March of Dimes
www.marchofdimes.com

National Marrow Donor Program
Provides information about cord blood and a list of hospitals that accept public cord blood donations
Phone: 1-800-MARROW-2
www.marrow.org/cord

Parent's Guide to Cord Blood Foundation
Provides information for parents on cord blood banking, and a list of private and public cord www.ParentsGuideCordBlood.org

Health Resources and Services
Administration (HRSA)
<http://bloodcell.transplant.hrsa.gov/>

Cord Blood Registry
<https://www.cordblood.com>