

What is Cord Blood Banking, and is it Right for You?

Cord blood banking isn't routine in hospital or home deliveries – it's a procedure you have to choose and plan for beforehand.

What is Cord Blood?

Umbilical cord blood contains stem cells that are capable of developing into mature blood cells. Sometimes these cells can be transplanted into patients to treat cancer or blood diseases that are otherwise treated by bone marrow transplant.

How is Cord Blood Collected and Stored?

Collection of the cord blood takes place shortly after birth in both vaginal and cesarean deliveries. It's done using a specific kit that parents must order ahead of time from their chosen cord blood bank. After cord blood collection has taken place, stem cells are separated from the rest of the blood and frozen in a collection facility, also known as a cord-blood bank.

Then, if needed, blood-forming stem cells can be thawed and used in either autologous procedures (when a person receives his or her own umbilical cord blood in a transplant) or allogeneic procedures (when a person receives umbilical cord blood donated from someone else – a sibling, close relative or anonymous donor).

What Are Stem Cells Used For?

Stem Cells are used in the treatment of diseases that more commonly involve bone marrow transplants such as certain kinds of leukemia or lymphoma, aplastic anemia, severe sickle cell anemia, and severe combined immune deficiency. In most cases, stem cell transplants are performed only on children or young adults.

Do Stem Cells Need to be a Perfect Match to Work?

No, donor cord blood stem cells do not need to be a perfect match to create a successful bone marrow transplant. There has been little experience with transplanting self-donated cells and most experts are concerned that an ill baby who receives his or her own stem cells during a transplant would be prone to a repeat of the same disease. Most of the bone marrow transplants that use stem cells have been performed on relatives of the donating child or on strangers, not on the donating child.

Cord Blood Banks

There are two types of cord blood banks: public and private. Cord blood can be donated to the public bank for a nominal administration fee. Cells donated to the public bank are available for use by all infants and children who may require stem cell transplantation.

Private cord blood banks store collected stem cells for exclusive use by your child. These are quite expensive and collection and storage fees vary among providers.

What Do the Experts Say?

The American Academy of Pediatrics (AAP), the Society of Obstetricians and Gynaecologists of Canada and the American Academy of Family Physicians do not recommend private cord blood banking for families who don't have a history of disease. Research has not yet determined the likelihood that a child would ever need his or her own stem cells, nor has it confirmed that transplantation using self-donated cells, rather than cells from a relative or stranger, is safer or more effective.

According to the AAP, "private storage of cord blood as 'biological insurance' is unwise. However, banking should be considered if there is a family member with a current or potential need to undergo stem cell transplantation."

Where Do I Get More Information?

KidsHealth www.kidshealth.org

Alberta Cord Blood Bank (Public) www.acbb.ca

Canadian Cord Blood Registry (Private) www.ccbcr.ca

American Academy of Pediatrics www.aap.org

