

# Banking on a Miracle:

## How Cord Blood Saves Lives

Jenny Levine used to call it “the Chloe shuffle”—that funny way her infant daughter scooted along on her bottom instead of crawling on all fours. But Chloe’s behavior soon looked anything but cute. The baby started dragging her right leg; she clenched her right fist, unable to grasp. Her gaze turned glassy. Chloe’s doctor diagnosed her with cerebral palsy, probably due to an in utero stroke.

But Chloe had one ace in the hole: Only minutes after her birth, her parents had banked the blood from her umbilical cord. In May 2008, doctors at Duke University transplanted the cord blood back into Chloe’s body. By October, at age two, Chloe was running, grasping with her right hand and saying words. Jenny Levine is convinced that her daughter’s own blood cured her of CP.

### What Is a Cord Blood Transplant?

When a baby is born, the umbilical cord is cut and discarded, along with a small amount of blood from the cord. But this cord blood is ideal for treating a variety of ailments. Dr. Charles Peters, director of the Blood and Marrow Transplant Program at Children’s Mercy Hospital in Kansas City, says that “cord blood can treat any disease you would consider a bone marrow transplant for,” including leukemia, sickle cell disease and aplastic anemia. The reason is that cord blood is rich in stem cells and, when transplanted, will attack a patient’s diseased blood cells. Cord blood stem cells are considered “mature,” similar to those found in bone marrow. (Because they aren’t harvested from frozen embryos, their use is not controversial, and is even sanctioned by the Vatican.) Collecting cord blood is painless for mother and baby, and the blood can be frozen for easy access.

### Private Cord Blood Banking

Cord blood transplants have been used to treat blood diseases like leukemia since 1988. But some of the most exciting research, says Dr. Mary Laughlin director of the Allogeneic Bone Marrow Transplant Program at Case Western University in Cleveland, is in regenerative medicine. Cord blood stem cells, while considered “adult,” appear to be able to generate new heart, lung or even brain cells. Because Chloe Levine’s parents had banked her cord blood at a private facility, a perfectly matched transplant was available to repair the damage done by

the in utero stroke. Clinical trials at Duke University in Durham, N.C., have shown promising results for other kids like Chloe, some with brain injuries, immune disorders and diabetes. Research is still in the early stages, but anecdotal evidence like Chloe’s is promising.

Even so, for-profit private banking is controversial. Private companies charge hefty fees to collect and store cord blood—on average about \$1,300 for collection, and a yearly fee of around \$120 for storage. According to a 2009 survey by the Dana-Farber Cancer Institute, transplant doctors are wary of private banking because the chances the blood will ever be used are so small—no more than 1 in 1,000, according to the American Academy of Pediatrics’ 2007 policy statement on the issue. Both the academy and the Dana-Farber study agree with Dr. Peters of Children’s Mercy, who says, “Unless you are well aware of a genetic disease that runs in your family, there are no practical reasons to bank the cord blood privately.”

Still, researchers are only just beginning to grasp the potential uses for cord blood, and Dr. Mary

Laughlin says that for parents who can afford to privately bank, “it’s not an unreasonable thing to do.” But she stresses that parents need to research their chosen bank thoroughly and find out exactly what fees will be charged. Only 35 labs in the United States bank cord blood privately, so most families must ship and store cord blood out of state. (Neither Kansas nor Missouri has a private bank.) The birth hospital may charge an additional fee because a clinician must collect the blood.

### Donating for the Greater Good

Even if parents decide against privately banking their baby’s cord blood, Becky Patrick hopes they’ll consider public donation. Patrick is the nurse coordinator for the cord blood donation program at Saint Luke’s Hospital in Kansas City. Currently, Saint Luke’s is the only metro-area hospital that arranges for cord blood donations, which are done free of charge. Because blood collection is completely noninvasive, says Patrick, “nothing changes in the delivery process” when a mother decides to donate the cord blood. Saint Luke’s Wornall hospital is currently the only donation center, although doctors are hoping to expand the service to their Saint Luke’s South location this summer. Patients at Shawnee Mission Medical Center and other area hospitals need to make their own arrangements to donate cord blood. But Patrick says it’s worth it, and there’s nothing like seeing people whose lives have been saved by anonymous donations. “You see what a wonderful gift your baby is to you,” she says, “and that baby can actually give a gift to someone else.” Not bad for the first five minutes of life.

*Shawnee resident Claire M. Caterer writes frequently on health and parenting.*

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816.698.7000 CenterpointMedical.com

**Liberty Hospital**  
816.792.7213 LibertyHospital.org

**Menorah Medical Center**  
913.498.6000 MenorahMedicalCenter.com

**North Kansas City Hospital**  
816.691.5179 NKCH.org

**Olathe Medical Center**  
913.791.4235 OHSL.com

**Overland Park Regional Medical Center**  
913.541.5300 OPRMC.com

**Providence Medical Center**  
913.281.7777 Providence-Health.org

**Research Medical Center**  
816.276.4000 ResearchMedicalCenter.com

**Shawnee Mission Medical Center**  
913.676.2000 ShawneeMission.org

**St. Joseph Medical Center**  
816.943.4645 CarondeletHealth.org/sjhc

**Saint Luke’s Hospital of KC**  
**Saint Luke’s Northland**  
**Saint Luke’s South**  
**Saint Luke’s Lee’s Summit**  
SaintLukesHealthSystem.org

**St. Mary’s Medical Center**  
816.655.5574 CarondeletHealth.org

**Truman Medical Center on Holmes**  
816.404.0350 TruMed.org

**Truman Medical Center Lakewood**  
816.404.8245 TruMed.org

**The University of Kansas Hospital**  
913.588.5000 KUMed.com



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