

Expanded Access Protocol Umbilical Cord Blood Infusion PATIENT INFORMATION

Thank you for your interest the Expanded Access Protocol for umbilical cord blood infusion at Duke University Medical Center. This brochure provides information about this program to help you determine if it is a good choice for your child.

About the Study

At Duke, we are researching ways to help treat children with brain injuries and certain neurologic conditions, including the use of umbilical cord blood infusion. We have conducted multiple early phase studies, demonstrating that infusion of a child's own umbilical cord blood, or that of a full or partially-matched sibling, is safe. We are continuing to conduct research to determine whether umbilical cord blood and related products are effective in improving the symptoms of children with neurologic conditions through ongoing clinical trials. The purpose of this Expanded Access Protocol is to enable access to autologous (a child's own) or sibling umbilical cord blood infusion(s) for children with certain neurologic conditions who are not eligible to participate in one of Duke's ongoing clinical trials. Children with cerebral palsy, hypoxic brain injuries, stroke, congenital hydrocephalus, speech apraxia, autism spectrum disorder, and other related brain injuries may be enrolled. This brochure describes what will happen if your child participates in the protocol.

Is Your Child a Candidate for this Program?

Before a visit is scheduled for your child, they must undergo screening to determine if they are eligible to receive a cord blood infusion on the Expanded Access Protocol. As part of the screening process and with your written consent, your child (or their sibling's) umbilical cord blood report and medical records will be reviewed.

Blood and/or buccal samples (from the inside of the cheek) are also required for basic laboratory testing, HLA typing to determine if your child and their sibling are a "match," and to confirm the identity of the cord blood unit.

If your child is eligible to receive a cord blood infusion after all of this information is reviewed, then your child or sibling's cord blood unit will be shipped to Duke and your child's visit will be scheduled.



CONTACT INFORMATION

If you have any questions regarding the Expanded Access Protocol, please feel free to contact us.

Our team can be reached via email at cordbloodtherapyinfo@dm.duke.edu or by phone at (919) 668-1102.

VISIT INFORMATION



Before Your Visit:

Before your child's visit, the umbilical cord blood unit being used for infusion must be tested at Duke to make sure the cells are healthy enough to use for an infusion. After all the final tests on the cord blood sample are complete and adequate, we will request that the cord blood unit be shipped to Duke and schedule your child's visit. Shipment of the cord blood unit will be arranged in conjunction with the cord blood bank where the unit is stored, and the costs associated with the shipment will be handled directly between you and the cord blood bank.

During Your Visit:

We ask that you arrive in the Durham area the day before your child's first visit and stay in local accommodations until at least one day after the infusion.

Visit Day 1:

When you arrive at Duke with your child for their initial visit, you will meet with a member of our team to review and sign two consent forms – one for the Expanded Access Protocol and one for the National Marrow Donor Program's Research Database (NMDP/CIBMTR). These consent forms will be provided to you for your review prior to your visit. You will be required to approve and sign these consent forms in order for your child to be able to receive a cord blood infusion. If you have any questions regarding the consent forms, please contact us before you travel to Duke. After the informed consent session is complete, a full history and physical exam will be performed on your child.

Visit Day 2

On the day of the infusion, your child will be admitted to the Valvano Day Hospital, an outpatient pediatric infusion center located in the Children's Health Center at Duke Hospital. Your child's or their sibling's cord blood

cells will be thawed and washed in the Duke Stem Cell Transplant Laboratory and transported to the infusion clinic. After your child checks in, they will have an IV (intravenous catheter) placed. Some, but not all, children may require numbing cream and/or a small dose of oral or intranasal medication (Midazolam or a similar medicine) to help them relax prior to the IV placement.

Prior to the infusion, your child will be given small doses of Benadryl and a steroid medicine (Solumedrol) through the IV. These medications are given to prevent allergic reactions to the cord blood infusion. The cord blood infusion will then be given through the IV over a period of five to twenty minutes. Your child's heart rate and oxygen levels will be monitored during the procedure. They will then receive an hour of IV fluids and observation.

After the observation period, your child's IV will be removed and you and your child may return to your local accommodations. You will be given information about how to contact the medical team overnight if you have any concerns regarding your child. We request that you stay locally on the night of the infusion before heading out of town.

Visit Day 3:

You will be asked to call our team the day after the infusion to check in and make sure you do not have any concerns regarding your child. If everything has gone as planned, then you will be ready to travel home. If you are coming from an international location, we request that you and your child remain in the United States for at least two days after the infusion.

After Your Visit:

We encourage you to remain in contact with us and keep us apprised of your child's progress and any new medical issues. Our team will also contact you one year after the infusion to complete a questionnaire regarding any changes your child has experienced since the infusion.

Most children will only have enough cells available in the cord blood unit for one infusion. If there are cells remaining after the initial infusion, you will be asked to sign a storage consent allowing us to keep them frozen and stored in the Duke Stem Cell Transplant Laboratory for potential future use by your child or family. If that is the case, the team will discuss options for potential subsequent infusions during your visit.

What are the Costs of this Treatment?

The charges for all tests, visits, and procedures conducted as part of this protocol will be submitted as a claim to your insurance company. The total charges for these services are approximately \$15,000. If your insurance company pays the claim, you will be financially responsible for any patient liability determined by your insurance company, such as deductibles, co-insurance, out-of-pocket minimums, etc. If your insurance company denies the claim, you will receive a billing statement from Duke University Medical Center for the total charge of the services provided. At that time, please contact our Customer Service Department at (919) 620-4555 or (800) 782-6945 to request an uninsured discount. You will be responsible for paying the amount owed after the discount. If your child does not have medical insurance in the United States, pre-payment will be coordinated through our International Office.

What are the Possible Risks and Benefits of Participation in the Expanded Access Protocol?

At Duke, we have performed more than 700 umbilical cord blood infusions for children with brain injuries and related neurologic conditions. In our experience, approximately 1.5% of patients experience an allergic reaction during the infusion, presumably to the preservative (DMSO) used during the freezing procedure. All such reactions have resolved by stopping the infusion and giving additional medications if necessary. Other much rarer potential risks include transmission of infection with any infusion, and a hemolytic reaction in which the body breaks down red blood cells, development of an autoimmune disorder, or extremely rarely, graft versus host disease in children receiving sibling cord blood infusions. Graft versus host disease (GvHD) results from a reaction of the cord blood cells against your child's body. The symptoms of GvHD ranges from a mild skin rash to severe involvement of the skin, liver, and/or gut (intestines). While we know these risks are theoretically possible and will monitor your child to see if they occur, we have not seen these complications in any child treated to date.

This protocol requires some blood draws and IV placement. Risks associated with these routine procedures include momentary discomfort, bruising, infections, bleeding, clotting, and fainting. Some children may also receive Midazolam orally or by nasal spray to help relax them prior to the placement of the IV. The potential risks associated with the use of Midazolam include excessive sleepiness or sedation, headache, hiccups, cardiac arrest, involuntary movements, agitation, changes in breathing, and decreased oxygen in the blood. These risks are all listed in detail in the protocol consent and our team will review these thoroughly with you before and again during your visit.

Potential benefits of participating in this protocol include the possibility that the umbilical cord blood cells may improve your child's condition. However, clinical benefits cannot be guaranteed.

