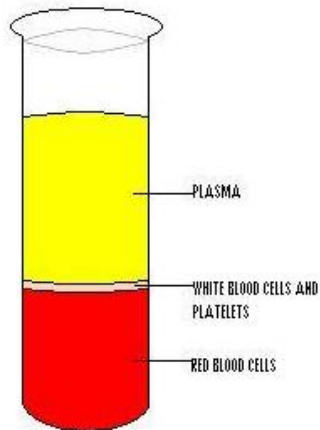


This pamphlet will give you some information about this procedure. When you talk with your doctor, please ask about anything you do not understand or would like to know more about.

What is in blood?

- Plasma is the liquid part of the blood made up mainly of dissolvable substances. It carries minerals, hormones, vitamins, and antibodies.
- White Blood Cells help prevent and fight infections
- Platelets are small particles which help the blood to clot
- Red Blood Cells carry oxygen around the body



What is Plasma?

When blood separates, plasma is the yellow fluid portion made up mainly of water. Plasma helps the circulation of red blood cells, white blood cells and platelets throughout your body.

What is a plasma exchange?

Plasma exchange is a procedure that separates plasma from the remaining parts of

the blood. The cell-separator machine does the separation. Plasma is removed and then replaced with another type of fluid. Your physician prescribes this fluid. Red blood cells, white blood cells and platelets return to the patient in re-circulated blood.

Why is a plasma exchange necessary?

Some illnesses and diseases make substances that circulate throughout the body in the plasma. In certain diseases these can be antibodies. These antibodies can attack healthy cells or tissue. Other diseases can cause too much protein to be made, which can slow down the blood flow in the body. Your physician will decide if those antibodies or excess proteins need to be removed by a plasma exchange procedure.

The plasma is removed from the body and is replaced with one or a combination of the following:

- Fresh Frozen Plasma (FFP) obtained by Canadian Blood Services (CBS). It is plasma that has been separated and frozen from donor blood collections.
- 5% Albumin, a purified blood product-containing albumin, the major protein in plasma. It is also obtained by CBS from pooled blood donations.
- Saline, a solution of salt and water.

What happens during a plasma exchange?

Qualified apheresis nurses operate the blood cell separator and monitor your child's condition at all times.

When the cell separator machine is set up, your child is connected to it with:

- Needles and tubing in the arm veins if these veins are suitable, OR
- A special venous catheter usually set into a big vein in the groin area (femoral line)

A replacement fluid is added to replace the volume of plasma that has been removed. This mixes with the blood components in the cell separator and is returned to your child.

Preparing your child for a plasma exchange

We suggest that you prepare your child for this in the same way you do for other procedures. Ask for the pamphlet called "Helping your Child Manage Medical Procedures" for some tips. Children who understand what is happening have more feeling of control.

What are the possible side effects?

1. The anticoagulant used to keep your child's blood from clotting in the machine may lower the amount of calcium in the blood. Your nurse will watch for early signs of low calcium, most frequently a tingling sensation on the lips, and take steps to prevent the problem.
2. The procedure may lower your child's platelet count and hemoglobin. Your child will have a complete blood count drawn before and after the procedure. In some cases, the doctor may decide that your child needs a transfusion.
3. If your child's arm veins are used, the arm may be tender and uncomfortable for a

while. If your child has a venous catheter inserted, there may be some bruising at the site.

4. Some children may have an allergic reaction to the fluids used for replacement. Your child's nurse will monitor for side effects such as, fever, chills, nausea, vomiting, back pain, difficulty breathing, itching and hives.

Frequently Asked Questions

Is the procedure painful?

- A. Insertion of needles may cause some discomfort. Keeping your child's arms in one position and remaining relatively still may also be uncomfortable. If your child has a femoral line it can become uncomfortable. A patient with a femoral line has to remain fairly still, and is unable to get up to use the washroom.

How long does the plasma exchange take?

- A. The length of procedure is different for each patient. Most plasma exchanges take approximately two hours.

How often do plasma exchanges need to be performed?

- A. The number of plasma exchanges will depend on the disease being treated and your child's response to the procedure. The physician monitors your child's response and decides on the number and frequency of procedures needed.

If you have any questions about the procedure, please feel free to speak to one of the apheresis staff in the Oncology/Hematology Clinic who is familiar with Therapeutic Plasma Exchange procedures
Telephone (604) 875-2345 local 7079

At Children's & Women's Health Centre of British Columbia we believe parents are partners on the health care team. We want you to be as informed as possible. This brochure will answer some of your questions. Please ask about things you do not understand and share your concerns.



Therapeutic Plasma Exchange



4480 Oak Street, Vancouver, BC V6H 3V4
www.bcchildrens.ca