Erythrocytapheresis (Red Blood Cell Exchange)

Erythrocytapheresis (eryth·ro·cy·ta·phe·re·sis) or red blood cell exchange is a procedure used to remove your red blood cells and replace them with donor red blood cells from a donor.

How is the procedure done?

During this procedure, blood is removed and sent through tubing that is connected to an apheresis machine. This machine spins your blood and separates out your red blood cells. Only a small portion of your blood is taken through the machine at any one time. After your red blood cells are removed, your remaining blood and the donor red blood cells are returned to your body.

For this procedure, you will need two intravenous (IV) catheters placed. IV catheters are thin, flexible tubes placed into a vein. One IV is used to remove your blood and the other IV is used to return blood to your body. This can be done by putting an IV in each arm or by using your central venous catheter (CVC) if it has two tips. The red blood cell exchange can take 2 to 6 hours to complete.

A specialty trained nurse will check on you before, during and after the procedure. When the procedure is done, you will be removed from the machine. If you had IVs placed in your arms, they will be removed and covered with a dressing.

A blood thinner (anticoagulant) is slowly added to the blood during the procedure. This is given to prevent your blood from clotting. Side effects from the blood thinner may include slight tingling around your mouth, chest vibrations, and a cold or chilled feeling. Calcium will be given to you to prevent these symptoms.
What are the possible side effects with this procedure?
Each person may respond differently to this procedure.

- Side effects from Red Blood Cell Exchange may include:
  - Dizziness or feeling light-headed
  - Nausea
- Side effects from a blood transfusion may include:
  - Fever
  - Rash
  - Itching
  - Shortness of breath
  - Chest or back pain

Tell the nurse right away if you have any of these side effects.

What can I expect after the procedure?

- You may feel tired after your procedure and should limit activities for the next 12 hours.
- Your arms may feel sore from being in one position during the procedure.
- You should drink plenty of non-caffeinated fluids to stay hydrated.
- Keep your bandages dry and in place for 5 hours after the procedure.
- Do not lift anything over 25 pounds or exercise for 24 hours after your procedure.
- If you get dizzy, lie down and put your legs up.
- If you see any redness or have pain where the IV was in your arm, you should call the Apheresis Department.

Call the Apheresis Department with questions or concerns:
- Monday through Friday, call 614-293-8672
- After hours or weekends, call the hospital operator at 614-293-8000. Ask the operator to page the Pathology resident on call.