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.

How is the procedure done?

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

For this procedure, you will need two intravenous (IV) needles placed. One IV is used to remove the blood and the other IV is used to return the blood. This can be done by putting an IV needle in each arm or by using a special central venous catheter (CVC) that has two lumens or ports. 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 IV’s 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 clotting. Side effects from the blood thinner may include slight tingling around your mouth, chest vibrations, and a cold or chilled feeling. Calcium is given by pill or IV to prevent these symptoms.

This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.
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?

- Most people feel tired after the procedure. You should limit activities for 12 hours after the procedure.
- Your arms may feel sore from being in one position during the procedure.
- You should drink plenty of non-caffeinated fluids.
- Keep the bandages dry and in place for 5 hours after the procedure.
- Do not do any heavy lifting or exercise during this time.
- If you get dizzy, lie down and elevate your legs.
- 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.