

Apheresis

Apheresis is blood split into sections based on density. This is done as a continuous loop, or circuit. We place 1 to 2 IVs in your arms. Your blood will flow from the IV into the machine. From there, the machine spins the blood and separates it into parts.

Medicine is added to keep the blood from clotting in the machine. The machine will set aside the chosen component. Then, the machine returns the other components back to your body through the 2nd catheter. Sometimes healthy donor blood parts are also used. In some cases, the chosen component is leading to illness. In other cases, the chosen component will be taken to later help treat illness.

Types of Apheresis

Plasmapheresis (Plasma Exchange)

A plasma exchange is completed when antibodies, or disease-causing proteins, need to be removed from the body. Antibodies are produced by an abnormal immune system. Antibodies can attack healthy organ systems. They are found in plasma. Therefore, the plasma must be removed to treat the illness.

The machine will remove blood from one IV catheter and carry it to the machine. When the machine spins the blood, the plasma layer is light, rises to the top, and is removed. The rest of the blood, along with a plasma replacement, is returned to your body through the other IV catheter. Only about one cup of blood is removed from your body at one time.


The plasma that is removed is replaced by:

- **Albumin:** a human blood product that has been screened and heat-treated. This is to prevent disease

from being transferred. Side effects are rare, but may include nausea, fever, chills, itching, low blood pressure, or flushing.

- **Saline:** a salt-water mixture.
- **Fresh frozen plasma:** healthy plasma given by blood donors that has been checked for viruses. Side effects may include itching, hives, chills, fever, and skin flushing. Rare side effects are labored breathing, low blood pressure, and allergic reaction. Tell staff if you notice any of these side effects.

Leukapheresis or Plateletpheresis

Certain diseases can cause high numbers of white blood cells or platelets in the body. If these extra cells are not removed, the blood can become thick and cause problems with breathing or cognition. This process removes white cells and platelets. The rest of the blood and its components is then returned. 

Red Blood Cell Exchange

In specific diseases, red blood cells become abnormal or infected not allowing them to effectively carry oxygen. A red blood cell exchange removes abnormal red cells from the bloodstream. It replaces them with closely matched healthy donor red blood cells.

Photopheresis

This process selects white blood cells and exposes them to ultraviolet light. The cells are returned to the body. After the white cells are gathered, they are injected with the drug Methoxsalen. This makes the cells more sensitive to UV light within the machine. The treated white cells are then returned to your body. They will react against the diseased white cells in your body.

Patients who have this treatment will **need to wear sunglasses** for 24 hours after each treatment. The drug used will make the lens of the eye sensitive to sunlight. **Avoid** sunlight as much as you can for 24 hours.

Before Treatment

The apheresis doctor will explain the treatment and get your consent before starting.

The type of central line or peripheral intravenous catheter (IV) used for your treatment depends on the type of treatment, the number of treatments needed, and the quality of your arm veins. If possible, we will place one IV in each arm for treatment.

Sometimes, we do not get a good blood flow from arm veins. Then, a central line needs to be placed into a large vein in your neck or chest. This is done by a doctor. Your doctor will discuss this with you if needed.

During Treatment

The treatment is done in your hospital room or in the Infusion Center, C5/350. A nurse will perform the treatment. It will take about two hours. If there is space, family members can be with you. The nurses will be with you always. Vital signs will be monitored.

Most people say that lying still is the hardest part of the treatment. You will not be able to leave your bed. You should go to the bathroom before the treatment starts. If you need to go to the bathroom during treatment, you will need to use a urinal or bedpan. It is recommended to wear clothing that is easy to remove.

You may read a book or watch TV. We have DVD players and a DVD library. Free WIFI is also available.

Your nurse can provide you with a drink if you would like. You may also bring in something to eat or drink from home.

Side Effects

Side effects of all the treatments can include dizziness, faintness and nausea. This is caused by your blood moving into the machine before the healthy parts are returned to you. Some people have tingling toes, fingers, and lips. This is caused by the anti-clotting medicine that is added. Let your nurses know if you are having any of these side effects. They can be managed. You can help by eating a good meal before your treatment.

If you are receiving **photopheresis**, there is a possible risk of clotting. This is a rare but possible serious side effect.

If you are receiving **red cell exchange**, there is a possible risk of bleeding due to platelet loss.

If blood products are used (red blood cells or plasma), each one has a small risk of transfusion reactions (rarely, severe reactions, and extremely rare fatal reactions). There is a risk of a transfusion-transmitted infection.

After the Treatment

Your central line will be flushed, or both IVs will be removed. Pressure dressings to the IV sites will be put on and need to stay on for a few hours. After your first treatment, we advise you **not** to do any hard physical activity that day. After the day of your first treatment, you can resume your normal routine as you are able. Check your IV sites to make sure they have sealed. Ask your doctor if you are unsure.

When to Call

Call if you have any of the symptoms listed below. **After hours, go to the nearest emergency room.**

- Fever over 101.5° F.
- Pain, increased redness, or warmth at the IV site.
- Bleeding at the IV site or central line site. If this happens, apply pressure to the site or try to clamp the central line above the site of the bleeding.

Who to Call

If you have questions, please contact your provider through MyChart. Or call your provider listed in your After Visit Summary or After Hospital Care Plan.

For a list of UW Health Clinics, please visit www.uwhealth.org/.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 4/2025. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#6300.