

White Blood Cell (WBC) Donation FAQs

What are white blood cells?

White blood cells are a part of the immune system which help fight infections.

Why do cancer patients need WBCs?

Cancer therapies such as chemo and radiation cause suppression of the bone marrow (which produces WBCs). Since the patients cannot always produce these cells on their own, sometimes they require white blood cell transfusions.

What is the process for WBC transfusions?

Once the patient's physician writes an order for WBC transfusions, the clinical team will contact the blood bank to begin this process. A representative from the blood bank will contact the patient and/or family to provide education on the process and to help the family develop an action plan to recruit donors. The recruited donors will then present to one of our donor centers for a prescreening visit. Within 72 hours of this visit, a representative from the blood bank will contact the donor to inform the donor if they are qualified to donate WBCs. If approved to donate, blood bank personnel will then schedule the donor for their pre-donation visit and the WBC donation.

How are WBCs collected?

During WBC donation, specific WBCs, or granulocytes, are harvested. This is done through a procedure called apheresis, in which whole blood is removed from the body in small increments and spun in a centrifuge. The spinning allows the blood to separate into the different blood components (red blood cells, white blood cells, platelets and plasma). A valve within the centrifuge collar allows the targeted cells to be collected into a bag, while the remaining components are returned to the donor in addition to a small amount of anticoagulant.

Why do donors donate platelets during their pre-screening visit?

To ensure that donors can tolerate an apheresis procedure prior to the administration of the stimulation medications, we require donors to give platelets via apheresis, therefore reducing the likelihood of discovering an apheresis intolerance at the last minute. WBC donors are given medications to stimulate their bone marrow to produce extra white cells prior to their donation. If they are unable to tolerate the apheresis procedure to remove these extra cells, they would have an elevated white blood cell count for several days, which could pose some health risks.

What Is the Actual White Blood Cell Donation Process?

The donor will take medications the night before the donation to make their body produce a large amount of white blood cells in the twelve hours prior to the 8 am donation. The donation will utilize an apheresis machine which can separate the white blood cells from the rest of the blood components. The donor will need to stay seated and still for three hours. Blood will be drawn from one arm and then be run through the centrifuge to separate. The white blood cells will be collected in a sterile bag. The red blood cells, platelets and plasma will be returned into the other arm. A steady stream of blood will run from one arm of the donor into the machine and through tubing back into the donor's other arm. Citrate is a blood thinner that will be added to the blood as it enters the machine in order to decrease any risk of the blood clotting in the machine.

How do I find donors?

Reaching out to friends and family members of the patient is the most successful way to recruit donors. There are many ways to do this, even if the patient is not local:

1. Send an email or letter to friends and family of the patient requesting donors.
2. Contact members from any social affiliations of the patient:
 - a. National organizations (Lion's Club, Rotary Club, Knights of Columbus, Masons)

- b. Fraternities/Sororities
 - c. School alumni
 - d. Place an appeal in newsletters or other publications
3. Make an appeal to the patient's religious organization (local churches, mosques and temples will often sponsor a patient from out of town)
 4. Utilize social media (Facebook, Twitter, Snapchat, Instagram, LinkedIn)
 5. Contact the patient's employer and/or coworkers. This is especially helpful in large corporations, the police force, firefighters, and healthcare workers. For out-of-town patients, see if there is a local office that could support the patient
 6. For servicemen and women, contact a nearby base or veteran's organization.
 7. For international patients, the embassy can be helpful in contacting local organizations to sponsor the patient.
 8. Contact recruitment personnel at (713) 792-7777 for help with any of these ideas or for information regarding a pre-screening blood drive

Why do I have to help recruit donors?

The WBC donation process takes place in short intervals over several days. Some people have to take off from work in order to donate. Usually, only donors with a personal connection to the patient will be motivated to devote the time and effort required.

Where do I send potential donors to start the screening process?

Donors can complete their prescreen appointment at any of our fixed site locations:

Holly Hall Blood Donor Center

2555 Holly Hall Street, Houston, Texas 77054

713-792-7777

Open daily 10 a.m. – 5 p.m.

To Understand Donor Eligibility, please go to our website at mdanderson.org/bloodbank select Donation Instructions