Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

About Your Blood Transfusion

This information explains what to expect before, during, and after your blood transfusion. A blood transfusion is when blood or blood cells are put into your body. You may need a blood transfusion because of how your cancer or cancer treatment affects your blood.

Some people may not want a blood transfusion for religious or other reasons. It's always your right to refuse a treatment. Your healthcare provider will only recommend a blood transfusion if they think it's needed. You can lose lots of blood during some types of surgery. If this blood isn't replaced, you can die.

About blood

Blood is made up of plasma, red blood cells, platelets, and white blood cells.

- **Plasma** is the liquid part of blood. It holds your blood cells. You may need a plasma transfusion if your blood isn't clotting well.
- **Red blood cells** carry oxygen to all parts of your body. You may need a transfusion of red blood cells if you have a low red blood cell count (anemia). This can help you feel better.
- **Platelets** help form clots and stop bleeding. You may need a platelet transfusion if you have a low platelet count (thrombocytopenia). This can help stop bleeding or keep you from bleeding too much during a surgery or procedure.
- **White blood cells** fight infection. White blood cell transfusions are rare and are only done in very specific situations.

About donated blood

There are no blood substitutes currently available. The blood or blood cells you get during your transfusion are usually donated by another person.

Sometimes, you can donate your own blood so it can be stored and given back to you if needed. This is called an autologous (aw-TAH-luh-gus) donation. To learn more, read *Being Your Own Blood Donor* (www.mskcc.org/pe/being-your-own-blood-donor).

After it's donated, blood is tested to see what type it is. It's also tested for things such as:

- Syphilis.
- Hepatitis B and C.
- HIV.
- A virus linked to a very rare form of leukemia.
- West Nile virus.
- *Trypanosoma cruzi* (a parasite that causes Chagas disease).
- Zika virus.
- Bacteria (platelets only).

If the tests show any of these, the blood is thrown away.

Directed donations

A directed donation is when someone donates blood or blood cells specifically for you. Directed donations are tested in the same way as other donations. If the blood tests positive for any of the things listed above, we'll notify the donor privately.

Directed red blood cell donations are held for you for 25 days. Directed platelet donations are held for you for 4 days. After that, the donation may be given to someone else. It will also be given to someone else if the donor's blood type isn't a match for yours.

Before your blood transfusion

Before your transfusion, we'll check your blood type with a test called a type and screen. The blood bank may take 2 to 4 hours to process the test. It may take longer if you have unexpected results. Your healthcare provider will use the results of your type and screen to make sure the blood or blood cells you get during your transfusion are safe for you.

Your healthcare provider will also talk with you about risks associated with having a blood transfusion. There's a very small chance of having an allergic reaction during or after your transfusion. The most common reactions are a fever of 100.4 °F (38 °C), chills, or hives. These can be treated with medication. Transfusion reactions are rarely life-threatening.

During your blood transfusion

When everything is ready, the nurse will access one of your veins.

- If you have a central venous catheter (CVC), such as a tunneled chest catheter or peripherally inserted central catheter (PICC line), the nurse will likely use it for your transfusion.
- If you have an implanted port (sometimes called a mediport), the nurse will use it for your transfusion. This will be the same type of needle stick you have for chemotherapy.
- If you don't have an implanted port or CVC, the nurse will put an intravenous (IV) line into one of your veins.

After they access your vein, the nurse will start the transfusion. The transfusion won't hurt.

A transfusion of one unit of red blood cells usually takes 90 minutes to 4 hours. A transfusion of one unit of platelets takes about 30 to 90 minutes. Your nurse will monitor you carefully during your entire transfusion.

After your blood transfusion

If you got your blood transfusion through a vein in your arm you may have some bruising or irritation in the area where the needle was.

Blood transfusions can cause an allergic reaction up to 2 days after the transfusion. Call your healthcare provider if you have any of the reactions below.

When to call your healthcare provider

Call your healthcare provider if you have:

- A fever of 100.4 °F (38 °C) or higher.
- Chills.
- Redness and warmth in your face.
- Hives, rash, or itching.
- Bad bruising or irritation at area IV was.
- Trouble breathing or shortness of breath.
- Lower back pain.
- Nausea (feeling like you’re going to throw up) or vomiting (throwing up).
- Weakness or fainting.
- Dark-colored urine (pee).

If you have chest pain, call 911 right away.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

About Your Blood Transfusion - Last updated on December 26, 2023
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