Your doctor has recommended that you have a blood transfusion. Many people have questions about why they need a blood transfusion. Some people may worry about the risk of being infected with human immunodeficiency virus (HIV), hepatitis, or other viruses. The information below will help answer some of your questions.

What is my blood made up of?

Your blood is made up of plasma (fluid in your blood that holds all your blood cells) and 3 types of blood cells:

- Red blood cells that carry oxygen to your tissues.
- Platelets that help form clots and stop bleeding.
- White blood cells that fight infection.

Why do I need to have a blood transfusion?

You may need a transfusion because of the effect a disease, surgery, chemotherapy, or other treatments have on your
blood.

You may need a transfusion of your red blood cells, white blood cells, or your platelets.

- You may need a transfusion of red blood cells if you had a lot of bleeding or if your red blood cell count is low (anemia).
- You may need a platelet transfusion if your platelet count is low (thrombocytopenia).
- You can also have a white blood cell transfusion, but these are rare and done in very specific situations.

Does it hurt?

It doesn’t hurt to have a blood transfusion. The only pain you may feel is when the needle is placed into your vein. This pain will go away quickly.

If you have a central venous catheter (CVC), you can get red blood cells or platelets through it. This will not hurt.

If you have a Mediport®, it will be the same type of needle stick that you have for chemotherapy.

How can I be sure that the blood I receive is the same type as mine?

Your blood type is either A, B, AB, or O. It’s either Rh positive (+) or Rh negative (-).

Your blood type is checked with a test called a type and
crossmatch. The results of this test are used to match your blood type with the blood in our blood bank. Your healthcare provider will check to make sure that the blood is the correct match for you before they give you the transfusion.

**How long does it take for a type and crossmatch to be completed?**

A type and crossmatch may take 2 to 4 hours to be processed in the blood bank. It may take longer if additional antibodies are found in your blood or if your immunotherapy medications affect your test results.

**How long does it take to receive the transfusion?**

One transfusion of red blood cells usually takes 2 to 4 hours. One transfusion of platelets takes 30 to 60 minutes.

**Are there any risks associated with a blood transfusion?**

Yes, blood transfusions have some risks. These risks include the very small chance of having an allergic reaction or getting an infection. Your healthcare provider will talk with you about these risks before you receive a transfusion.

**How can I be sure the blood is safe?**

After it’s donated, the blood is tested for:

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

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

**Can a friend or relative donate blood specifically for me?**

Yes, friends and relatives can donate both red blood cells and platelets. These are called directed donations. These donations are tested in the same way as other donations. If the blood tests positive for any of the viruses listed above, the donor will be notified privately.

If the donor’s blood type isn’t the same as your blood type, the donation may be given to someone else who may need it.

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 donations may be given to someone else.

**Can I give blood for myself?**
Sometimes, we encourage people scheduled for surgery to donate their own blood. It’s stored and given back if and when you need it. This is called an autologous donation.

Ask your doctor if you can donate your own blood. If this is possible, arrangements will be made with the blood bank for you to begin banking your blood.

You can donate your own blood several times during the month before your surgery. For more information about autologous blood donations, read the resource Being Your Own Blood Donor (www.mskcc.org/pe/autologous_blood_donation).

What if I don’t want a blood transfusion?

It’s always your right to refuse a treatment. However, keep in mind that doctors recommend a transfusion only when they think it’s needed. A large amount of blood is lost during some types of surgery. If this blood is not replaced, you can die.

Are there any substitutes for blood if I need a transfusion?

There are no substitutes for blood. This is why we are so grateful to the many family members and friends who donate their blood.

Is there anything to worry about during or after a blood transfusion?

A blood transfusion can sometimes cause reactions. The most
common symptoms are a temperature of 100.4° F (38° C), chills, and hives. These can be treated with medication. Transfusion reactions are rarely life-threatening. Your nurse will monitor you carefully while your blood transfusion is taking place.

Call Your Doctor if You Have:

- A temperature of 100.4° F (38° C) or higher
- Chills
- Redness and warmth in your face
- Hives, rash, or itching
- Trouble breathing or shortness of breath
- Lower back pain
- Nausea or vomiting
- Weakness or fainting
- Dark-colored urine (pee)

If you have chest pain, call 911 right away.
If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

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