

# Blood Type and Crossmatch



## Does this test have other names?

Blood typing, crossmatching

## What is this test?

This is a set of tests that looks for harmful interactions between your blood and donor blood. The tests are done before a blood transfusion.

Blood typing is the first step. This test finds out if you have blood type A, AB, B, or O. Your blood is also tested to find out if your Rh type is negative or positive. It's important for your healthcare provider to know your blood type in order to select a donor blood that's compatible before doing the crossmatch.

An intermediate step between blood typing and crossmatching is called a recipient antibody screen. This test checks for unexpected antibodies in your blood. If unexpected antibodies are found, this can delay the selection of compatible donor blood.

Crossmatching is a way for your healthcare provider to test your blood against a donor's blood to make sure they are fully compatible. It's essentially a trial transfusion done in test tubes to see exactly how your blood will react with potential donor blood.

It's important for donor blood to match your own as closely as possible. Otherwise, your immune system might create antibodies against the donor blood cells. In this case, your immune system correctly views the donor cells as foreign, but incorrectly views them as harmful. This can lead to a dangerous and possibly fatal reaction.

## Why do I need this test?

You may need this test if you need or may need a blood transfusion. For example, you might need a blood transfusion if you have an acute hemorrhage that causes a severe loss of blood.

You may also have this test if you are having certain medical procedures that could have a complication of significant blood loss, such as a cesarean section, a renal biopsy, or heart surgery.

You may also have this test if you:

- Have severe anemia or a condition that causes severe anemia, such as sickle cell disease, thalassemia, or the effects of chemotherapy for cancer
- Have a bleeding disorder, such as hemophilia
- Are pregnant, to find out if you are Rh negative or positive
- May be getting an organ, bone marrow, or tissue transplant

You may have a partial crossmatch if you are in critical need of blood, and your healthcare provider decides that waiting for a full test could be more dangerous for you. If your situation is too urgent to wait for even a partial crossmatch, type O blood may be used. Type O blood is called the universal donor and has the highest probable compatibility with other blood types.

## What other tests might I have along with this test?

You may also need an antibody screen.

## What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

This test does not have a "normal" result. The goal of blood typing and crossmatching is to find a compatible blood type for transfusion.

The results of blood typing will tell you if you are type A, B, AB, or O and if you are Rh negative or positive. The results will tell your healthcare provider what blood or blood components will be safe to give you.

If your crossmatch finds no antibodies, you have a very low possibility that your blood type will be incompatible with the donor type.

If your crossmatch comes back positive, it means it's likely that antibodies were found. In this case, the antibodies must be isolated in a lab to find out how significant they are. Not all antibodies cause donor blood to be incompatible with your type. But when they are, using blood from that particular donor will most likely be ruled out.

## **How is this test done?**

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

## **Does this test pose any risks?**

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

## **What might affect my test results?**

A crossmatch that's done more than 3 days before a transfusion could have inaccurate results.

## **How do I get ready for this test?**

You don't need to prepare for this test. Tell your healthcare provider about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

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