



**Canadian
Blood
Services**

BLOOD
PLASMA
STEM CELLS
ORGANS
& TISSUES

How rare is your blood?

Canadian Blood Services'
Rare Blood Program

What is rare blood?

Did you know that some people's blood is rarer than others? It's not just about being type A, B, O or AB.

Your blood contains red blood cells. On the surface of those cells are proteins called antigens which have various functions and which may react with the immune system of a blood recipient. There are more than 600 known antigens, with more being discovered every year.

Having rare blood depends on whether or not your red cells carry a particular antigen or combination of antigens, with some combinations being less common than others.

If only
1 in 1,000
people has the same
antigen combination
as you, your blood
is rare.

If only
1 in 10,000
people has the same
antigen combination
as you, your blood
is very rare.

How do antigens determine blood type?

Depending on the antigens you carry, you're classified into one of more than 35 blood group systems — most common are the ABO groups.

If you have type A blood, your red cells carry the 'A' antigen. People with the 'B' antigen have type B blood, while people with neither have type O blood. If you have both the 'A' and 'B' antigens, your blood type is AB.

Other blood groups are less familiar and are only important if a blood recipient has antibodies. Some of these include M, N, K and others. There are also some antigens that most of us carry (such as the H antigen) but a few people lack. Their blood is said to be 'negative' for those antigens while others are 'positive'.

Why rare blood donors are so important

Time is always of the essence when someone needs a blood transfusion. But when a recipient has rare blood and an associated antibody, finding a matching donor can be extremely difficult. If the blood used in a transfusion doesn't match, the immune system may destroy the 'foreign' red cells, harming the recipient.

Canadian Blood Services' Rare Blood Program makes sure lifesaving rare blood is available to patients whenever and wherever it's needed. To deliver on that promise, we need everyone with rare blood to donate as often as they can.

We depend on our rare donors to give blood regularly and also to be available in times of need. Because requests for rare blood are relatively infrequent, rare blood is not usually stocked in hospitals' blood banks. Instead, units of rare blood are often frozen in long-term storage so they can be made available when they're needed most.

When a specific rare blood type is urgently required and no units are available in storage, we will call on our rare donors to ask them to donate right away. If we call, it means the donor's blood is needed immediately or our inventory of that specific type has fallen below optimal levels.

How to become a rare blood donor

It starts with a test to see if your blood is rare or not. To find out if you have lifesaving rare blood contact us. We'll discuss the testing options and arrange for the best method for you.

But if you're a regular blood donor, we may have already determined that your blood is rare. If we know of a patient with a long-term illness who will need a specific rare blood type over time, we often test blood from our current donors for a match. We also test for rare blood when there's an overall shortage of a certain blood type in Canada.

Because antigens are inherited, like eye or hair colour, we also reach out to family members of known rare

donors or patients with an identified rare blood type. That way, we can target our specialized testing to those who are most likely to have rare blood.

If you know you have rare blood, ask your siblings to also consider becoming donors (if they're eligible). Let them know they can contact us to arrange for testing.

There is a **1 in 4** chance your siblings have the same rare blood as you.



How we test for rare blood

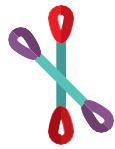
We can test for rare antigens in your blood using a:



Blood donation



Blood sample



Buccal swab sample

Even if our testing shows you don't have rare blood, we still encourage you to donate whole blood. Remember, every donation is valuable and can help save lives.

Did you know?

Information about your rare blood type is important in some medical situations — if you ever need a blood transfusion or during pregnancy, for example. If you have rare blood, be sure to tell your doctor. We can provide a letter explaining your rare type to help communicate what they need to know.

A global need for rare blood

Rare blood is rare all over the world, not just in Canada making it important for national and international blood operators to work together. At Canadian Blood Services, we're proud to partner with the International Rare Donor Panel (IRDP).

One or more units of a specific rare blood type are usually stored at Canadian Blood Services. That allows us to quickly transfer the required rare blood to a hospital that needs it. But sometimes, no units of a rare blood type are available in long-term storage and no donors can donate right away to replenish our inventory. If we're unable to provide the rare blood required by a patient in need, we contact the IRDP.

What is the International Rare Donor Panel?

The IRDP helps manage the world's supply of rare blood and assists in finding rare blood donors for patients with specific needs.

Established in 1965 by the International Society of Blood Transfusion, the day-to-day operations of the IRDP is handled by the World Health Organization's International Blood Group Reference Laboratory (IBGRL) in the United Kingdom.

The IBGRL compiles blood group information on rare donors who have been identified around the world and then makes the information available to national and international blood operators whenever rare blood is needed.

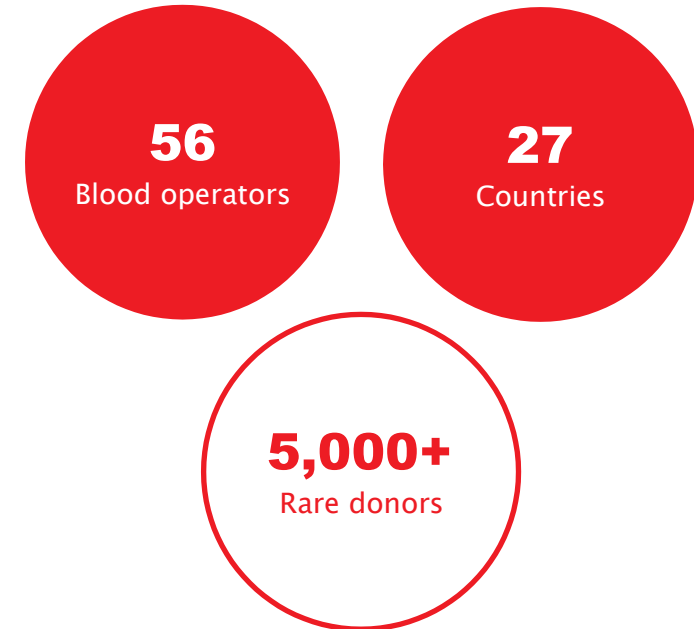
When a request is made, the IRDP searches through a database of more than 5,000 rare donors to find someone whose blood type matches that of the patient in need. It then asks the facility with the matching donor to send the rare blood (if already on hand) or call in the donor to donate the needed blood. If the rare blood is available in storage, requests can often be filled within 24 hours. If a donor needs to be called, more time may be needed to collect, test and ship the blood.

Our partnership with the IRDP helps ensure patient needs for rare blood are met here in Canada. And because Canadian donors are part of the IRDP database, we can do our part in helping other countries meet their patients' rare blood transfusion needs.

Your privacy

Canadian Blood Services is committed to protecting your personal information. If you have questions about how we collect, use, and disclose your personal information, please read our Privacy Notice or contact us at privacy@blood.ca.

Saving lives around the world



About Canadian Blood Services

Canadian Blood Services is a not-for-profit charitable organization that operates independently from government. Canadian Blood Services is one part of Canada's broader network of healthcare systems and is the only national manufacturer of biological products funded by Canada's provincial and territorial governments. We provide blood, plasma, as well as transfusion and stem cell registry services, on behalf of all provincial and territorial governments (excluding Quebec). Our national transplant registry for interprovincial organ sharing and related programs extends to all the provinces and territories.

Learn more about Canadian Blood Services' Rare Blood Program:

RareBloodProgram@blood.ca
rareblood.blood.ca | **1888 2 DONATE**

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