



PATHOLOGY TESTS EXPLAINED

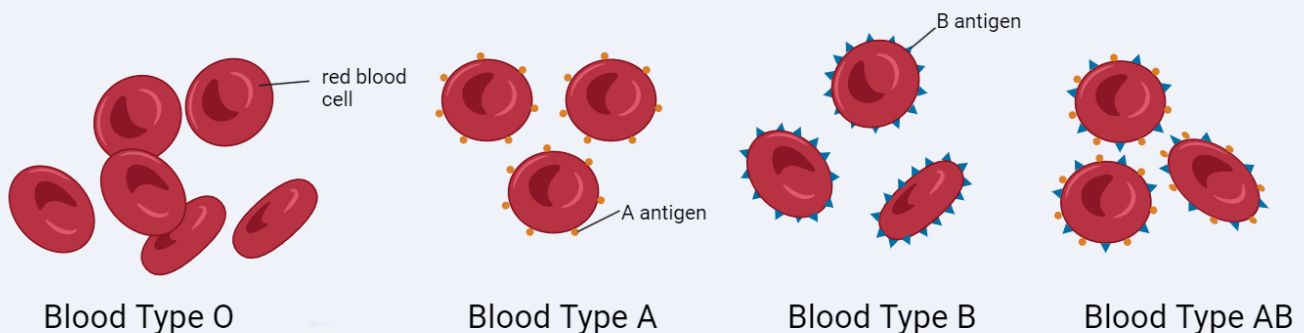
Information about pathology tests to help everyone take control of their health and make the right decisions about their care.

WHAT YOU SHOULD KNOW ABOUT **HAVING TESTS BEFORE A BLOOD TRANSFUSION**

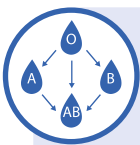
If you need to have a blood transfusion it is important that you are given blood that is compatible with your own. Blood contains antigens and your immune system can attack transfused blood from a donor if it contains antigens that are different to your own.

Antigens are found on the surface of your red blood cells. Before a transfusion is made, your blood will be tested to identify which antigens you have. This will show which blood group you belong to and whether you are Rhesus (RhD) positive or negative. With this information, the lab will perform a test called a crossmatch to identify the most compatible blood.

Blood groups



PTE_x
created by Biorender.com



Four blood groups – A, B, AB and O

Your blood group is classified according to whether you have the antigens A and B. These are inherited from your parents. If you are group A blood type you have A antigens on your red cells. If you have B antigens you are group B. If you have both A and B antigens, your group is AB, while anyone without either antigen is group O.

Rhesus (RhD) factor

Each of these blood types is then further classified according to its Rhesus (RhD) factor.

RhD is another antigen on the surface of red blood cells, and you are either RhD positive or negative. If you are RhD Positive your blood cells have RhD antigens. If you are RhD Negative – your blood cells do not have the RhD antigen/.

O Blood Group

- **O positive is the most common group in Australia**
- **O negative blood group** does not have A or B markers and is Rh negative.
- **O positive blood group** does not have A or B markers but is Rh positive.



What can your results tell you?

Your results will show whether you are type A, B, AB or O and if you are Rh negative or positive.

Crossmatch

Once your blood type is confirmed and antigens identified, a crossmatch test is performed. This is the final check to ensure that any blood transfused to you is compatible, safe, and avoids a transfusion reaction. It involves taking a sample of the donor blood that has been selected for your transfusion and checking there is no reaction with any antigens that have been identified in your blood.

Blood group including RhD type	Compatible blood groups for transfusion
A positive	A positive or negative, O positive or negative
A negative	A negative, O negative
B positive	B positive or negative, O positive or negative
B negative	B negative, O negative
AB positive	AB positive or negative, A positive or negative, B positive or negative, O positive or negative
AB negative	AB negative, A negative, B negative, O negative
O positive	O positive or negative
O negative	O negative

RhD factor and pregnancy

The RhD antigen is important if you are pregnant. If you are RhD negative but the father of your baby is RhD positive, the baby may also be RhD positive. Sometimes RhD negative mothers produce antibodies - known as anti-D - to the RhD antigen if the unborn baby is RhD positive.

If your blood is RhD negative and a small amount of your RhD positive baby's blood enters your blood stream during pregnancy or birth, it can cause an immune response called haemolytic disease of the newborn. In this situation you will be offered anti-D immunoglobulin injections to protect your baby.



Questions to ask your doctor

- Why does this test need to be done?
- Do I need to prepare (such as fast or avoid medications) for the sample collection?
- Will an abnormal result mean I need further tests?
- How could it change the course of my care?
- What will happen next, after the test?

For more detailed information on these and many other tests go to pathologytestsexplained.org.au



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www.pathologytestsexplained.org.au

Pathology Tests Explained is the primary national source of consumer information on pathology testing. Information is written and edited by practising pathologists and scientists, including leading experts. This ensures integrity and accuracy.

Pathology Tests Explained is managed by a consortium of medical and scientific organisations representing pathology practice in Australia. More details at:
www.pathologytestsexplained.org.au/about

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My Health Record

You'll find a direct link to the Pathology Tests Explained website embedded in the pathology results pages of your My Health Record.

Click on the link to find information about what your tests are investigating or measuring and what your results can tell your doctor.