

Blood donation and research

Donating blood for research helps to further medical knowledge on a wide range of blood-related medical conditions and diseases. These include blood clots, heart attack, stroke and certain types of cancer. New and effective treatments for these conditions depend on medical research.

Australians are familiar with the idea of donating blood to help people who need life-saving transfusions or regular blood products, but donating for medical research is less well known.

How blood is used for research

Research institutes use donated blood to increase understanding about blood clotting and disorders, and about diseases that affect the blood such as blood cancers.

About eight out of every 10 Australians will experience a blood-related disease at some point in their lives. Blood clots can cause heart attack or stroke, and blood cancers (such as lymphomas or leukaemia) account for about 15 per cent of cancers in Australia. New and effective treatments for these conditions depend on medical research.

Examples of clinical studies

Donated blood is used to investigate the factors that contribute to blood-related diseases, including:

- **Anti-clotting enzymes** – normally, particular enzymes help to break down and remove blood clots from the bloodstream. Understanding this process may help to develop new treatments for life-threatening blood clots.
- **Platelet adhesion** – investigating the chemicals that cause platelets to stick to blood vessel walls can help determine why life-threatening conditions like stroke occur.
- **Blood stem cells** – blood components such as red blood cells, white blood cells and platelets are created by stem cells. Malfunctioning stem cells are thought to cause blood-related illnesses such as leukaemia. Investigating stem cell functions can lead to improved treatments.
- **Myeloma** – cancer of the plasma cells in bone marrow. Donated blood is used to test the effectiveness of new treatments.

Donor requirements

The donor requirements for research may be slightly different than those for Blood Bank donors, depending on the research project. For example, people with bleeding disorders or people who are taking blood-thinning medications are not usually able to participate in a research project that studies healthy platelets.

People who usually don't qualify as Blood Bank donors (such as people who have lived in the United Kingdom) sometimes qualify as donors for medical research, depending on the project. All donors must be 18 years or over.

The donation process

If you are interested in donating blood for medical research, the process at the Australian Centre for Blood Diseases (ACBD) includes the following steps.

- Contact the Centre by phone to make an appointment.

- At the Centre, you are given a patient information form, which outlines the purpose of the research.
- You are given a consent form to sign.
- The blood collection procedure is safe and is performed by a qualified scientist, nurse or medical practitioner. Staff at the Centre take blood daily. The procedure takes about 20 minutes.
- The amount of blood required from each donor depends on the needs of the research project. The maximum amount of blood taken is 400ml. The body takes only a couple of days to replace the lost blood volume.
- In some cases, you may be paid a small amount (such as \$10.00) for your time.
- If you want, you can be sent information on the outcomes of the research project.
- Depending on the amount of blood taken, you can donate again within three months. Most people can donate regularly.
- Your name and contact details are kept on a database in case you would like to give future donations.
- If you have a complaint about any aspect of the research, you can contact the Standing Committee on Ethics in Research on Humans.

The consent form

If you agree to participate in a blood research project, you will be required to sign a consent form. The exact content of the form may differ depending on the project requirements, but may include a statement that:

- You understand the aims of the research project (this should be explained to you).
- You are willing to donate the required amount of blood.
- You know that the blood donation procedure may be uncomfortable, and may result in a small amount of bruising around the needle site.
- The blood will be used purely for research, not for transfusion or any other medical purpose.
- All information you provide is confidential.
- Your participation is voluntary and you can change your mind at any stage if you want.

Where to get help

- Your doctor
- The Australian Centre for Blood Diseases Tel. (03) 9903 0122
- The Standing Committee on Ethics in Research on Humans Tel. (03) 9905 2052

Things to remember

- Donating blood for research purposes helps to further medical knowledge on a wide range of blood-related diseases. These include heart attack, stroke and certain types of cancer.
- The donor requirements may be slightly different than for Blood Bank donors, depending on the research project.
- The blood collection procedure is safe and is performed by a qualified scientist, nurse or medical practitioner.

This page has been produced in consultation with, and approved by:

Australian Centre for Blood Diseases

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