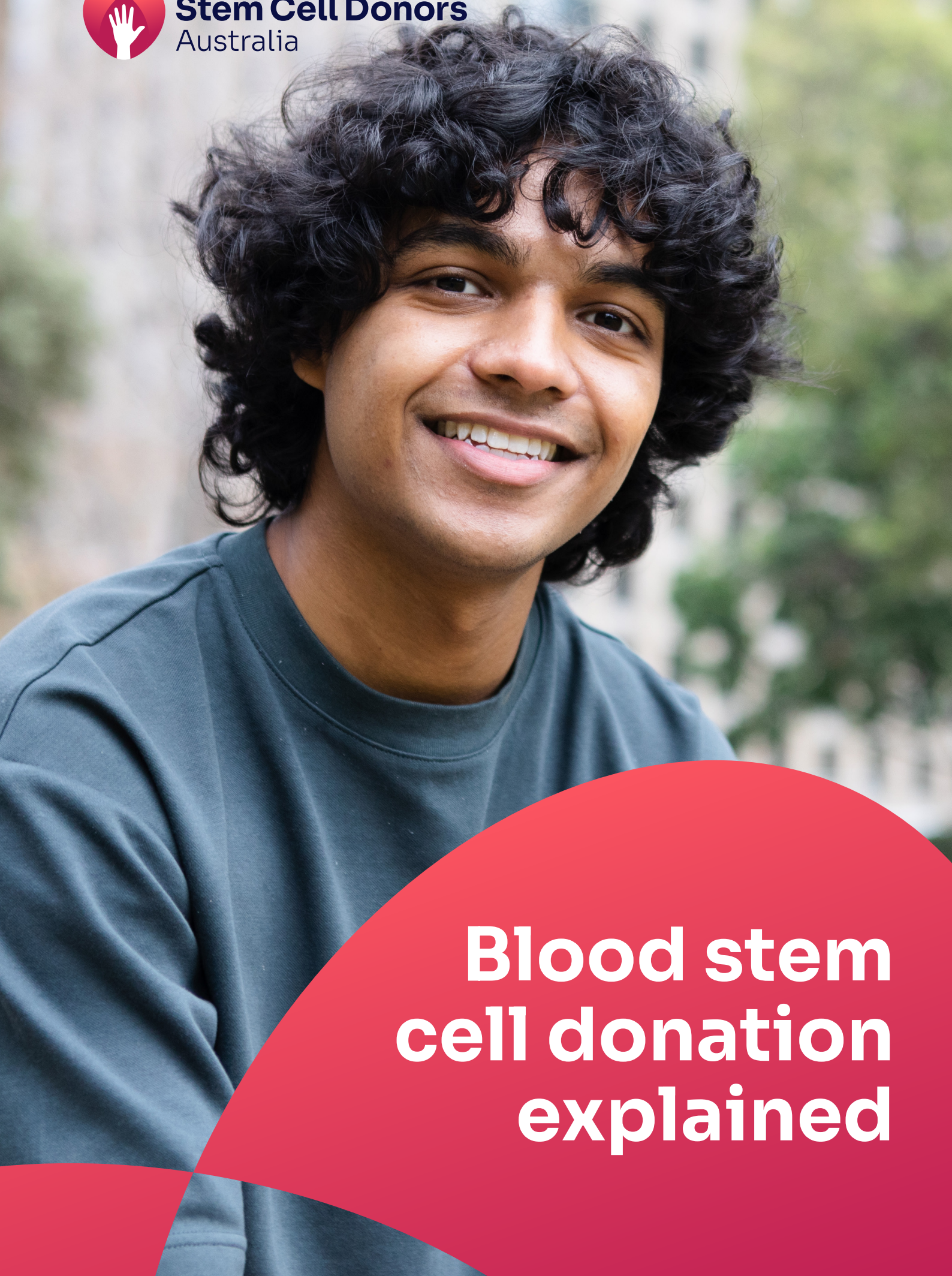




Stem Cell Donors
Australia



Blood stem cell donation explained

You've received a call from the Donor Support Team to let you know that you are the best match for a patient. This is amazing news!

There are a couple of steps you need to go through before you can donate. These checks are in place to ensure you are fit and healthy to proceed. The patient has their own steps they must go through to prepare, so this period can take a couple of months.

Whether you're donating bone marrow or PBSC (peripheral blood stem cells), understanding the process can help you prepare and feel more confident.





1. Preparing for your donation: Workup appointment

You'll need to attend a Workup appointment before you can donate bone marrow or PBSC. This crucial step ensures that you're in good health and that the donation process will be safe for you and the recipient.

To make you feel comfortable, you can bring someone along with you. The goal is to provide you with detailed information about donating so you can make an informed decision to proceed. We encourage you to ask lots of questions.

The Workup must take place within 30 days of your actual donation to ensure your assessment is current. If the bone marrow or PBSC donation is delayed, you may be required to repeat blood work or complete another health history questionnaire to ensure that nothing has changed.

- a. Medical history review.** One of the first steps in your Workup appointment will be a thorough review of your medical history. You'll complete a detailed health questionnaire about your past and current medical conditions, surgeries, medications, and any potential risk factors for the donation process.

Your Workup clinician will go over your answers to the questionnaire with you, asking follow-up questions to clarify any details. This discussion helps ensure that you're a good candidate for donation and that no health concerns might complicate the procedure.
- b. Physical examination.** You'll undergo a physical examination to assess your overall health. This includes checking your vital signs, such as blood pressure, heart rate, and temperature. The Workup clinician will also examine your heart, lungs, abdomen, and other areas to ensure everything is functioning normally.
- c. Testing.** Several blood samples will be taken to test for infectious diseases, check your blood count, and ensure your organs function properly. You might also undergo additional tests, such as an electrocardiogram (ECG) to assess your heart's activity or a chest X-ray if necessary.
- d. Paperwork and consent forms.** After the Workup clinician has discussed the procedure with you, answered your questions, and completed your physical examination, you will be asked to sign consent forms to agree to donate.



2. PBSC donation procedure

- a. G-CSF injections.** PBSC donation is a non-surgical procedure, like donating blood. It involves collecting stem cells from your bloodstream, which requires a process called apheresis. To increase the number of stem cells in your blood, you'll receive injections of a medication called G-CSF (granulocyte colony-stimulating factor) for several days before the donation.
- b. Arrival at the collection centre.** On the day of the PBSC donation, you'll arrive at the collection centre, where you'll be seated in a comfortable chair for the procedure. Nurses will check your vital signs, take more blood samples and prepare you for the apheresis process.
- c. Apheresis process.** The apheresis machine will draw blood, separate the stem cells, and return the rest to you. This process usually takes four to six hours. During the donation, you can relax, watch a movie, or listen to a podcast.
- d. Post-donation recovery.** After the PBSC donation, you may feel a bit tired, and some donors experience mild bone or muscle pain from the G-CSF injections. These side effects typically resolve within a day or two. Most PBSC donors can resume their normal activities the next day.



3. Bone marrow donation procedure

- a. Arrival and pre-procedure preparation.** Before the procedure begins, you'll meet with the anaesthetist and the collection clinician. The anaesthetist will explain the anaesthesia process and answer any questions. The collection clinician will review the procedure with you to ensure you're comfortable and informed.
- b. Administration of anaesthesia.** In the operating room, the anaesthetist will administer general anaesthesia through an IV line, so you'll be completely asleep during the procedure. You won't feel any pain or be aware of what's happening.
- c. Bone marrow extraction.** While you're under anaesthesia, the collection clinician will use a special needle to extract liquid marrow from the back of your pelvic bone. The procedure typically takes up to an hour. The marrow collected depends on the recipient's needs but is limited to a maximum of 20 mL per kilogram of donor weight.
- d. Post-procedure monitoring.** You'll be closely monitored for a few hours to ensure there are no immediate complications, and you'll need someone to drive you home. Most donors can go home the same day, though some may stay overnight for additional observation, depending on their condition.





4. Follow up and recovery

a. Monitoring your recovery. Whether you donate bone marrow or PBSC, you'll be monitored closely after the donation to ensure you recover. Most donors experience a full recovery within a week, though some may feel residual fatigue or discomfort for a bit longer.

You may continue to feel some fatigue or mild pain in the days following your donation, but most donors can return to normal activities within a week. If you notice any unusual symptoms, such as excessive pain, swelling, or signs of infection, contact the collection centre or your healthcare provider immediately.

b. Follow ups. Naturally, after such a procedure, we want to keep in touch and see how you are. You will be contacted for your first follow up within 72 hours of your collection.

Regardless of the donation method, your Donor Support Coordinator will follow up with you weekly until you can resume regular activity. We will contact you annually for up to ten years to check your general condition.

c. Emotional and psychological support. Donating is a significant contribution, and it's expected to experience various emotions afterwards. Support services are available if you need someone to talk to or want to connect with other donors who have had similar experiences.

