

Sickle cell and blood donation



Medical fact file
Information for donors

Sickle cell and blood donation

To increase the safety of blood for patients, each donation is now run through a filter to remove the white cells. Sometimes blood donated by people with sickle cell trait does not filter properly – if this happens, the donation cannot be used for patients. We therefore need to identify donations from sickle cell trait donors so that we can do an extra check to make sure the filtering process has been successful.

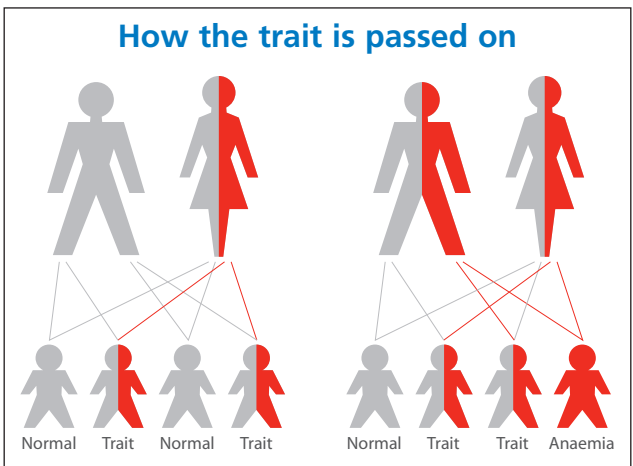
What is sickle cell and why is it important?

Our bodies get the oxygen they need through the red cells in the blood system. These cells contain haemoglobin, a molecule which is able to pick up and release oxygen easily. People with sickle cell have a different haemoglobin. When this haemoglobin releases oxygen, it tends to crystallise. This in turn deforms the shape of the red cells which become rigid and sickle-shaped, hence the name. Unlike normal red cells, which are flexible, these sickle cells cannot get through the body's narrow blood vessels easily. This causes blockages in the blood vessels and leads to a 'sickle cell crisis' which can be

agonising for sufferers, who often need hospital treatment including blood transfusions.

Sickle cell trait

People who inherit sickle haemoglobin from one parent are described as having sickle cell trait. Although their red cells contain some sickle haemoglobin, as well as normal haemoglobin, they do not have any health



problems as a result. The only significant consequence may be to their children. If both parents have the sickle cell trait, there is a one-in-four chance of their child having sickle cell anaemia. If only one parent is affected, none of the children will have sickle cell anaemia, but may inherit the sickle cell trait.

Sickle cell anaemia is a serious, lifelong condition with severe chronic anaemia and susceptibility to infection. It is usually first

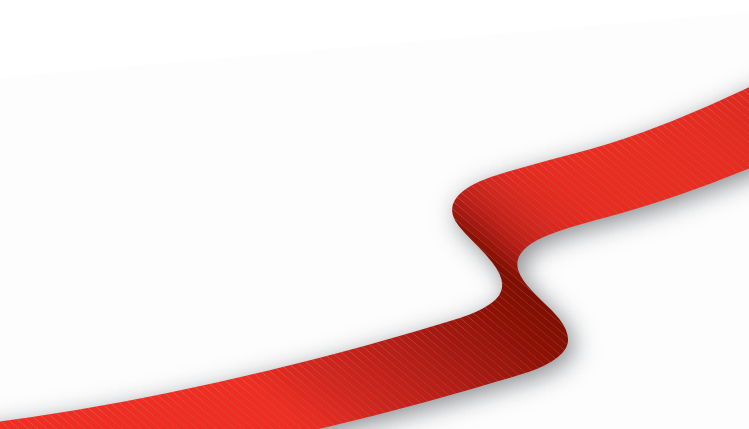
diagnosed in childhood and frequent treatment is often required.

Who is affected?

Sickle cell conditions mainly affect people of African and African-Caribbean descent, but are also found in those from India and the Middle East, as well as Europeans of Mediterranean origin. So we test blood donors with these ethnic origins for the sickle cell trait. In this country, over 300,000 people have sickle cell trait and approximately 12,000 have sickle cell anaemia.

Other tests on your blood

Donors selected for sickle cell testing are also tested for blood groups which are more commonly found in people of the same ethnic origins. Their donations are essential to help us provide compatible blood for patients with these rarer blood types. For these reasons it is very helpful to identify donors who may carry sickle cell trait, so that their blood can be tested, processed and used appropriately.





What happens if the test shows sickle cell trait?

We will write to let you know, and we will also advise that your general practitioner is informed, so that your medical records are up to date. Apart from that, you will not need to do anything else.

You will certainly be eligible to continue donating as long as your blood filters properly. Your blood is very valuable to us and the sickle cell test will help us to make the very best use of it.

Our donor helpline is open for general enquiries 24 hours a day, every day of the year. If you have a non-urgent medical enquiry, please try to contact us between 9am and 5pm, Monday to Friday.



If you have given blood and become unwell

If you have given blood and you become unwell (except for a cold or coldsore) in the two weeks following your donation, ring our donor helpline as soon as possible on 0300 123 23 23.

The National Blood Service is part of NHS Blood and Transplant, a Special Health Authority within the NHS.

www.blood.co.uk