

# In-depth information on organ and tissue donation



**We want teachers to feel confident and knowledgeable** when informing and inspiring students about organ and tissue donation so this document includes in-depth information, explanations and statistics covering:

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The resource pack also includes a shorter 'frequently asked questions' document for you to have at hand in the classroom, as these may come up throughout your lesson.

For more information, and if you have any questions, please visit the website: [www.organdonation.nhs.uk](http://www.organdonation.nhs.uk), call us on **0300 123 23 23** or email us at [marketing.comms@nhsbt.nhs.uk](mailto:marketing.comms@nhsbt.nhs.uk).





# Who are NHS Blood and Transplant and what do we do?

We stand for hope. We stand for life. We stand for helping people to do something extraordinary, save and improve the lives of others.

As an essential part of the NHS we take pride in playing our part to make the most of absolutely every donation – from blood and organs to tissues and stem cells.

Every day we bring the values of caring, expert and quality to our roles. When we break new scientific ground, when we connect with donors and families, when we help to save a life – it's because of each and every one of us.

The donors who make our work possible do so selflessly, giving life and changing life for the better. It is because of them, and the people who need their life-saving and life-enhancing donations, that we strive to be the best in all we do.

NHSBT is a Special Health Authority, dedicated to saving and improving lives through the wide range of services we provide to the NHS.



## **We are responsible for:**

- Encouraging people to donate organs, blood, stem cells and tissues when and if they can
- Optimising the safety and supply of organs, blood, stem cells and tissues and matching them to patients
- Helping to raise the quality, effectiveness and clinical outcomes of blood and transplant services
- Providing expert advice to other NHS organisations, and to the health departments of the four UK countries
- Commissioning and conducting research and development to improve outcomes for patients
- Implementing relevant EU statutory frameworks and guidance.

## **Our work is dedicated to saving and improving lives**

We provide blood and transplant services to the NHS, which means supplying enough safe blood to hospitals in England and providing tissues and solid organs to hospitals across the UK.

Each year donors give around 1.6 million donations of blood and 6,250 organs – saving and transforming countless lives and those of family members.

Safeguarding blood supply and increasing the number of donated organs involves collecting, testing, processing, storing and delivering blood, plasma and tissue to every NHS Trust in England. We also match, allocate, audit and analyse organ donations across the whole of the UK.

Currently there are around 6,000 people on the UK active waiting list. During the financial year 2017/18, around 1,000 people either died whilst on the waiting list or became too sick to receive a transplant. This is because, despite more than 600,000 people dying each year in the UK, around 7,000 people die in circumstances where they can become a donor.

NHSBT is responsible for managing the National Transplant Database, which includes details of all donors and patients who are waiting for, or who have received, a transplant. We maintain the NHS Organ Donor Register (ODR), and provide a 24-hour service for supporting donor families. We are also responsible for matching and allocating donated organs in a fair and unbiased way, including the transport arrangements to get the organs to patients.



# 02

## 2a What is organ donation?

Organ donation is giving a solid organ to help someone who needs a transplant. Transplants can greatly enhance the lives of other people, but this relies on donors and their families supporting their decision to donate their organs or tissues when they die.

## 2b How do I become a donor?

If you know you want to help others when you die, you can sign up as a donor on the NHS Organ Donor Register - a confidential and secure database that records the decision of everyone who does or does not want to donate their organs and/or tissue after they die.

### You can join by:

- Visiting our website: [www.organdonation.nhs.uk](http://www.organdonation.nhs.uk)
- Calling us on **0300 123 23 23**.

You can also become a donor by letting your family and friends know what you want to donate, as they will be asked to support your decision to donate your organs when you die.

### When you register:

We will send you a donor card. If you have registered but don't have a card, ring us on **0300 123 23 23**. We are available 24 hours a day, seven days a week.

**From spring 2020, the law around organ donation in England is changing. All adults over 18 in England will be considered to have agreed to be an organ donor when they die, unless they had recorded a decision not to donate or are in one of the excluded groups. Whatever your decision, make sure you tell your family and closest friends, to help ensure your decision is honoured.**

**To find out more about your choices, visit [www.organdonation.nhs.uk](http://www.organdonation.nhs.uk).**



## 2c What is the NHS Organ Donor Register?

The NHS Organ Donor Register is a confidential and secure database which records the decision of everyone who has decided what they want to do regarding donating their organs and tissue after they die.

### Why join the NHS Organ Donor Register?

Recording your decision on the register will help medical professionals to support your donation decision should you die in circumstances where you may be able to donate. It is also an indication for your family of your decision. This is important because we will always approach your family prior to donation.

### On the NHS Organ Donor Register you can also:

- Register not to be an organ donor: You can choose not to donate your organs or tissues in the event of your death
- Update your registration: Whether you move homes, change your name or change your mind about donating your organs or tissue you can always update your registration with your new details and decision
- Withdraw from the register: You can choose to withdraw your details and decision from the register.

The law around organ donation in Wales changed on 1 December 2015. If you haven't registered a decision to opt in or opt out of organ donation in Wales, you will be treated as having no objection to be an organ donor. This is called deemed consent. For more information visit: [www.organdonationwales.org](http://www.organdonationwales.org).

**The same system will apply in England from spring 2020.** Whatever your decision, let close family or friends know to help ensure your decision is honoured. To find out more about your choices, visit [www.organdonation.nhs.uk](http://www.organdonation.nhs.uk).



2d

## Why should I share my decision to donate?

If you registered to donate your organs and tissue, we will ask your next of kin to support your decision to be a donor. If you register without telling your next of kin, it may come as a surprise to them. Letting them know what you've decided now makes it much easier for them, especially when they are trying to come to terms with their loss.

**So, if you want to make a real difference by being an organ and tissue donor after your death, then you should:**

- Join the NHS Organ Donor Register
- Talk about your decision with family and friends.

2e

## Types of donation

**There are three different ways to donate. These are:**

- Brain stem death – This is where a person no longer has activity in their brain stem due to a severe brain injury. They have permanently lost the potential for consciousness and the capacity to breathe. These patients are nursed on a ventilator, which keeps the person's heart beating and oxygen is circulated through their blood
- Circulatory death – This is the irreversible loss of function of the heart and lungs after a cardiac arrest from which the patient cannot or should not be resuscitated. It can also be the planned withdrawal of life-sustaining treatment from a patient
- Living donation – This happens while you are still alive. You can choose to donate a kidney, a small section of your liver, discarded bone from a hip or knee replacement and also your amniotic membrane (placenta). For more information on living donation visit [www.organdonation.nhs.uk/become-a-living-donor](http://www.organdonation.nhs.uk/become-a-living-donor)

Transplants can be the best treatment for most people with organ failure. We suggest that you discuss your organ donation decision with family and friends so that they know your wishes, as relatives will be asked to support donation going ahead when you die.



## Common transplants

**The most common transplants are:**

- Kidney transplant
- Heart transplant
- Liver transplant
- Lung transplant

**Other transplants include:**

- Pancreas
- Small bowel
- Tissue such as corneas, heart valves, skin and bone

## 2f What does my religion say?

All the major religions of the UK support the principle of organ donation and transplantation and accept that organ donation is an individual choice.

For more information, please visit [www.organdonation.nhs.uk/your-faith-and-beliefs](http://www.organdonation.nhs.uk/your-faith-and-beliefs)

We encourage people from all ethnic communities to donate because there is a better success rate when we carry out transplants in the same ethnic group. We match organs by blood group and tissue type (for kidney transplants).



2g

## Why does NHSBT need more donors from black, Asian and minority ethnic (BAME) groups?

We need more donors from black, Asian and minority ethnic (BAME) groups because:

- Some blood and Human Leukocyte Antigen (HLA) types are more common among some ethnic groups
- Some ethnic groups are more likely to develop medical conditions that need blood, organs or tissue donations
- People needing bone marrow are more likely to find a match with someone with a similar ethnic background.

Patients from black, Asian and minority ethnic communities are more likely to need an organ transplant than the rest of the population as they are more susceptible to illnesses such as diabetes and hypertension, which may result in organ failure and the need for a transplant.

On average, patients from black, Asian and minority ethnic communities wait longer for a kidney transplant, due to the lack of suitable organs. Blood and tissue types need to match for a successful organ transplant and organs from people of the same ethnic background are more likely to be a close match.



# 03

## About tissue donation

Tissue donation has helped thousands of people receiving life-transforming tissue transplants. Donated tissue can save or improve the lives of people suffering from illness or injury.

There are two types of donation:

- Deceased
- Living

### 3a Deceased tissue donation

Tissue donation is giving your tissue to enhance the lives of others. Some tissue can only be donated from deceased donors.

#### Heart valves

- Transplanted to save the lives of children born with heart defects and adults with damaged heart valves.

#### Skin

- Used as a natural dressing
- Helps to treat people with serious burns by stopping infections
- Helps to reduce scarring and reduce pain.



## Bone

- Used for people receiving artificial joint replacements
- Replaces bone that has been removed due to illness or injury
- Helps reduce pain and improve mobility.

## Tendons

- Used to attach bones and muscles to each other
- Can help rebuild damaged joints.

## Corneas

– the clear part of the eye covering the iris.

- Can help restore sight to people who have lost their vision as a result of eye disease, injury or birth defects.
- Can be donated up to 24 hours after death and donations can take place either in hospital or a funeral home.

## Who can become a tissue donor?

Almost anyone can become a tissue donor, however, there are some exemptions. To protect the person receiving your donation from infection, we will check your medical and lifestyle history to make sure your tissue is safe.

## Making a tissue donation

You can donate your tissue up to 24 hours after you die. Sometimes, we accept donated tissue up to 48 hours after death.



## 3b Living tissue donation

Tissue donation is giving your tissue while you are alive to enhance the lives of others. Some of the tissue you can donate while alive includes:

- Bone
- Amniotic membrane

### Bone

If you are having a total hip replacement, you can donate the femoral head removed during your operation to help others who need a bone graft to restore health and mobility through impaction surgery.

### What it is used for?

Donated bone can be used in bone grafts to restore health and mobility to many people.

### How to donate

Unfortunately, you cannot donate at every hospital. We work with specific hospitals in England where trained staff can discuss donation options with you.

If you are having primary hip surgery, you should:

- Discuss donation with a member of the pre-operative assessment team
- Email: [tissue.donation@nhsbt.nhs.uk](mailto:tissue.donation@nhsbt.nhs.uk)

### Amniotic membrane or placental donation

Amniotic membrane is part of the placenta. It is the tissue closest to your baby while it develops in the womb. If your baby is delivered by caesarean section, you can donate the placenta at delivery.

### Functions of the amniotic membrane

- Protects your baby from any harm
- Has natural healing actions to help your baby develop.

### What it is used for?

We use it in eye surgeries to help wounds heal fast.



# 04

## Eligibility for donation

### Medical conditions

Having a medical condition does not always prevent you from becoming an organ or tissue donor. At your time of death, a qualified doctor responsible for your care will decide whether some or all organs or tissue are suitable for transplant.

But there are a few conditions that will exclude you from donating organs and tissue.

### You cannot become an organ donor if you have:

- HIV (in some circumstances people with HIV can donate to another person who already has HIV)
- Creutzfeldt-Jakob Disease (CJD)
- Cancer that has spread in the last 12 months.

### Using your organs for research

We can only use your organs and tissue for research after you die if we get permission from you or your family and if they are not suitable for transplant.

### Leaving your body for medical research after organ donation

We will not accept your body for medical research if you have donated your organs or after a post-mortem.

But, if you donated only your corneas, you can leave your body for research.



### **If your relatives object**

If your family or relatives object to the donation, even if you made your decision clear before you died, we will:

- Discuss the matter with them
- Encourage them to accept your decision
- Make it clear that they do not have the legal right to override your decision
- Ultimately respect their decision.

### **If you have no family or relatives**

NHS professionals will speak to your GP about your medical and social history. But you should also tell a close friend or colleague about your decision as they may be able to provide information to help us.

### **Qualifying relationship/Nearest relative (Scotland)**

When the wishes of a person who has died are unknown, the law defines who is their nearest relative to decide on donating their organs. This enables specialist healthcare professionals seeking permission for donation to know who they should approach and in what order. This ranges from a spouse or partner, parent or child, brother or sister, other relatives or a close friend.

### **Eligibility**

There is no age limit on becoming an organ and/or tissue donor. But there are a few medical conditions that may prevent you from donating organs. If you are legally competent, you can join the NHS Organ Donor Register (ODR).

Joining the register provides legal consent for you to donate your organs and/or tissue after you die.

### **Children and young people joining the ODR**

Children and young people can join the ODR but their parents or guardians must give consent after they die, or until they reach 16 or 18 years of age, depending on where they die in the UK.

### **Age related restrictions**

There's no age limit for donating. Healthcare professional decide to use your organs and/or tissue based on strict medical criteria, not age, and will determine whether your organs and tissue are suitable for transplants when you die.





# About blood donation

## Screening

We will test your blood for transmissible diseases and viruses including HIV and hepatitis.

## Turned down to donate blood?

You can still donate your organ or tissue even if you have been turned down for blood donation.

A healthcare professional will decide whether your organs or tissue can be transplanted based on your medical history.

You may not be able to donate blood, if you have had a blood transfusion, or hepatitis, or are taking cold remedies or other medicines.

## Why give blood?

Donated blood is a lifeline for many people needing long-term treatments, not just in emergencies. Your blood's main components: red cells, plasma and platelets are vital for many different uses.

## Red cells, plasma and platelets

Red cells are used predominantly in treatments for cancer and blood diseases, as well as for treating anaemia and for transplant and burn surgery. Plasma provides proteins, nutrients and a clotting agent that is vital to stop bleeding – it is the most versatile component of your blood. Platelets are tiny cells used to help patients at a high risk of bleeding. They also contribute to the repair of damaged body tissue.



## Short shelf-life

Maintaining a regular supply of blood to all the people who need it is not easy. Blood components have a short shelf-life and predicting demand can be difficult. By giving blood, every donor is contributing to a nation-wide challenge to provide life-saving products whenever and wherever they are needed.

- Red cells – last up to 35 days
- Plasma – lasts up to one year
- Platelets – last up to seven days.

## Balancing blood types

Ever since a national blood service was first created in 1946, we have relied on the generosity of blood donors not only to maintain stock levels for all our hospitals, but also to provide the necessary range of eight blood types. We are indebted to our regular donors for their role in helping us to save lives.

We sometimes need to target specific blood types to increase stock levels. This is particularly true of the rare but essential blood type O Rh negative because it is the only blood type that can be given to anyone, regardless of their own blood type. Donors with the blood group B Rh negative are more often found in black and south Asian minority ethnic communities.

## How to prepare yourself to give blood

- **Eat**  
Eat regular meals to help you avoid feeling lightheaded.
- **Sleep**  
A good night's sleep will boost wellbeing.
- **Drink**  
Drink plenty of fluids 24 hours before donating, but avoid alcohol.
- **Wear**  
Wear loose and comfortable clothing, avoid tight sleeves.
- **Know**  
Knowing your medical, body piercing and travel history will save you time.
- **Distract**  
Nervousness is normal, come with a friend or bring along a book or MP3 player so you can relax during your visit.
- **Exercise**  
Should you undertake any exercise as part of your normal routine, it is advisable to avoid strenuous activity or exercise that is not usual for you before (and after) donating blood. Also ensure you are fully recovered and well hydrated before you donate blood.



## What happens when I give blood?

Donating blood is simple. To see what happens view our blood donor experience at [www.blood.co.uk/what-happens-on-the-day](http://www.blood.co.uk/what-happens-on-the-day)

### Welcome and preparation

Before donating blood, please eat regular meals, drink plenty of fluid (non-alcoholic) and avoid vigorous exercise or exertion. When you attend your donation session please read our Welcome leaflet provided. This explains the importance of Blood Safety. It's important to read this whenever you attend because advice does change. We will give you sufficient information so that you can make an informed choice, on the benefits and risks of donating blood and samples for testing. We will provide you with 500ml of fluid just before you donate. By drinking this over about five minutes, it will help with your wellbeing during and after donation.

### Health screening

You will be called for private health screening, where a donor carer will confirm your identity. It's critical that we guarantee an accurate link between you, your Donor Health Check and your donation. We must ensure that it's safe for you to donate and your donation is safe for a patient to receive. We'll ask some confidential questions based on your completed Donor Health Check. There is a period of time between contact with any infection and detecting markers in the laboratory. We trust your honesty when answering these personal questions. This will ensure your blood is safe to transfuse to patients.

You may be referred to a registered nurse for certain medical queries. Their uniforms have white piping on the collar and cuffs. An explanation will always be provided if you are not able to donate. You will be advised when you can donate.,

For your wellbeing, we must ensure you have enough haemoglobin (iron) in your blood before donating. A small blood sample will be taken from your finger to test your haemoglobin levels. If your results are lower than our accepted levels, we will offer you a confirmatory test. This requires a sample of blood from your arm, to be tested in a machine at the session. We will advise you of the result.

Following health screening, if you are fit and well and pass the health screening, you will be asked to sit in a different waiting area. From here you'll be called and escorted to a donation chair.



## Your donation

When you are comfortable on the chair, you will be asked your name, address and date of birth again. Blood bags and sample tubes are labelled with unique donor identification numbers. All collection equipment is single use and sterile; only one blood bag is filled with your donation. A blood pressure cuff will be placed on your arm to maintain a small amount of pressure during your donation. The cuff is not used to measure blood pressure. Your arm will be thoroughly examined to find a suitable vein before being cleaned with an antiseptic sponge containing Chlorhexidine solution.

Blood donation our arm will be thoroughly examined to find a suitable vein before being cleaned with an antiseptic sponge. You will see staff cleaning their hands frequently, using hand wipes or gels.

Donors are advised to do applied muscle tension exercises during donation. This is to promote wellbeing during and after donation. Following needle insertion you should be comfortable during your donation. If you experience any discomfort or pain please alert a member of staff.

An agitator scale constantly weighs and measures your donation. It will stop automatically when your donation is complete. Donor carers will be available to you throughout your donation. You may hear beeping noises from the agitator, these inform us of the progress of your donation. A full donation is 470ml and will usually take between five and 10 minutes.

If you require

assistance or have any concerns, please make us aware by raising your non-donation arm. After donation, the needle will be removed and a sterile dressing applied to your arm. We advise that you leave the pressure roll on for 30 minutes and the plaster dressing on for six hours.

Please avoid using this arm to push on or to carry anything heavy. We will give you a card at the end of your donation with important care advice.

## After donation refreshment

A selection of drinks and snacks are available at the refreshment table. We encourage donors to relax here for at least 15 minutes and to have at least two drinks following donation.

If you feel unwell, please remain seated and alert a member of staff immediately. Where possible, we encourage you to book an appointment for your next donation.

## At home

If you become unwell within two weeks following your donation, or if you believe there is a reason your blood should not be transfused to a patient, please call our donor helpline on **0300 123 23 23**. Please do not have a hot bath on the day of your donation.



## Putting safety first

While both donating and receiving blood is extremely safe, these procedures do have potential risks. So we are constantly assessing and managing these risks, balancing them with the benefits to patients and donors.

Safety doesn't begin and end at our blood collection sessions - hospitals, patients and donors have a role to play as well.

In order to help us keep blood safe as stated above, the final decision to accept or defer a donor at a blood donation session rests with the donor care staff and Registered Nurse on duty.

## Reducing donor risk

The Donor Health Check (DHC) is designed to help us spot potential problems for donors and patients. Together with the medical screening we carry out at every session, we can assess if it's safe for someone to donate that day.

## Reducing patient risk

The DHC is our first line of defence. That's why it's crucial that you read it each time because our safety rules or your personal circumstances may have changed. Our next line of defence is ensuring our staff follow best practice guidelines on things such as arm cleaning. And of course, back in our labs we test every donation for any dangerous infections.

## Testing to minimise risk

Every donation is tested for a number of different infections. The tests play a very important role in ensuring that we provide a safe blood supply to patients. We test for your blood group, so that we can select the correct group for the patient. We also test for infections that can be passed from donor to patient via a blood transfusion. Any donation that is reactive on any one of the screening tests cannot be used. If your blood is reactive on any one of the screening tests, further tests are carried out to confirm whether the result indicates a true infection. That's why the DHC questions are so vital to help us spot the risk. Thanks to these questions, processes and tests, the main risk from a blood transfusion is not an infection but being given blood of the wrong blood group.



**Teacher resource** In-depth information on organ and tissue donation

## How Blood is used

### Whole blood

This is rarely used these days, only really in instances of severe blood loss. It's usually separated into its individual components.

### Red cells

The main function of red blood cells is to distribute oxygen to body tissues and to carry waste carbon dioxide back to the lungs.

These are used in the treatment of all kinds of anaemia, which can't be medically corrected, such as when rheumatoid arthritis or cancer is involved, when red cells break down in the newborn and for sickle cell disease.

They're also essential to replace lost red cells due to blood loss in accidents, surgery and after childbirth.

### Platelets

Platelets can be used in bone marrow failure, post-transplant and chemotherapy treatments, and leukaemia. Platelets can be of huge benefit to the recipient.

### Plasma

There are two forms of plasma used for treatments:

- Frozen plasma
- Processed plasma.

Fresh frozen plasma is used after obstetric loss of blood (which is usually childbirth), during cardiac surgery, and to reverse any anti-coagulant treatment.

It's also used to replace clotting factors after massive transfusions or when they are not being sufficiently produced, such as liver disease.

Processed plasma has several important uses. For instance, it is used in the treatment of haemophilia and for treating sufferers of Christmas disease – a life-threatening form of haemophilia.

Processed plasma is also used to help produce stronger antibodies against diseases like tetanus, hepatitis, chickenpox and rabies.



**Teacher resource** In-depth information on organ and tissue donation

It also helps generate anti-D, which is used for RhD negative pregnant women carrying RhD positive babies.

Additionally, plasma contains a protein called albumin, which is extremely beneficial for burn victims.

### Why blood is vital even for the dying

Everyone knows blood is literally a lifesaver for those who've been in an accident or need it to help survive treatments and operations. But for some, whose illness has no cure and that last battle they face just can't be won, a blood transfusion can help to improve their quality of life during their final months, weeks or even days.

Karen Clarke, a Community Nurse who gives transfusions to the terminally ill in their own homes, says, "These vital transfusions give patients a better quality of life. It gives them the energy and ability to enjoy this precious, final time with their families."

But this time is often a gift that only blood can provide. In some serious accidents, its use can mean that a critically ill patient can stay alive long enough for their loved ones to reach the hospital to see them, one last time.

### Blood transfusion

A blood transfusion is a procedure in which blood is given via an intravenous line into the blood vessels.

### Top uses of blood

- Surgical 30%
- Haematology 18%
- Gastro intestinal bleeding 11%
- Anaemia 30%
- Maternity 6%
- Other 5%.





# About bone marrow donation

## What is bone marrow?

Bone marrow is a soft tissue found in the centre of certain bones in your body. It is this bone marrow that creates stem cells. Stem cells are the 'building blocks' from which any of the other normal blood cells can grow, such as red cells, which carry oxygen, white cells, which fight infection, or platelets, which stop bleeding.

## Why do we need bone marrow/stem cell donors?

There are a number of diseases that prevent a patient's bone marrow from working properly. These include leukaemia and aplastic anaemia as well as other diseases of the immune system. Although chemotherapy will successfully treat some of these patients, for many the only possibility of a cure is to have a stem cell transplant from a healthy donor. In about 30% of cases, a matched donor can be found from within the patient's family, such as a brother or sister.

The other 70% of patients have to rely on a matched volunteer donor, identified organisations such as the British Bone Marrow Registry (BBMR). We need to continue to recruit more donors, particularly from black, Asian and minority ethnic communities. This is important as finding a suitable match, whenever a bone marrow/stem cell transplant is needed, is often difficult due to the lack of appropriate volunteers on the Registry.



## What is the British Bone Marrow Registry (BBMR)?

The British Bone Marrow Registry (BBMR) is a division of NHSBT, working in co-operation with the other UK bone marrow/blood donor registries and the NHS Cord Blood Bank. Stem cell donations from cord blood can be made at specialist hospitals within the NHS. For more information see [www.nhsbt.nhs.uk/cordblood](http://www.nhsbt.nhs.uk/cordblood)

The BBMR holds details of stem cell donors and cord blood donations from across the UK. It is responsible for recruiting, testing and registering blood donors who volunteer to become stem cell donors. It is also part of an international network, performing searches around the world to find suitable stem cell donors.

## How can I join the BBMR?

If you are aged between 17 and 40 years old (you will need to register before your 41st birthday), are male and a blood donor, please consider joining when you next donate blood. We are also very keen to hear from females aged 17-40 who are from Black, Asian, and minority ethnicities and mixed ethnicity backgrounds. To join, simply tell the staff when you next give blood.

We use these criteria to target the donors that we are short of on the BBMR. All of our donors are made available for searching as potential matches for patients anywhere in the world. For those who wish to become a stem cell donor and do not meet our recruitment criteria, there are still opportunities to join one of our other UK partners; either Anthony Nolan or DKMS (previously Delete Blood Cancer UK). Donors in Wales may consider the Welsh Bone Marrow Donor Registry. Please note that you only need to join one UK registry as we anonymously share your matching information.

You can join the register when you next give blood, or at the same time as your first donation. We will check that there is no medical reason preventing you from being both a blood donor and a stem cell donor. At the time of your blood donation we will take an extra blood sample, so that for the purposes of the registry we may identify your tissue type from your DNA - the genetic material our bodies are made up from. Please inform the staff at the blood donation session that you wish to join the BBMR before your blood donation is taken.



## What happens next?

Patients and potential donors are matched by comparing the white cells in the blood to reveal tissue types. If you are found as a potential match, we will contact you to see if you are still willing to donate, to check on your health status and to ask for blood samples for testing. If you have any questions about this you can ask a member of registry staff. This is a serious commitment and you should consider the full implications for both you and the patient when you first complete the consent form and provide a blood sample for testing. If, however, you do not wish to proceed, you may withdraw at any stage.

## What happens if I am a match for a patient?

If you are identified as the best possible match with a patient, we will invite you to come into one of our centres for an explanation of the procedures from one of their clinical staff. You will also have a thorough medical examination by a doctor and you will be asked to give your consent for a number of blood tests, to ensure there is no medical reason why you shouldn't donate.

## How do I donate?

There are two possible ways of donating stem cells that you may be asked to consider. The first, and most frequent, is to donate stem cells from circulating blood. For the four days preceding the donation a nurse will inject you with a drug, which vastly increases the number of stem cells in your circulating blood. On the fifth day you will have a blood test to check that you have enough circulating stem cells. You will then be connected to a cell-separator machine, without the need for a general anaesthetic. The machine collects the stem cells from your blood via a vein in one arm, returning the blood to your body through a vein in your other arm. If you are already a platelet donor you will be familiar with this type of machine. Occasionally you may be asked back on the sixth day for a further donation, if the dose of cells obtained is not sufficient.

The second method is donation of bone marrow itself, which involves the removal of stem cells from your hip bones. This is done using a needle and syringe under a general anaesthetic in a hospital. Although this is not a surgical operation, there will be marks on your skin made by the needle. As there may be some discomfort where the needle has been inserted, you will need to stay in hospital for up to 48 hours and have a period of recovery at home of up to five days.

## Where will I make the donation?

Stem cell donations are given in hospitals or at a clinic and you can bring someone with you for support.



## After your donation

For the first 12 months following your donation you will be contacted regularly to ensure you do not experience any adverse reactions. If you need to take time off work for the procedure you will be entitled to re-imburement of expenses. These details will be covered in your medical interview when the procedures are explained.

## What are the risks?

Stem cell donation is very safe. However, no medical procedure is entirely without risk. Both forms of stem cell collection mentioned within this pack may involve some temporary discomfort in your bones and any small risks involved will be fully explained before you donate.

## What information will I receive about the patient?

The identity and location of both the donor and the patient must remain confidential. This is to comply with 'EU Tissue and Cells Directive (EUTCD)'. All you will know is that you are performing a very valuable and life-saving procedure for a person who is in need.

## Stem Cell Registries

Bone Marrow Donor Worldwide links bone marrow donor registries internationally using only tissue-typing to establish rapid identification of potential donors. You can be assured that your personal details are only available to the staff of the BBMR and are not available to international agencies.

## How can I get more information?

If you have any further questions or general enquiries, please contact the NHS Blood and Transplant Donor Helpline on **0300 123 23 23** or visit [www.nhsbt.nhs.uk/british-bone-marrow-registry](http://www.nhsbt.nhs.uk/british-bone-marrow-registry)

