

Sometimes, if you're donating via the Peripheral Blood Stem Cell Collection (PBSC) method, we can't collect enough stem cells — even after your G-CSF injections. If this happens, we might recommend you have another injection called plerixafor.

This information will tell you what plerixafor is, how it is given to you, and potential side effects.

What is plerixafor?

Plerixafor increases the number of stem cells in your blood. It does this by encouraging stem cells in the bone marrow to be released into the bloodstream.

It has been used effectively and safely for many years in patients who are donating stem cells for their own future transplant.

Why might I need plerixafor?

We might suggest a plerixafor injection if:

- the number of stem cells we collect after your first day of donation is too low
- there was some interruption to your G-CSF injections before your donation, and it is therefore unlikely you will donate a safe number of stem cells

The recipient of your stem cells will likely have started their conditioning therapy for their transplant when you begin your donation. Using plerixafor, if necessary, makes sure we can still deliver those lifesaving stem cells.

How will I be given plerixafor?

You will be given plerixafor as an injection by one of the nurses at the collection centre. It's a bit like having another G-CSF injection. The dose of plerixafor is determined based on your weight, but you will receive only one injection.

What will happen after I have the injection?

This is what you can expect after your injection:

- You will be monitored for 30 minutes to check for any immediate side effects, like an allergic reaction.
- You will be discharged or can stay at hospital overnight if your medical team would prefer it.
- Any side effects can be noticed within a few hours. We explain what to look out for later in this information.

- You will go back to your collection centre the next morning for your second day of apheresis.

What are the side effects of plerixafor?

Every donor is different and will experience plerixafor injections differently.

The most common side effects (more than 1/10 donors) are:

- nausea (feeling sick)
- diarrhoea
- redness where you had your injection.

Other side effects (less than 1/10 donors) can include:

- vomiting (being sick)
- difficulty sleeping
- feeling dizzy
- headaches
- tummy pain
- constipation
- indigestion
- having a dry mouth
- fatigue (extreme tiredness)
- achy muscles.

You will be given one dose of an anti-sickness medication alongside plerixafor to prevent you feeling or being sick.

You may be discharged with a 24 hour supply of an anti-sickness medication and loperamide (anti-diarrhoea) medication.

Rare side effects (occasional case reports) include:

- allergic reactions, including anaphylaxis
- spleen rupture — similar to when you were taking the G-CSF injections, contact us immediately if you have pain on the left side of your tummy or upper left of your back

A doctor will also chat through what to expect at your medical assessment, and you can ask them or your Anthony Nolan coordinator any questions.

How long do side effects last?

Side effects will have resolved within 24 hours for the majority of donors.

You will be assessed after your donation to review whether you need any more supportive medications to take home with you to prevent any nausea or diarrhoea.

Is there any other additional information about plerixafor?

Plerixafor is currently used 'off-label' in healthy donors. This means the medicine has a license for treating some conditions but that its manufacturers have not yet asked the Medicines and Healthcare products Regulatory Agency (MHRA) to licence plerixafor for this specific use.

Medical evidence suggests plerixafor is safe for use in healthy donors. You will only be offered plerixafor if it is considered safe for your situation.

A UK consensus statement has been published the British Society of Blood and Marrow Transplantation and Cellular Therapy (BSBMTCT) and all the UK stem cell donor registries supporting its use in healthy donors.

You can read more about the use of off-label and unlicensed medicines at <https://www.hey.nhs.uk/patient-leaflet/unlicensed-off-label-medicines/>

Can I take plerixafor if I am breastfeeding?

Unlike with G-CSF, you must stop breastfeeding for seven days after your plerixafor injection.

We understand this might not be possible. If you're breastfeeding, speak to your medical team to discuss different options. You might prefer to donate via bone marrow instead, as you can start breastfeeding again after 24 hours.

Is there an alternative to plerixafor?

It is not compulsory to have plerixafor and this will be discussed with you in detail prior to administration, with an additional consent form being completed between you and the medical team looking after you.

If you can't or don't want to have a plerixafor injection, you might be able to donate via bone marrow.

A bone marrow donation is a small operation where your stem cells are taken directly from the bone marrow in your hip. This is carried out under general anaesthetic so you will be asleep. It takes about 30 minutes and you will stay overnight in hospital afterwards.

You can discuss your options with your medical team.