Stem Cell Collection

Stem cells live in your bone marrow. They make blood cells for your body. Collecting your bone marrow stem cells is the first part of the transplant process.

Getting Your Stem Cells Out of Your Bone Marrow

In order to collect your stem cells, we usually give you medicines that cause your stem cells to move out of your bone marrow and into your bloodstream. Once they are in your bloodstream, we can collect them through an IV catheter.

We call this stem cell mobilization, or mobilizing your stem cells.

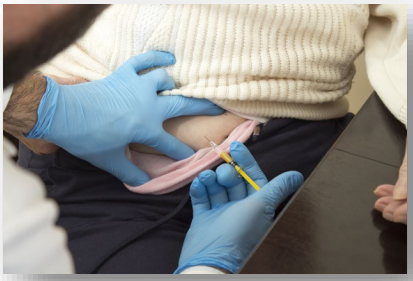
The medicine we usually use for this is called Filgrastim, or G-CSF (Granulocyte Colony Stimulating Factor). We give you this medicine as an injection (shot) under your skin once a day. By the fifth day of getting Filgrastim shots, most people have enough stem cells in their blood stream to start collecting them.

Another way to mobilize your stem cells is to give you chemotherapy first and then injections of G-CSF medicine. If you get this procedure, you may need to stay in the hospital for the chemotherapy. Usually you can get the G-CSF injections and stem cell collection at the UNM Cancer Center outpatient clinic.

Your transplant doctor will figure out the best stem cell mobilization method for you.

Collecting Your Stem Cells

Before starting collection, we will put a central venous catheter into a large vein in your body. This catheter is a tube that we can use for both collecting your stem cells and your stem cell transplant. We will collect your stem cells by connecting your IV catheter to an apheresis machine. The apheresis machine separates your bone marrow stem cells from the other cells in your blood. Then it returns the rest of the blood back to your body.

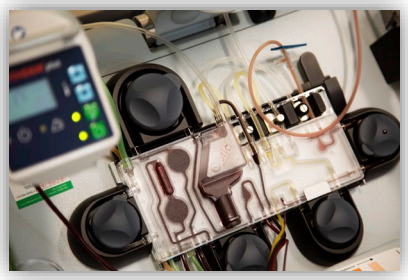


We will give you medicine injections so we can collect your stem cells.

What to Expect During Your Collection

- You will come to the Cancer Center. We will take blood samples to see if you are ready to start collection.
- If the number of stem cells in your blood is too low, we might give you a medicine to help move your bone marrow stem cells to your bloodstream. This medicine is called plerixafor (Mozobil).
- Once there are enough stem cells in your bloodstream, we will connect your catheter to the apheresis machine so we can start the stem cell collection.
- The apheresis machine will move your blood through the machine. It will take stem cells from your blood and store them in a transfusion bag. It will return the rest of your blood into your body. Your blood will be circulated through the machine several times to collect enough stem cells. We will use a small amount of blood thinning medicine to prevent blood clots.
- The collection process takes 3 to 4 hours. An apheresis nurse will be with you during the whole process.
- You should not feel pain during this process. You may feel some tingling or muscle cramps because your calcium levels will be changing. Tell your nurse if you feel tingling or cramps. Your nurse can treat this by giving you calcium through your IV catheter.
- In some cases, the apheresis machine will also remove some of your red blood cells or platelets during the process. We will check your blood counts after collection. If your red blood cells or platelets are too low, we will give you a blood transfusion after the apheresis process.
- Make sure you have someone to drive you home afterwards. Usually, people do not have bad side effects from this procedure.

If we do not collect enough cells from you on the first day, you will need to come back for the next 1 to 3 days.



We will collect your stem cells using an **apheresis machine**.

HLO Approved
2/19