About you

This booklet is yours to help you to understand your stem cell harvest and to explain some of the things that may happen to you.

my name: ____________________________ my age: ____________________________

my hospital: ____________________________

date of harvest: ____________________________

As part of your treatment you will need to have your stem cells collected. This is called harvesting.
Bone Marrow

Bone marrow is the soft bit in the middle of your bones and is the factory where all of your blood is made.

Stem cells are special cells which normally live in your bone marrow. They produce your red cells, white cells and platelets.

Meet Ruby

We would like you to meet Ruby.

Ruby is going to tell you about what it’s like to have your stem cells harvested and how they are given back to you.

Platelets stop you from bleeding when you get a cut or fall over and hurt yourself.

White blood cells help your body to fight infections.

Red blood cells give you energy to help you run around and play.
Stem cell nurses

Ruby came to see the stem cell nurses before having her harvest. Ruby had blood taken from her central line (wiggly) to make sure that it was safe for her to go on the special machine. She also needed to have her height and weight measured.

Harvest machine

The harvest involves separating and collecting your stem cells from the rest of your blood using a special machine called a harvest machine.

Here is Ruby looking at the machine.
Ruby’s treatment

Before your harvest you will have an injection (called GCSF) once a day in your leg to make the stem cells move from your bone marrow factory into your blood. These injections may be given through a special tiny tube called an insuflon.

Here is Ruby with an insuflon in her leg. Ruby had magic cream put on her leg before she had the insuflon put in. The cream will help numb the skin so you don’t feel the insuflon going in as much.

You do not have to stay in hospital as a nurse may be able to visit you at home to give you these injections.

Blood will be regularly taken from your central line so that the stem cell nurses know when it is the best time to harvest your cells.

The insuflon can stay in for 7 days. This is where Ruby will have her injections every day. It will sting but only for a short while. You can decide whether to have the injection given slowly or quickly. Ruby found that ice packs helped to take away the sting.
Harvest day

On the day you come to hospital to have your cells harvested the stem cell nurses will check your temperature, pulse and blood pressure.

Here is Ruby having her blood pressure taken.

The stem cell nurses have to put lots of numbers into the harvest machine so that the machine knows how many cells to collect.

Ruby is now ready to be connected to the harvest machine. It will be attached to Ruby’s central line just like being attached to a ‘drip’.

Here is a picture of Ruby attached to the harvest machine.

Some children may need a special tube (cannula) in their arm or hand if their central line does not work very well, or a special line in their leg.

Ruby’s blood goes into the harvest machine where it spins around very fast. This spinning separates out the blood so that the stem cells and a liquid called plasma (which is also part of your blood) can be collected in separate bags.
How Ruby kept busy

You will need to stay on your bed or in a chair for about four hours. Ruby was able to eat, drink, play, and watch DVDs with her family.

The nurses will ask you to drink milk whilst you are on the machine. This is because some children can get tingling in their fingers and toes (this happens if your calcium level becomes too low). Don’t worry if you don’t like milk, lots of energy drinks contain calcium, or you may prefer a yoghurt.

Stem cells

Once the harvest is finished Ruby’s stem cells are put in a box and taken to a laboratory where they are counted.

Sometimes if there are not enough cells then you may have to come back the next day to have more cells collected.
The nurses will check lots of paperwork to make sure that they are your cells (the same as when they check your medicines). The nurses then need to defrost Ruby’s cells (warm them up) so they can go through her central line. To do this the bag of frozen cells are placed in a bath of very clean warm water.

The cells can take several minutes to defrost.

Ruby has her stem cells back

Following your treatment you will need to have your stem cells returned by the stem cell nurses, just like Ruby.

The stem cells will arrive in a big container.

The cells will have been frozen and kept in a special liquid to keep them fresh. Look what happens when the nurses remove the lid!

Your central line will be checked to make sure it is working and you will be given some medicines through your line to stop you from feeling sick.
Ruby having her stem cells through her line

Once the cells have defrosted the nurses will check everything again. Depending on how many cells there are, sometimes they are given straight into your line and sometimes they are given back in a ‘drip’.

The nurses will give the cells back quickly as they want them to be as fresh as possible. You may find it helps to either suck a sweet or have a drink as you may have a funny taste in your mouth whilst the cells are being given back.

Can you see what helped Ruby?

You may feel a little sleepy following the cells but this is quite normal. You may also notice a smell of ‘sweetcorn’ for a few days. This is because of the special liquid added to the cells in the laboratory. The smell will soon disappear and is nothing to worry about.
Goodbye

If you are already staying in hospital you will need to stay on the ward. If you came to see us from home you can go home an hour after you have had your cells back.

Your stem cells will now travel back to the bone marrow where they will grow and help you feel better. It may take up to two weeks for this to happen.

We hope Ruby has helped you understand your stem cell journey.
CCLG supports the 1,700 children who develop cancer each year in Britain and Ireland. As an association for healthcare professionals involved in their care, it works to benefit children through development of the highest standards of care. CCLG is a major provider of accredited information for patients and families.

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