



**Did**

**You**



**Know?**

**Ages  
5-10**

**About Sickle Cell**

# DID YOU KNOW?



Sickle cell disease is an illness of red blood cells.

You are born with it, you get it from your parents. This means you cannot catch it from other people.

Inside the red blood cells there is something called Haemoglobin or Hb. There are many kinds of Hb, each has a letter or a name.

Sickle cell Hb has the letter **S**

Hb is short for Haemoglobin. Haemoglobin is a protein in the red blood cells. This makes the **red** colour, and carries oxygen around the body.

Each of your parents gives you one kind of Hb. For example, if you have one Hb **S** from Dad and one Hb **S** from Mum, then you have Sickle Cell Disorder:



Dad + Mum = Child

**SS**

+

**SS**

=

**SS**

sickle cell disorder

# Sickle Cell Trait



Sickle cell trait means that a person is born with one unusual Hb which is the Hb S from one parent, and one usual Hb A from the other parent.



**Dad** + **Mum** = **Child**

**AS** + **AS** = **AS**

AS = Sickle Cell Trait

AA = no sickle cell disorder or trait



Normal red blood cells

Sickled red blood cells

All red blood cells are made  
in the bone marrow.

Sickle cells get their name from the farmer's sickle, because of the shape.



Look at the normal cell: it is like a doughnut



The sickle shaped red blood cells cannot travel through the tiny blood vessels easily, Oxygen also cannot get through to the tissues and organs of the body that need it. The sickle cell can get stuck in blood vessels and block the blood flow. This can cause pain (crisis) and other problems.

Sickle cell pain is  
also called crisis

# CRISIS (PAIN)



Everybody feels pain differently. You may have your own ways of dealing with it, and things you do when you feel pain in different parts of your body.

## Pain Killers

Children take painkillers when in pain. There are different kinds of painkillers. There are some painkillers you take at home like paracetamol and ibuprofen. If you have a crisis and go into hospital you will have stronger painkillers sometimes by injection such as morphine.

**but there are other things you can try too.**

**You could try:**

- Reading
- Listening to music
- Hot water bottle
- Eating food you like
- Phoning a friend
- Watching TV
- Sleeping
- Thinking of a place that makes you feel happy
- Playing computer games

## Other Things that can contribute to crisis

- Exercise that is too hard and makes you feel out of breath can cause the red blood cells to sickle
- Stress like exams can cause red blood cells to sickle, so keep calm and relax, stay positive
- Infections can cause the red cells to sickle
- Cold weather
- Not drinking enough water



**Be active  
but DON'T  
do too  
MUCH**

# SOME OTHER COMPLICATIONS



## Anaemia

Anaemia is when there are not enough red blood cells or Hb. It will make you feel tired. It is very common in people with a sickle cell disorder.

## Jaundice

Jaundice occurs when red blood cells come to the end of their life. Sickle red blood cells have a shorter life and break down quickly. This makes up something called bile that is yellow. You will see that sometimes your eyes become yellow in colour.

## Bedwetting



Bedwetting is also called enuresis. Some children do this a lot even when they are teenagers. Do not worry about this too much, it will stop. There is help. Do not stop drinking plenty.

## Stroke



A stroke is caused by sickling of the red blood cells in the blood vessels of the brain. Doctors and nurses watch for this very closely.

## Priapism



Priapism is when there is pain in the penis and it stays up for a while. Do not be afraid to tell someone if you have this, or if it is painful when you pass urine.

## Sickle Chest



Sometimes a crisis occurs in the lungs and blood builds up that can cause breathing problems .



# SICKLE CELL DISORDERS



**At Home**



## Penicillin

Penicillin fights infections caused by bacteria. As infections can cause a crisis you will take penicillin every day to try and stop. This prophylaxis means guarding against disease. Most of you will take folic acid every day. Folic acid is a vitamin that helps the body to make new red blood cells.

## Hydroxyurea

Hydroxyurea is another medicine for sickle cell, It is a tablet. You may have heard about or have taken it yourself. It can help reduce the number of crisis and how bad they are.

## In Hospital



### Blood Transfusions

Sometimes if you have a very bad crisis or other problems with your sickle cell the doctors may decide to give you some blood. This is called transfusion. Blood transfusions are also used to stop strokes.

When you have a lot of blood transfusions, after a while the body builds up iron. This is called iron overload. The body cannot get rid of this iron by itself, so you will have to take some medicine to remove it.

### Bone Marrow Transplant

Bone marrow is fluid in the middle of the bone that makes all your blood cells, these are red blood cells, white blood cells and platelets. Some children can have their bone marrow taken out, and be given bone marrow from someone who does not have sickle cell.

Before you can have a bone marrow transplant, the doctors have to do some tests to find the right person who can give you a bit of their bone marrow, usually your sister or brother. Other things have to be done, and you may have to stay in hospital for a long time.

Did you know that you can get iron overload when you have a lot of blood transfusions?

## Remember: Staying Healthy

- Eat well
- Exercise – remember to drink a lot more when you are doing exercise or sports
- Rest and relax
- Drink lots (don't drink fizzy drinks too often)
- Keep warm in cold weather – you can still be trendy and dress warmly



Information, counselling and caring for those with Sickle Cell Disorder and their families.

### Sickle Cell Society

We would like to know your reviews on this booklet. Please send your comments to [info@sicklecellsociety.org](mailto:info@sicklecellsociety.org)

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