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Haematology Department

**Sickle Cell Disease – Chronic Complications**

**The Kidney**

Information for parents and carers

**Introduction**

This leaflet is designed to explain about the long term (chronic) complications of sickle cell disease. The information does not cover everything. If you are ever worried about your child then please contact your Sickle Cell Team or take your child to Accident and Emergency Department.

**What does the kidney do?**

The kidney cleans the blood by filtering out any waste products and extra fluid. Waste products in the blood come from the normal breakdown of active tissues, such as muscles and from food. The body uses food for energy and self-repairs. After the body has taken what it needs from food, wastes are sent to the blood. If the kidneys did not remove the wastes they would build up in the blood and damage the body. The waste products and fluid are turned into urine.

The kidney also activates vitamin D which controls the amount of phosphate and calcium in the bones and blood. The kidney also produces Erythropoeitin (EPO), which is carried in the blood to the bone marrow where it stimulates the production of red blood cells. The red blood cells carry oxygen throughout the body.

**What problems can happen with the kidney?**

The kidneys in someone with sickle cell disease get damaged over time and this can lead to a number of problems:

* ****People with sickle cell disease do not concentrate the urine as much as normal so they need to pass large quantities of diluted urine. This can lead to them getting dehydrated and can cause bed wetting at night.

* They can have blood in their urine.
* It can lead to high blood pressure.

**How will I know whether my child’s kidneys are working properly?**

When your child comes to clinic their kidney function will be monitored. They will have their blood pressure monitored and be asked to give a urine sample. The urine sample will be tested to see if it contains protein or blood. If these are present it could be an indication that their kidneys have been damaged. Your child will have a blood test approximately every six months

**What happens if the results show my child’s kidneys aren’t working properly?**

If there is blood present in your child's urine it will be checked to make sure that they don't have an infection. The doctors will encourage your child to drink more fluid than normal. If your child has high blood pressure or protein in their urine they will also be referred to one of the nephrology (kidney) doctors who will see them in clinic.

**What are the treatment options if my child’s kidneys aren’t working properly?**

If your child's kidneys aren't working properly they may be given medicine to decrease the amount of protein in the urine or medicines to treat high blood pressure. The doctor may also recommend that your child takes the medication called Hydroxycarbamide. This can slow down the damage caused by sickled red blood cells

**Can I prevent my child getting kidney problems?**

To help reduce your child's chances of getting kidney damage you can encourage them to drink plenty of fluids throughout the day. If your child is having a crisis then you should avoid giving them Ibuprofen if they are not drinking very well as this can be damaging to the kidney.

**Further information**

If you have any further information please contact your Sickle Cell Team on 0151 252 5070



**Useful websites**

[www.alderhey.co.uk](http://www.alderhey.co.uk)

[www.sicklecellsociety.co.uk](http://www.sicklecellsociety.co.uk)

Alder Hey Children's NHS Foundation Trust is neither liable for the contents of any external internet site listed, nor does it endorse any commercial product or service mentioned or advised on any of the sites.

This leaflet only gives general information. You must always discuss the individual treatment of your child with the appropriate member of staff. Do not rely on this leaflet alone for information about your child’s treatment.

This information can be made available in other languages and formats if requested.

Alder Hey Children’s NHS Foundation Trust

****Alder Hey

Eaton Road

****Liverpool

L12 2AP

Tel: 0151 228 4811

[www.alderhey.nhs.uk](http://www.alderhey.nhs.uk)

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