

# Corpus callosotomy



Information for families

**Great Ormond Street Hospital  
for Children NHS Foundation Trust**

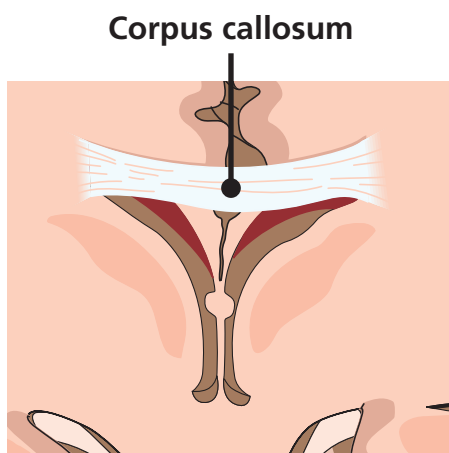
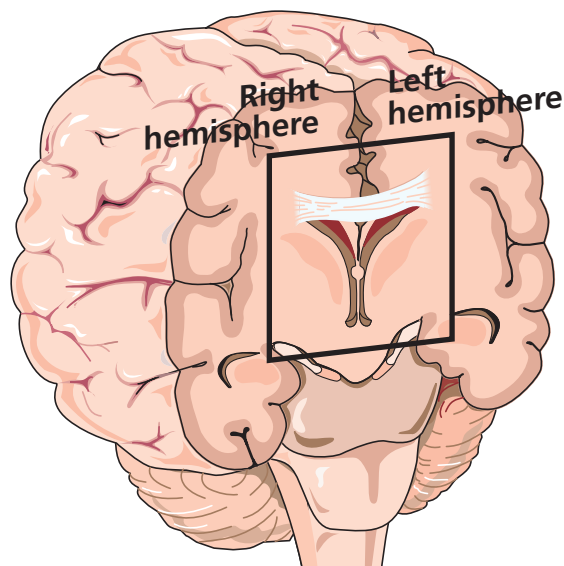
This leaflet explains the operation called corpus callosotomy and what to expect when your child comes to Great Ormond Street Hospital (GOSH) to have this operation. You should read this leaflet in conjunction with our *Welcome to the Children's Epilepsy Surgery Service* leaflet which explains about the epilepsy surgery programme at GOSH.

## What is a corpus callosotomy?

A corpus callosotomy is an operation which divides the corpus callosum. This is the main fibre bundle that connects the right and left sides of the brain to each other. In the normal brain, electrical activity flows from one side to the other. In children with epilepsy, abnormal electrical activity can also travel across this connection. Dividing all or part of the corpus callosum reduces this abnormal

flow from one side of the brain to the other, and so can help children with certain kinds of epilepsy.

At GOSH we generally divide the whole corpus callosum, however, for some children, it may be appropriate to only divide the anterior part, but this will be discussed with you by your doctor. From our experience, dividing the corpus callosum can reduce fits to a more acceptable level.



## **Why might my child need this operation?**

Some children suffer from seizures called 'drop attacks'. When children have a drop attack they suddenly fall to the ground, either with a sudden jerk (myoclonic seizure), by going stiff (tonic seizure) or floppy (atonic seizure). These seizures can cause injury. A corpus callosotomy works best for these types of seizures.

## **How do the doctors decide if my child needs this operation?**

Your child will previously have had a series of tests and investigations to see where in the brain the seizures are starting and whether these parts of the brain are needed for important functions. All these results are discussed at the multi-disciplinary team Epilepsy Surgery Meeting. The team will decide if surgery is an option. You will then be able to discuss these results with the team at an outpatient appointment at the epilepsy surgery clinic and come to a decision about the operation.

## **What are the risks of the operation?**

Healthy children usually cope well with the anaesthetic, but the risk increases if your child has other problems.

All surgery carries a small risk of infection or bleeding. In general, there is a five per cent risk of complications, which may mean that your child could have to stay in hospital longer than expected. We will send you a letter following your epilepsy surgery clinic appointment summarising the benefits and risks of surgery for your child.

Corpus callosotomy carries a small risk of causing weakness in the arm or leg. If this happens, it is temporary in most cases. There is also a small risk that your child will be less communicative after surgery; however, we expect this to quickly improve. Occasionally we find that although this operation reduces the number of drop seizures that your child has, there can be an increase in the number of focal seizures.

## **What should I expect from this operation?**

Generally, 80 per cent of children who have a corpus callosotomy have reduced frequency and severity of their seizures. Your child's doctor will discuss with you the likelihood of success for your own child.

## **Are there any alternatives to this operation?**

Your child can continue with drugs to try to control seizures. However, although there are new drugs available all the time, people who have not responded to them early have a smaller chance of responding with each new drug tried. This means that there is only a small chance of drugs controlling your child's seizures long term.

If the ketogenic diet is suitable for your child, your doctor will have discussed this with you. Vagus Nerve Stimulation (VNS) therapy may also be an option; this may be discussed with you by your consultant or by the team at your epilepsy surgery clinic appointment. Further information about the ketogenic diet and VNS therapy is available.

## **What happens before the operation?**

Before the operation, we will ask you to arrange a blood test with your family doctor (GP) to ensure your child is fit for surgery.

You will need to come to Koala Ward the day before the operation.

This is to make sure that your child is well enough to have the operation. A doctor will examine your child and may take a repeat blood sample to check that his or her blood parameters (for example, clotting tests, full blood count) are fine. The neurosurgeon will explain about the surgery in more detail, discuss any worries you may have and ask your permission for the operation, by signing a consent form. Another doctor will also visit you to explain about the anaesthetic.

Occasionally, some children need neuropsychology testing and a further scan before the operation, but we will let you know if this is likely before you come into hospital. If your child has any medical problems, for instance, allergies, please tell the doctors

about these. If your child has had any infectious diseases like chicken pox or head lice recently, please tell the doctors.

Before the operation, your child will need to have a bath and a hair wash with a special soap.

## **What does the operation involve?**

Your child will have this operation under a general anaesthetic, which is a medicine which puts them very deeply to sleep. This means that your child will not feel any pain during the operation which will last between three and four hours. Your child's head will not be shaved completely, just a line where the doctors will make the incision (cut). This will be done while your child is under the anaesthetic. The doctors will make one incision over the top of your child's head. The doctors will cut through the corpus callosum. After the operation, they will close up your child's skin and fix it with stitches.

## What happens after the operation?

When your child has recovered from the anaesthetic, a member of staff will bring your child back to Koala Ward. He or she will have a head bandage in place. Your child may also have a drain coming out from the wound (a clear, plastic tube). This is usually removed after 24 hours.

At the end of the day, the doctors will visit you to talk about the operation. Your child may feel sick after the operation, but the doctors will give him or her medicines to reduce this. The sickness should pass within a couple of days. Children usually come back from theatre with an intravenous infusion (drip) to replace their body fluids when they are unable to drink. The nurses will monitor your child closely for the first few days after the operation to make sure he or she is recovering well.

Your child's face may be a little bruised and swollen after the operation. This tends to get worse for the first two to three days and then to resolve. If your child is in any pain, the doctors and nurses will give him or her medicines to reduce this. Your child may also develop a high temperature after the operation, but this is usual and does not tend to be due to an infection. The doctors may carry out some tests to make sure.

Over the next few days, your child will be able to start moving around. Your child is likely to be in hospital for between three to four days. He or she will be able to gradually return to normal day-to-day life and full activity over the next two to three months. Your child should stay away from school for about four weeks after the operation. Your doctor or nurse will give you more specific information before you leave hospital.

When you and your child leave hospital, we will arrange for you to come to outpatient appointments at regular intervals. These will usually be six weeks, six months and a year after the operation. We will check that your child is recovering well from the operation and that his or her seizures are under control. It is unlikely that your child's drugs would be changed for at least six months.

## Notes

**If you have any questions or worries,  
please telephone the Nurse Practitioner for complex epilepsy  
on 020 7405 9200 Extension 1592.  
Out of hours, please call Koala ward on 020 7813 8313**

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