

What is a Craniotomy

Information for parents and carers



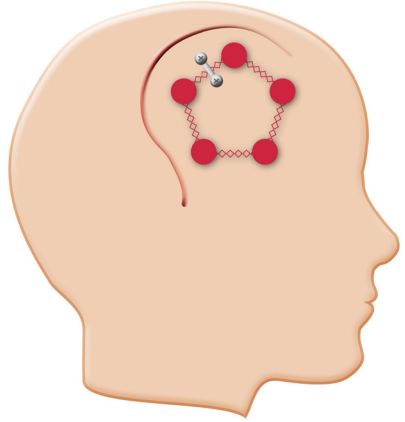
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What is a craniotomy?

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A craniotomy is a surgical procedure during which a piece of bone is removed from the skull to gain access to the brain. The piece of bone is usually referred to as a 'bone flap'. The craniotomy allows the surgeons to carry out further procedures such as biopsies (samples of tissue), tumour removal and removal of haematomas (blood clots), shunt insertion or skull fractures. There may be other reasons for a craniotomy and your child's surgeon will discuss this with you.



What happens before surgery?

You will meet the Neurosurgical Team who will discuss in detail the reasons why a craniotomy needs to be carried out. Consent will be gained from a person with parental responsibility. This will involve signing a form once everyone is happy with the decision to do the operation.

If this is a planned operation then your child will have the opportunity to meet the ward staff and have the operation explained to them.

If your child is unwell and needs emergency surgery this will not always be possible.

What happens during the operation?

The operation will be done by a member of our Paediatric Neurosurgical Team in the operating theatre. Your child will have a general anaesthetic and will be asleep throughout the procedure. They will have a specialist Paediatric Anaesthetic Team monitoring them throughout the operation.

A small area of your child's scalp will normally be shaved over the area that the surgeon needs to operate on. An incision is made to the scalp above the area of the intended craniotomy and an opening is made and section of bone (bone flap) is then removed. This enables the surgeon to access the brain tissue or fluid and the procedure will be carried out. At the end of the operation the bone flap is usually fixed back into place with plates and screws or with sutures (stiches) depending on the child's age. The scalp is then sutured back together. Occasionally the 'bone flap' cannot be replaced immediately, so the wound is stitched back together and a second operation is planned for a later date to repair the skull.

Some of the plates used to fix the bone flap in place are made of metal, and some are made of biodegradable material, designed to dissolve over time as the bone flap heals in place. The biodegradable plates are usually only used for younger children. If metal plates are used, these are made of very thin titanium and will be safe for MRI scans and airport security scanner.

What are the risks of a Craniotomy?

Infection - All surgery carries a risk of infection and to reduce this risk antibiotics will be given during the operation.

Bleeding/bruising/swelling - Your child's head and face will look swollen and bruised after the operation. Swelling tends to get worse for the first two or three days and then starts to improve.

Cerebro-spinal fluid leak - sometimes small holes occur during the operation, which do not pose a risk to the brain but can cause cerebro-spinal fluid (CSF; a clear, watery fluid that surrounds and cushions the brain) to collect under the skin or leak from the wound site. The Neurosurgical Team will provide treatment for this should it occur.

Pain - Your child may feel some pain around the craniotomy site but this is usually controlled with basic pain killers such as paracetamol. Should your child need stronger pain killers the hospital Specialist Pain Team may become involved. Once the initial post-operative period has passed the pain will improve.

Brain injury - The risk of this is extremely small, but nevertheless important to understand. It could be seen in the form of a weakness or paralysis like a stroke and may be temporary or permanent. If this does occur the Neurosurgeon would investigate to find out why it has happened and explain this to you.

Risk to life - This is usually extremely small but it is dependent on age, weight and general health. The risk is there because this is surgery and also because it involves a general anaesthetic.

What happens after surgery?

Children who have had a craniotomy will recover from their general anaesthetic in the Post Anaesthetic Care Unit (PACU). Your child will then be transferred to one of the following the Children's Intensive Care Unit, the Children's High Dependency Unit or the Children's Neuroscience Ward (L52). This decision will be made by the Neurosurgeon and Anaesthetist. If your child has been transferred to PICU or HDU the unit staff will telephone the ward and the ward staff will take you round to see your child. If your child is able to return to the ward it is usually possible for you to go to them in the PACU once the recovery staff telephone the ward.

Your child will be closely monitored for signs of complications. These can include wound leakage, infection, an increase in pressure in the head, headaches, nausea and vomiting. The team are familiar with the management of these and will work to keep your child comfortable. Most children will have a head bandage covering the wound to help prevent infection and provide protection. This will be removed at the Neurosurgeon's request.

Your child will be attached to some machines including a drip for fluids and medications, a monitor that tells staff your child's heart rate and oxygen levels. They may also have a tube inserted into their bladder to drain urine.

Some children may have a wound drain in place following their surgery and the nurse caring for your child will explain this to you. Also the swelling and bruising on their face may cause their eyes to be closed- this will gradually improve.

Your child may be well enough to be transferred back to Ward L52 the day following surgery but this decision will be made

by the Neurosurgical, Neurology and the Doctors caring for your child on PICU/HDU.

How long will we be in hospital for?

Your child will recover from their operation in a few days but the cause or other procedures done as part of the operation may take longer to recover from and lead to further treatments. The Neurosurgical and Neurology Consultants will be able to give you guidance on how long your child will need to be in hospital.

How do you care for the wound?

Your child's wound will usually be closed with dissolvable sutures but occasionally clips/staples or sutures that will need removing will be used. The nurses will be able to tell you what sutures have been used and when they will need removing.

Usually staples/sutures will be removed 5-7 days after surgery but this may depend on your child's Consultant.

Your child will be able to wash their hair 48 hours after their operation but again this may depend on your child's Consultant. It is advised that you use a mild baby shampoo. Your child's hair will normally grow back, except along the line of the scar itself.

Who else may be involved in my child's recovery?

Your child may also be cared for by Physiotherapists, Occupational therapists, Dieticians, Speech and Language Therapists and School Teachers. They will all work towards

helping your child to return to their usual activities for example, walking, dressing, talking, eating and learning.

Additional input from Play Therapists is also available to help your child understand what has been done and help in their recovery.

Frequently asked questions.

When can my child return to school?

Following a craniotomy you may find your child tires easily and cannot yet manage their usual daily routine. This may mean they will need a gradual re introduction to school. This may mean them initially only attending school for part of the day but this is important for the social interaction with their friends. The ward school teachers will be able to advice you on this matter.

Can my child go on an aeroplane?

After a craniotomy, there may be a small amount of air in the head – which normally dissolves away naturally and fairly quickly. It is common to leave 2-4 weeks after a craniotomy before flying, to ensure that this air has dispersed.

Are there any limitations on sports?

Contact sports (e.g. rugby, football and hockey etc.) should be avoided for a minimum of 6 months. The only sport we absolutely ban is boxing due to the deliberate repetitive head injuries caused.

Otherwise there are no reasons patients cannot eventually participate in all sports including swimming, cycling etc. Care however is advised to avoid head injury, in-particular repetitive head injury.

What if my child has a head injury?

Normal post head injury procedures should be followed and you should take your child to the local accident and emergency department if you are concerned. It would be important to mention to the doctor that your child has had a craniotomy as this will help them assess and treat your child.

Useful Numbers

Ward L52	0113 392 7552
Ward L47 (PICU)	0113 392 7447
Ward L48 (HDU)	0113 392 7448

Aftercare (staff please tick applicable)

Your child's wound has been closed with:

- clips
- sutures
- dissolvable sutures

If your child has removable clips or sutures they will need to be taken out. This can be carried out either on Ward L52 or the family can make an appointment for them removed by their GP Practice Nurse.

Date sutures/clips to be removed/...../.....

What did you think of your care?

Scan the QR code or visit bit.ly/nhsleedsfft

Your views matter

