

Your child's glaucoma surgery to control high pressure in the eye

This leaflet is about your child's surgery to treat a condition called glaucoma that involves high pressure inside the eye. It explains what you should do before your child's procedure, on the day of the procedure and when you return home.

Your child's condition and procedure

What is childhood glaucoma?

If your child has glaucoma, the pressure inside their eye is very high. This causes damage to the nerve that sends messages from the eye to the brain (the optic nerve).

Childhood glaucoma is rare and affects about 5 in 100,000 children. There are several possible reasons why your child may have this condition. It can be caused by the eye's drainage system not developing correctly before birth. Another problem in the eye, such as inflammation (irritation), can sometimes block the drainage tubes and make pressure build up.

Why does my child need a procedure to treat glaucoma?

There are eye drops that can lower the pressure in the eye. For most children, however, these drops are not enough to reduce the pressure to acceptable levels. This means that your child usually needs a procedure to treat glaucoma. The aim is to create a new path for the water (fluid) produced inside the eye to drain out of the eye and control the pressure.

Your child's surgeon explains which type of procedure is most suitable. This depends on the cause of your child's glaucoma and their personal circumstances.

Before your child's procedure

What needs to happen before my child's procedure?

We need to see your child at a pre-admission clinic. This clinic may take place face to face or online. We make sure that your child is ready for an anaesthetic, which is a medicine to make them sleep during the procedure, and surgery.

After the pre-admission clinic, our admissions team contacts you by letter, text message or phone. We offer you a date for your child's procedure. We also explain when your child should stop eating and drinking (fast) before their procedure.

Do I need to get pain medicine ready for my child?

Please make sure that you have a week's supply of paracetamol (a painkiller) and ibuprofen (an anti-inflammatory medicine) at home before the procedure. We do not routinely give these medicines to take home for your child after day surgery.

You can buy paracetamol and ibuprofen from a pharmacy, supermarket or shop. Paracetamol for children may also be called Calpol[®]. Ibuprofen for children may also be called Calprofen[®] or Nurofen[®]. You need the type of medicine that you would give your child if they were unwell with

a cold or ear ache. If your child cannot take paracetamol or ibuprofen for any reason, please speak to their healthcare team about other options.

On the day of the procedure

When you arrive at the children's day surgery unit

We give you a time to arrive at the Evelina London children's day surgery unit. It is important that you arrive at the correct time and have followed the fasting instructions for your child. If you arrive late or have not followed the fasting instructions, we may not be able to do the procedure.

You and your child meet the surgical and anaesthetic teams on the admissions ward before the procedure. We confirm that you have given your permission (consent) for the procedure. You can ask us any questions that you may have.

During the procedure

We give your child a general anaesthetic. This is a medicine that makes your child sleep and stops them feeling any pain during the procedure. You can stay with your child until they are asleep. Please see our separate leaflet called "Your child's general anaesthetic" for details.

When your child is asleep, we do one of the following procedures. The surgeon explains in advance which type of procedure is suitable for your child and why.

- **Goniotomy**

We usually do this procedure for children who are born with glaucoma. The surgeon uses a small special knife to open the blocked drainage tubes inside the eye.

- **Trabeculotomy**

We also do this procedure for children who are born with glaucoma. The surgeon uses a special device or fine wire to open the blocked drainage tubes from outside the eye.

- **Trabeculectomy**

During this less common procedure, we make a new path or channel to the surface of the eye. The surgeon creates a flap in the white part of the eye (the sclera) and makes a small drainage hole underneath. Later, a small blister or pocket of fluid called a bleb forms on the eye's surface. Fluid in the eye drains through the new path into the bleb and then goes into the bloodstream.

If your child has this treatment, they need medicines during the procedure to avoid scar tissue blocking the new drainage path.

- **Drainage tube**

We can put a small plastic tube inside the eye to drain the fluid. The tube stays in the eye permanently. We most often do this procedure for children who previously had cataract surgery or where there is a high risk of scarring. Sometimes, the surgeon needs to use special removable stitches and gas or jelly to control the pressure in the eye.

- **Laser treatment**

In some children, we shine a laser beam onto the structure inside the eye that makes fluid. Laser treatment reduces the amount of fluid produced in the eye.

Are there any risks to my child's procedure?

Every procedure has some risks of complications. To reduce these risks, we make sure that your child is well at the time of the procedure. We talk to you about the risks in the clinic and before the procedure when we confirm that we have your consent.

The specific risks of glaucoma surgery are as follows:

- **Bruising, swelling or soreness**
These side effects are temporary and your child should recover from them fully.
- **Infection**
To prevent an infection, we give you antibiotic drops to put in your child's eye 3 to 4 times a day for a week after the procedure. If the eye gets red and sticky or painful, your child needs to see an eye doctor urgently. An infection inside the eye called endophthalmitis is very serious and must be treated with antibiotics.
- **Bleeding**
It is common to have some bleeding inside the eye after glaucoma surgery. This is to be expected and usually stops quite quickly.
- **Loose stitches**
Any loose stitches can cause irritation and soreness. They need to be removed and we can do this in the eye clinic.
- **Different appearance to the eye**
After glaucoma surgery, the appearance of the eye may be different. The opening (pupil) of the eye may not be completely round or may not be in its usual place in the centre. This does not usually affect the eyesight or the outcome of the procedure.
- **Eye pressure problems**
The pressure inside the eye can be very high or very low during the first few weeks after glaucoma surgery. Some children may need extra eye drops or another procedure to treat this.
- **Cataracts**
Sometimes, cataracts can develop after glaucoma surgery. Cataracts are when the lens (small transparent disc) inside the eye becomes cloudy. They may need to be treated with surgery.

After your child's procedure

How will my child look and feel after their procedure?

Your child may feel drowsy after their surgery and sleep for a while. They may be restless (agitated) and upset for up to an hour after waking up from the procedure. Some children may have mild discomfort and feel or be sick (vomit), but this is not common.

After the procedure, your child has a patch over their eye. They may also have a plastic shield on top of the patch. This reduces swelling and sensitivity to light, and keeps the eye closed while it heals. Your child needs to wear the patch until the morning after the procedure. Sometimes, there is a small amount of bleeding from under the patch.

It is common to have some blood-stained tears from the eye in the first 1 to 2 days after the procedure.

Will my child be in pain after their procedure?

There is usually no eye pain after glaucoma surgery and most children cope with the procedure reasonably well. Your child's eye will be a little sore, watery and red with some swelling.

We may give your child paracetamol, ibuprofen or both medicines while they are with us. You can continue to give your child these medicines as needed when they are at home.

When can my child eat and drink or feed after their procedure?

Your child should be able to eat and drink or feed as usual within 1 to 2 hours of the procedure.

Do we see the surgeon after my child's procedure?

Yes, the surgeon comes to check your child after their procedure. They update you about the surgery, answer any questions and explain when we will see your child again in the eye clinic.

When can my child go home?

Your child can go home on the same day as their procedure when they:

- feel comfortable
- can manage (tolerate) their usual food and drink
- are not feeling sick (nausea) or being sick (vomiting)
- are behaving as they usually do

Please supervise your child carefully on the journey home. According to the sudden infant death syndrome (SIDS) guidelines, it is best to avoid long car journeys for babies under 1 year of age. If you travel home by car, it is important that:

- you stop for frequent breaks to feed your baby and change their position
- an adult sits with the baby in the back of the car

After you go home

How do I care for my child's eyes after the procedure?

Your child usually has stitches after glaucoma surgery, but these do not need to be removed. Some stitches dissolve by themselves. Other stitches are buried in the eye and do not cause any discomfort.

Here is some guidance on how to care for your child's eyes:

- **Eye patch and shield**

On the morning after the procedure, you need to remove your child's eye patch. If too much mucus (slippery liquid) is left on their eyelids, you can clean them gently. It is best to use cold water that you have boiled and then allowed to cool, and a clean towel.

If we give your child a plastic shield, they need to wear it at night for about 2 weeks after the procedure. This is to prevent your child from rubbing their eye when they are asleep and opening the surgical wound.

- **Eye drops**

We give you antibiotic and steroid (anti-inflammatory) drops to put in your child's eye 3 to 4 times each day for a week. This is to prevent infection, make the eye feel more comfortable, and reduce the redness and inflammation. Sometimes, we also give you drops to widen (dilate) the opening (pupil) of your child's eye.

It is important to use the eye drops as directed.

- **Protecting the eyes**

Try to discourage your child from touching or rubbing their eyes while they heal. This could irritate the eyes and increase the risk of infection.

- **Bathing**

Your child can have a bath or shower as usual and you can wash their hair. Try not to get too much water in their eyes or on their face. A splash of water is fine. Also try to avoid getting soap or shampoos in their eyes, as you would normally do.

- **School or nursery**

You can expect your child to return to school or nursery about 5 days after the procedure. The surgeon explains how much time they need to take off because each child recovers at a different speed.

- **Swimming**

You should not take your child swimming for at least 2 weeks and preferably 4 to 6 weeks after the procedure. If your child does swim, they need to wear watertight goggles.

- **Glasses and contact lenses**

If your child has glasses, they can start wearing them again straight away after you have removed the eye patch. Sunglasses can help to reduce any discomfort if their eyes feel sensitive to light. Your child should not wear contact lenses until we tell you that this is safe.

How can I manage my child's pain after their procedure?

Your child should not be in pain after the procedure. If there is bruising under the eye, you can give them paracetamol and ibuprofen in the first week. Please remember to buy these medicines before the day of your child's operation. It is also important to make sure that your child drinks plenty of fluids.

It is safe to give the 2 medicines at the same time, ideally with food. This is easier to plan and the medicines work in different ways. You can give your child:

- 1 recommended amount (dose) of paracetamol every 4 to 6 hours and no more than 4 doses in 24 hours
- 1 dose of ibuprofen every 6 to 8 hours and no more than 3 doses in 24 hours

You may find the following chart helpful to keep track of your child's medicines.

Home medicine chart for parents

Medicine	Time to give	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Paracetamol								
Ibuprofen								
Chloramphenicol (antibiotic) eye drops								
Dexamethasone (steroid) eye drops								

Do I need to look for any symptoms after my child's procedure?

You need to get urgent medical help for your child if you feel that they are unwell or:

- they have severe eye pain, a bad headache or dizziness and cannot open their eye because of light sensitivity
- their eyesight becomes worse
- their eye becomes redder
- there is a yellow-green liquid (pus) or leaking fluid (discharge) from the eye
- they have a high temperature (fever)
- they are not eating or drinking well

These can be signs of an infection or a reaction to the antibiotic or steroid eye drops. Call our eye casualty on 020 7188 4336 (Monday to Friday, 8.30am to 4pm). Outside these hours, call 999 or go to your nearest emergency department (A&E) immediately.

Do you see my child again after their procedure?

It is essential that we see your child in the outpatient eye clinic at St Thomas' Hospital after their operation. The surgeon explains if you need to return to the hospital on the day after the procedure or several days later. We usually book the appointment for you before you leave the Evelina London children's day surgery unit.

After this, it is important that you continue to bring your child for future follow-up appointments at the eye clinic. We need to monitor the pressure inside your child's eye closely.

Contact us

If you **cannot keep your appointment**, contact our admissions team, **phone** 020 7188 9098, **email** gst-tr.paediatricadmissions@nhs.net

If your child has a **cough, cold or high temperature** in the 2 weeks before the procedure, contact our pre-assessment team, **phone** 020 7188 7188 extension 58209

If you have any **concerns about your child's procedure but it is not an emergency**, contact our eye department, **phone** 020 7188 4299 (please leave a message on the answerphone and we will call you back within 3 working days), **email** gst-tr.paediatricophthalmologyenquiries@nhs.net (we reply to emails within 3 working days)

If you are concerned that your child is **seriously unwell during working hours**, contact our eye casualty, **phone** 020 7188 4336 (Monday to Friday, 8.30am to 4pm)

If you are concerned that your child is **seriously unwell outside working hours**, go to your nearest A&E or **phone** 999

For more information on conditions, procedures, treatments and services offered at our hospitals, please visit **web** www.evelinalondon.nhs.uk/leaflets

Evelina London Medicines Helpline

If you have any questions or concerns about your child's medicines, please speak to the staff caring for them or contact our helpline, **phone** 020 7188 3003, Monday to Friday, 10am to 5pm **email** letstalkmedicines@gstt.nhs.uk

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS), **phone** 020 7188 8801 **email** pals@gstt.nhs.uk. To make a complaint, contact the patient resolution team **phone** 020 7188 3514 **email** complaints2@gstt.nhs.uk

Language and accessible support services

If you need an interpreter or information about your child's care in a different language or format, please get in touch, **phone** 020 7188 8815 **email** languagesupport@gstt.nhs.uk

NHS 111

This service offers medical help and advice from fully trained advisers. They are supported by experienced nurses and paramedics, **phone** 111 (24 hours a day) **web** www.111.nhs.uk

NHS website

This website gives information and guidance on all aspects of health and healthcare. It can help you to take care of your child's health and wellbeing, **web** www.nhs.uk



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