

## TRABECULOTOMY

AT CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this surgery and invite you to participate. Please read the following information to learn about the surgery and how you can help.

### Fast Facts About Trabeculotomy

- Trabeculotomy is a surgery to treat glaucoma.
- Glaucoma is an eye disease that increases the pressure inside the eye.
- Trabeculotomy is an outpatient surgery, so your child may go home afterward, but must come back in for a follow-up visit with the doctor the day after the surgery.
- The surgery is done under general anesthesia, which means that your child will be sound asleep.
- When general anesthesia is needed, there are special rules for eating and drinking before the procedure.
- A pediatric anesthesiologist—a doctor who specializes in anesthesia for children—will give the medications that will make your child sleep during the surgery.
- A pediatric ophthalmologist—a doctor who specializes in eye surgery for children—will do your child's trabeculotomy.
- This surgery takes about 1½ to 2 hours, but recovery from the anesthesia might take several hours.

### What Is Glaucoma?

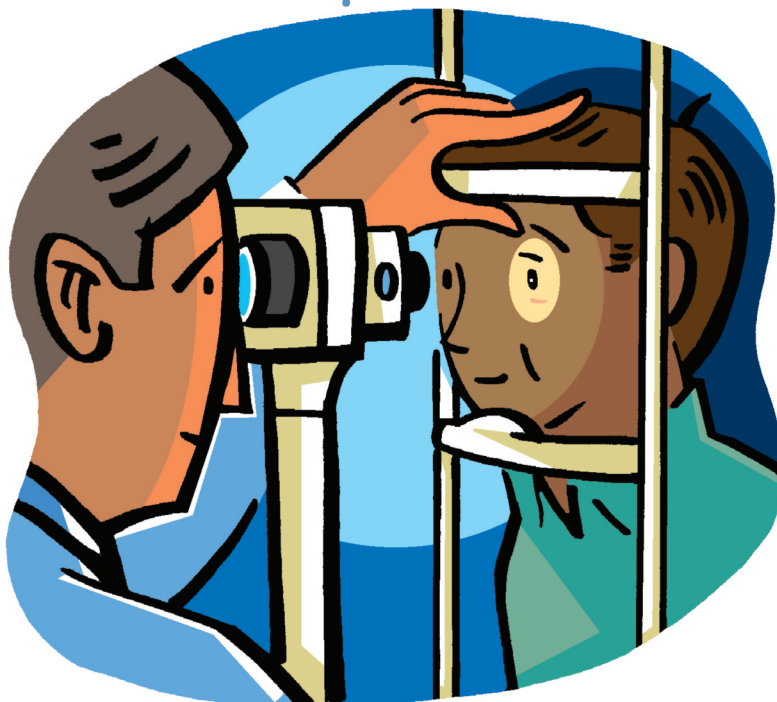
Glaucoma is an eye disease that causes a slow and painless loss of vision. It often has no symptoms and can lead to total blindness if not diagnosed and treated.

Glaucoma causes the pressure inside the eye to be too high, leading to a slow destruction of the optic nerve and loss of peripheral vision, which is the area you can see to the sides while looking straight ahead.

If your child is suspected of having glaucoma, the doctor will want to examine his or her eyes under anesthesia before any surgical steps are taken. Depending on what is found during that examination, your child's doctor might prescribe eye drops, surgery or both to control your child's eye pressure.

### What Is A Trabeculotomy?

Increased pressure in the eye can be caused by a blockage in the eye's drainage system. Trabeculotomy (*tra-BECK-yoo-LOTT-oh-mee*) is a surgical procedure that helps reduce pressure in the eye by opening the eye's drainage system to allow the eye to drain better. The eye is filled with a fluid called aqueous (*AKE-wee-us*) humor (*HUE-mer*). The fluid may not drain properly, causing glaucoma or increased pressure in the eye. Conversely,



the eye may produce too much fluid, causing glaucoma or increased pressure in the eye. A trabeculotomy helps improve drainage of aqueous humor and decreases the pressure in the eye.

In the trabeculotomy, the surgeon will create a flap in the conjunctiva (*kun-JUNK-tiv-uh*), the clear covering over the white of the eye and lining the eyelids, and the sclera (*SKLARE-uh*), the white of the eye. The surgeon will then identify the drainage system canal and insert an instrument to open the canal wall to help the fluid inside the eye drain better. The scleral and conjunctival flaps then will be closed with stitches. These stitches will dissolve on their own and do not need to be removed. An eye patch and shield is placed on the eye. The patch will be removed by the surgeon in the office the following day.

### Home Preparation

**In the 2 weeks before the surgery**, do not give your child any aspirin or ibuprofen. That includes Motrin®, Advil®, Bayer®, Pediaprofen®, Aspergum®, Pepto Bismol® and Alka Seltzer®. Your child **may** take Tylenol®.

**The day before the surgery**, do not allow your child to get any kind of vaccination.

**When general anesthesia is needed, there are important rules for eating and drinking that must be followed in the hours before the surgery.** One business day before your child's surgery, you will receive a phone call from a nurse between the hours of 1 and 9 p.m. (Nurses do not make these calls on weekends or holidays.) Please have paper and a pen ready to write down these important instructions.

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- The nurse will give you specific eating and drinking instructions for your child based on your child's age. Following are the **usual** instructions given for eating and drinking. No matter what age your child is, you should follow the specific instructions given to you on the phone by the nurse.

### For children older than 12 months:

- After midnight the night before the surgery, do not give any solid food or non-clear liquids. That includes milk, formula, juices with pulp, coffee and chewing gum or candy.

### For infants under 12 months:

- Up to 6 hours before the **scheduled arrival time**, formula-fed babies may be given formula.
- Up to 4 hours before the **scheduled arrival time**, breastfed babies may nurse.

### For all children:

- Up to 2 hours before the **scheduled arrival time**, give only clear liquids. Clear liquids include water, Pedialyte®, Kool-Aid® and juices you can see through, such as apple or white grape juice.
- In the 2 hours before the **scheduled arrival time**, give nothing to eat or drink.

## A Parent's/Guardian's Role

The most important role of a parent or guardian is to help your child stay calm and relaxed before the surgery. The best way to help your child stay calm is for you to stay calm.

- You may bring along a "comfort" item—such as a favorite stuffed animal or "blankie"—for your child to hold before and after the surgery.
- If you are a guardian of the child having surgery, please bring the necessary paperwork with you to prove your guardianship.
- During the surgery, at least one parent or guardian should remain in the surgical family waiting area at all times, in case the family needs to be reached.

## Going to Sleep

A pediatric anesthesiologist—a doctor who specializes in anesthesia for children—will give the medications that will make your child sleep during the test.

Before the procedure, a member of the anesthesia staff will meet with you to take your child's vital signs, weight and medical history. As the parent or legal guardian, you will be asked to sign a consent form before the anesthesia is given.

- The anesthesiologist will meet with you and your child to review your child's medical information and decide which kind of sleep medication your child should get.
- If your child is very scared or upset, the doctor may give a special medication to help him or her relax. This medication is flavored and takes effect in 10 to 15 minutes.

- Younger children will get their sleep medication through a "space mask" that will carry air mixed with medication. Your child may choose a favorite scent to flavor the air flowing through the mask. There are no shots or needles used while your child is still awake.
- Older children may choose between getting their medication through the mask or directly into a vein through an intravenous (IV) line.
- When your child has fallen asleep, you will be taken to the waiting room. If it has not already been done, an IV will be started so that medication can be given to keep your child sleeping throughout the procedure.



## The Trabeculotomy

This surgery is done through the Same Day Surgery Center at Children's Hospital of Pittsburgh.

When you check in at the registration desk, you will be asked for the clearance form from your child's primary care physician (PCP). This PCP form was given to you at the appointment with the ophthalmologist when you scheduled your child's surgery.

Once your child is registered, you and your child will be called to the examining room.

- A nurse will take your child's weight, vital signs and medical history. The nurse will ask you to name any medications your child might be taking, as well as the dosages and the time last taken.
- A member of the anesthesia team will meet with you to discuss your child's medical history and answer any questions you might have about the anesthesia. As the parent or guardian, you will be asked to sign a consent form for the anesthesia.
- Your child's doctor will meet with you and your child to discuss the procedure and answer any questions you might have. As the parent or guardian, you will be asked to sign a consent form for the procedure.

You and your child will be moved to a holding area near the operating room (OR). When the OR is ready your child will go to the OR and you will be directed to the OR waiting room. We ask that at least one parent stay in the OR waiting room at all times.

- Your child will be given the anesthesia medication that was selected based on his or her age, weight and medical history.
- When your child is fully asleep, the surgery will begin.
- The doctor will insert an eyelid speculum to hold the eye open.
- The doctor then will create a flap in the conjunctiva and sclera of the eye.
- Next, the surgeon will identify the drainage system canal and insert an instrument to open the canal wall.

## TRABECULOTOMY cont'd

- The scleral and conjunctival flaps will be closed with sutures, or stitches. The sutures will dissolve on their own and do not need to be removed.
- The surgeon then will put a patch and plastic shield over the eye to protect it after the surgery.

### While Asleep

While your child is asleep, his or her heart rate, blood pressure, temperature and blood oxygen level will be checked continuously.

- During the surgery, your child will have a breathing tube placed in the airway while he or she is asleep. Your child might have a sore throat after the surgery.
- To keep your child asleep during the surgery, he or she might be given anesthetic medication through the breathing tube, through the IV tube or both. When the surgery is over, the medications will be stopped and your child will begin to wake up.
- Your child will be moved to the recovery room so that you can be there as he or she wakes up.

### Waking Up

When your child is moved to the recovery room, you will be called so that you can be there as he or she wakes up. While your child is in recovery, your surgeon will talk to you about the surgery. This is a good time to ask questions about pain medications, diet and activity.

- Your child will need to stay in the recovery room to be watched until he or she is alert and his or her vital signs are stable. The length of time your child will spend in the recovery room will vary because some children take longer than others to wake up after anesthesia.
- Children coming out of anesthesia may react in different ways. Your child may cry, be fussy or confused, be sick to his or her stomach, or vomit. These reactions are normal and will go away as the anesthesia wears off.
- When your child is fully awake, he or she may be given a Popsicle® or slushy to drink. If he or she can keep the liquid down, your child will be discharged and may go home.

### After the Trabeculotomy

When your child is discharged from the hospital, he or she still might be groggy and should take it easy for the rest of the day.

- Your child will have a patch on the eye that will need to be removed by the doctor the next day.
- Your child might not open that eye for a few days after surgery.
- Your child's eye might be sore or feel like there is something in the eye. This feeling is normal and may last for a day or so. You may give your child Tylenol® to relieve the discomfort.
- The white surface of your child's eye might be pink to very red after the surgery.

### At-Home Care And Follow-Up Visits

You will need to bring your child to see the doctor 1 day after the surgery.

- At the first follow-up visit, you will be given antibiotic eye drops to put in your child's eye. The doctor will tell you how often and for how many days you should give your child the drops.
- Your child may return to school or daycare when he or she feels well enough.
- Your child may return to normal daily activities, but should not participate in gym class, swimming, or other sports or physical activities for at least 2 weeks after the surgery.
- Your doctor will need to see your child again for a check-up in approximately 1 to 2 weeks after the surgery.

### When To Call the Surgeon

The following symptoms may be cause for concern:

- Signs of infection, such as eye drainage that has gotten worse or has changed to green or yellow
- Loss of vision
- Pain that has gotten worse
- Increased swelling
- Fever higher than 100 degrees F.
- Nausea and vomiting that won't go away

**If your child has any of these symptoms, you should call the surgeon's office at 412-692-8940 immediately. If you are calling during the evening or on a weekend, please call the hospital at 412-692-5325 and ask to page the ophthalmology resident on call.**



### Special Needs

If your child has any special needs or health issues you feel the doctor needs to know about, please call the Division of Ophthalmology at Children's Hospital *before* the surgery and ask to speak with a nurse. It is important to notify us *in advance* about any special needs your child might have.

Division of Ophthalmology  
**Children's Hospital of Pittsburgh of UPMC**  
One Children's Hospital Drive  
4401 Penn Ave.  
Pittsburgh, PA 15224  
412-692-8940  
412-692-5325 evenings and weekends

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To see the list of all available patient procedures descriptions, please visit [www.chp.edu/procedures](http://www.chp.edu/procedures).