



~ Please call the Surgical Coordinator at 617-355-5776 with any questions or concerns regarding your or your child's surgery ~

EYE MUSCLE SURGERY - WHAT TO EXPECT

(Revised 9/04)

Eye muscle surgery is being scheduled for you or your child. This type of surgery is elective. It is routinely performed on an outpatient basis unless there is a medical reason to keep the patient in the Hospital the night before or the night after surgery.

Many insurance companies require a second surgical opinion, pre-admission authorization, or both. Please check your health insurance policy or contact your insurance company about such special requirements. If you do not meet these requirements, the insurance company may refuse to pay, or may pay a reduced amount for your surgery. In that case, you will be responsible for payment of all bills not covered by your insurance. It is your responsibility to contact your health insurance carrier regarding its policy concerning second surgical opinions and pre-authorization. If a required pre-authorization number has not been obtained, the surgery will have to be canceled.

One Week before Surgery

Stop taking aspirin, aspirin-containing products, or ibuprofen (Motrin, Advil, Aleve, Nuprin, etc.) one week before surgery, unless you are taking the aspirin because of a high risk of having a stroke. Aspirin interferes with blood clotting and may cause bleeding during surgery. Tylenol (acetaminophen) may be taken as a replacement for aspirin if needed. If there are any questions about aspirin or other blood thinners, please discuss them with your surgeon and your family doctor.

If there are any particular medical issues that may alter the risk of surgery, we may obtain a pre-operative medical consultation from the Anesthesia Department at Children's Hospital, or we may ask you to be evaluated by your child's physician.

If your child has a cough or cold, please inform the surgical coordinator. Depending on the severity (for example if your child is waking up in the middle of the night, has a loss of appetite, or a loud, congested cough), the surgery will be rescheduled at that time. If the symptoms seem minor, you can discuss them with a day surgery nurse, who will call you the day before surgery. If your child is cleared for surgery by the nurse and/or your pediatrician, please note that an anesthesiologist will also examine your child the day of surgery. If the anesthesiologist has any concerns on the morning of surgery, he/she may decide to reschedule the surgery. When this occurs, it is of course frustrating for everyone, but our number one concern is the safety of your child. We will make every effort to reschedule the surgery as soon as it is possible, and safe, to proceed.

1 to 2 Weeks before Surgery

If the type of surgery has not already been decided upon, and if your ophthalmologist has requested a pre-operative eye examination, an appointment will be made with your ophthalmologist one or two days before surgery.

Your ophthalmologist will want to check the eyes before performing the surgery. At that time, you and your ophthalmologist can discuss any questions or concerns you may have about the upcoming procedure. Your general physician's report and labwork will be reviewed at this time; please ensure that it has been faxed on time. You will also be asked to sign consent forms during this visit – try to review the copy attached to the end of this brochure ahead of time. The exact time of surgery will be determined by your ophthalmologist.

Preparation for Surgery

Please follow the enclosed *Instructions for Day Surgery*.

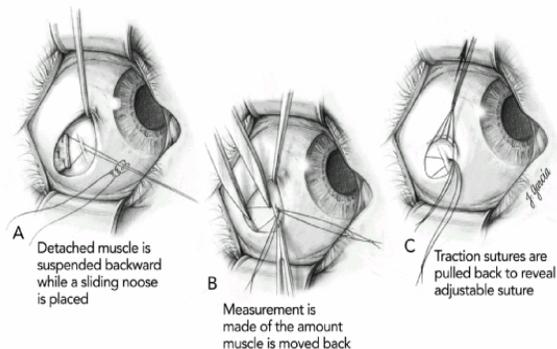
Anesthesia

Children may be accompanied into the operating room by one parent (with gown, cap, and mask provided) until the child is asleep, depending on the anesthesiologist, the patient, and the parents.

Young children are put to sleep by breathing gas from a mask held near the child's face, not clamped tightly. An IV (intravenous) line and breathing tube are placed after the child is asleep, and the breathing tube is removed before the child is fully awake. Older children and adults are given an IV beforehand so that a medication can be used to put them to sleep prior to administering the anesthetic gas, or for those adults having local anesthesia so that sedative medications can be given.

The anesthesiologist may need to alter the above anesthetic routine depending upon the age, specific needs, and medical condition of the patient.

Surgical Procedure



After the anesthesia is administered, the eyelids are gently opened and the muscle identified. No skin incision is required. The incision is made in the thin white tissue overlying the muscle. The muscle is then separated from the eye and

reattached in a new position using dissolvable sutures. In no case is the eye ever removed during eye muscle surgery.

In many adults and some children, the eye muscle is reattached using an adjustable "slip" knot. ***If an adjustable suture is used***, the muscle can be repositioned after the patient wakes up (but before leaving the Hospital) by gently adjusting threads that remain attached to the repositioned muscle.

Length of Surgery

Most eye muscle operations take about one hour of operating time, once the actual surgery begins. This can vary, however, from thirty minutes to two hours. Do not be concerned if we seem to be taking a long time; this usually means we simply started late. After young children are asleep, establishing an IV line can be time-consuming. During the operation is often a good time for those waiting to take a walk or get something to eat, but be sure to let the operating room front desk know where you can be reached any time you are not in the fourth floor waiting area.

Risks of surgery

There are some risks associated with anesthesia, whether general or local. In very unusual instances, death, diminished brain function or pneumonia has ensued. There can be loss of vision of the eye associated with anesthesia, hemorrhage, retinal detachment, infection, or change in blood supply to the eye, but these complications are also highly unusual.

The eyes may not be straight after the operation and more than one operation may be required. Minor risks include bleeding under the conjunctiva (the thin, outer layer covering the eye) – this is outside the eyeball and never serious. Abrasion (scratch) on the cornea, inflammation of the surface membrane (conjunctivitis, pink eye), reaction to the sutures, pain, and sometimes scar tissue formation including implantation cysts, are other minor risks. Sometimes the lid position may be altered. Of course not every possible complication can be listed for any procedure.

Rarely a different, unsuspected condition may arise at the time of surgery and your surgeon may be required to do what he/she deems necessary.

Alternatives to surgery

Prism glasses are used in some cases if the amount of misalignment is small and consistent. Glasses can help control the alignment in some cases when a child is farsighted ("accommodative esotropia"). Eye exercises (orthoptics) are rarely helpful, except in some cases where the eye does not converge well for near work. Patching can eliminate double vision but this does not allow the eyes to be used together. Botox injections can sometimes help the alignment but anesthesia is still required for children and the effect may wear off after 3 months, requiring repeat injections. Your doctor has probably already discussed whether any of these alternatives to surgery might be considered in your case.

What To Tell Your Child About Surgery

It is important to prepare your child for surgery psychologically. It is not necessary to talk about surgery several weeks ahead of

time - a day or two before is fine. A child who is 2 or 3 years old needs to be told that he or she will be coming to the hospital.

Say that "Dr. _____ will be fixing your eyes". Children need to be assured that they will not be abandoned. Assure them that a parent will stay by their side until asleep. Say that they will see many nice people with green shirts and pants and funny blue caps in the operating room. Tell them that they will be asleep while their eyes are fixed, that they will wake up in a new room, and that you will be called to be with them when they wake up. Let them know that they will not be able to eat breakfast before the eyes are fixed, so as not to become sick while asleep, but that they can eat after they wake up. This is usually all your child needs to know. Younger children simply need reassurance of your presence. Older children may ask for more details. Just leave it to them to ask.

Eye Patches

We no longer use eye patches after eye muscle surgery except sometimes after we have used an adjustable suture. Children (and most adults), however, will not want to open their eyes at first, other than intermittently, because of the discomfort. Blood-tinged tears may drain from the operated eye or eyes, and these can be gently wiped away with a tissue or washcloth.

Post-operative Pain and Nausea

There will be some pain from the surgery, and two types of pain medications are ordered, if you ask the nurse for them. Tylenol elixir or tablets are used for mild pain, and a pill or shot of a stronger medication is used for worse pain. The anesthesia sometimes produces nausea, and anti-nausea medication is also ordered for use when needed. We expect you to ask for these medications once or twice, on the average.

Recommended Tylenol Elixir doses:

6-11 months - 1 dropper (80 mg)

1-2 years - 1 1/2 dropper (120 mg)

See directions on bottle for older children (or on the bottle of tablets for adults)

Most patients will sleep for several hours following surgery.

Suture adjustment

If an adjustable suture was used, the adjustment will be performed before discharge. In some cases, the adjustment is done 1-2 hours after surgery while the patient is still in the Recovery Room. In other cases, we have to wait up to 5-6 hours after surgery for local anesthesia to wear off before doing the adjustment. These adjustments are performed either at the bedside or in one of our exam rooms on the second floor.

Drops are put in the eye to numb the surface, and the suture is adjusted as necessary to fine-tune the alignment. The adjustment is usually not painful, but there may be some feelings of anxiety, pressure, or discomfort while the sutures are repositioned. The eyes are often left in an overcorrected position on purpose, for as the eyes heal during the weeks following surgery, they usually drift slightly back in the direction they were before the surgery. This intentional overcorrection often produces temporary double vision (usually lasting less than a week).

Discharge Exam

General anesthesia has usually worn off enough for discharge within a few hours after the surgery. If there is still significant nausea, you may wish to wait another hour or two before leaving. If the child appears to have recovered early, check with the nurse, for you might be discharged at that time. We will either check the post-operative result in one of our exam rooms, or in the recovery room. We must see the patient before discharge, however.

Care at Home

Pain medication is rarely necessary after discharge, but some patients find that Tylenol is helpful. We routinely use post-op drops, a combination antibiotic-steroid (or separate bottles of each of these), to prevent infection and help the eyes heal with less scarring. Even this is not absolutely necessary, however, and if a young child will not tolerate application of the drops, the eyes will heal well without them. Put one (1) drop inside the lower lid (or directly on the eyes of squeamish children) twice a day for 5 to 7 days, beginning the day after surgery.

The only restriction is staying out of swimming pools for five days. Otherwise resuming normal activity is perfectly all right as soon as the patient feels up to it. Adults should return to driving cautiously, however, especially if their dominant eye has been operated upon or if they have double vision. Hair washing, bathing, showering, and even rubbing the eyes will not interfere with the surgery, but avoid getting bath water in the eyes.

If significant post-operative swelling and discomfort occur, these can usually be reduced by applying ice packs to the operated area for 10-20 minutes every hour or so during the afternoon and evening after you are discharged. We have found that a Zip-Lock bag partially filled with frozen peas works better than ice, because it conforms nicely to the eye socket and is not as messy when it melts. In some cases, the lids will stay swollen, and it will be difficult to open the eye, for 2-3 days after the surgery.

We generally advise that contact lens wear not be resumed until the swelling and soreness have resolved (usually 1-2 weeks). Resume contact lens wear gradually, whether you are wearing soft or hard lenses. On the first day, wear the lens for just one hour, then remove it. If there are no untoward reactions, double your wearing time each day until you are back to your usual schedule.

Recovery

Young children recover quickly, usually behaving normally by the next morning. Older children may be uncomfortable for a few days, and adults may take four to seven days to feel comfortable. The more extensive the surgery, the longer the recovery period. The eyes will stay red for 1-2 weeks, and all of the pinkness may not disappear for several months. A small dark "bump" on the white portion of the eye is the adjustable suture knot, the last portion of the suture to dissolve (by about 6-8 weeks). We usually use the type of incision (inside the upper or lower lid) that rarely leaves a visible scar.

Return Appointment

You will be seen 6-8 weeks after surgery for a full post-operative evaluation of alignment. You may or may not still need to wear your glasses. Sometimes you will also be asked to return for a brief visit 2-7 days after surgery. Please call our appointment secretaries to schedule the post-operative visits with your surgeon.

If you or your child have any problems after you get home, call our office. One of our ophthalmologists is available to answer your questions and provide assistance 24 hours a day.

Bills

There are generally three bills that you or your insurance company will receive:

- 1) Surgeon and assistant surgeon fees
- 2) Anesthesiologist professional fee
- 3) Children's Hospital covering all facility, equipment, and service charges, including anesthesia equipment and supplies.

If you have questions **after receiving your bill**, please call the Billing Office at 617-355-6405.