



EYE MUSCLE SURGERY - WHAT TO EXPECT

Eye muscle surgery is being scheduled for you or your child. This type of surgery 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. If your insurance plan changes while waiting for surgery, please notify our office at 410-955-8314 **IMMEDIATELY!**

One Week before Surgery

Stop taking aspirin, aspirin-containing products, or ibuprofen (Motrin, Advil, Nuprin, etc.) one week before surgery, unless you are taking the aspirin because of a risk of having a stroke or heart attack. Aspirin interferes with blood clotting and may cause bleeding during surgery. Tylenol (acetaminophen) may be taken as a replacement for aspirin if a pain medication is needed. If there are any questions about aspirin or other blood thinners such as Plavix or Coumadin, please discuss these drugs with the prescribing physician and let us know at least a week before surgery if your physician advises continuing to take them.

All patients undergoing eye surgery at the Wilmer Institute must be examined by their pediatrician, general physician, or internist within 30 days of surgery. Please ask the physician to perform a complete history and physical, complete the attached "Wilmer Ophthalmology Pre-Operative Medical Consultation" form, and perform the tests indicated for you on the "Testing Checklist" on the front page of that form. The form and any test results must be faxed by the physician's office or by you to the Wilmer Surgical Coordinator's office at least **7 days** before the surgery. **FAX 410-955-7912.**

If you do not have a general physician, we can arrange for a pre-operative medical evaluation to be scheduled at Wilmer, but this will need to be completed before the day of surgery.

1 to 2 Days before Surgery

Usually the type of surgery will have already been decided upon, but **if not**, and if your ophthalmologist has requested an additional pre-operative eye examination, an appointment will be made with your ophthalmologist a few days or weeks before surgery. Please remember to **register at the Wilmer Registration Desk on the first floor when you arrive.**

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 included in this packet ahead of time. The exact time of surgery will be determined by your ophthalmologist a day or two before the actual surgery date.

If the eye examination has already been done, and the consent form has been signed, **please ignore the above two paragraphs. A Wilmer Surgical Coordinator will call you several days before surgery to give you the exact time to report to the BENDANN SURGICAL PAVILION, 400 N. Broadway, across the street from the Johns Hopkins Hospital.**

The Day of Surgery

FOLLOW THESE INSTRUCTIONS TO THE LETTER, OR THE ANESTHESIA STAFF WILL CANCEL THE SURGERY! (IF THERE IS ANY QUESTION, YOU WILL BE SAFE IF YOU SIMPLY DO NOT EAT OR DRINK ANYTHING AFTER MIDNIGHT!)

Specifically, nothing should be taken by mouth (including milk and milk products) beginning eight (8) hours before arrival at the Bendann Surgical Pavilion.

Allowable exceptions for **infants and toddlers** only:

- Clear liquids: Up to two (2) hours before scheduled arrival at the Bendann Surgical Pavilion.
- Breast milk: Up to four (4) hours before scheduled arrival at the Bendann Surgical Pavilion.
- Everything else, including milk and formula, must be discontinued at midnight the night before surgery.

Clear liquids include apple juice, Gatorade, ginger ale, Jello, Pedialyte, Lytren, & water.

Orange juice and milk are NOT clear liquids. Any kind of candy is considered a solid, and no chewing gum is allowed.

Essential medications may be taken with small sips of water; let the anesthesia staff know that your child or you have done so.

Illness

If you or your child becomes sick before the day of surgery, please let us know right away by calling 410-955-6250 or 410-955-8314 so that we can use the time for someone else as well as reschedule your surgery. Anesthesia is riskier in patients with colds, and we cannot put anyone to sleep with an active cold, significant cough, chest congestion, fever, or acute ear infection. Also, we generally cannot put anyone to sleep who is still taking antibiotics for one of the above conditions. It is usually safe to proceed with anesthesia 2 weeks after the symptoms of a cold have subsided; and 2 weeks after institution of therapy for an ear infection, although each patient's condition will be determined individually.

Time of Operation

The time of your operation will be determined by your surgeon several days before the surgery. Our youngest patients must generally go first, followed by elderly adults, followed by all others. The first surgical case usually begins at 7:30 a.m. (9:00 a.m. on Thursdays). **If a Wilmer Surgical Coordinator does not call you at least a day before your scheduled surgery, please call 410-955-6250 to find out the exact time to report to the BENDANN SURGICAL PAVILION.**

Time to Report on the Day of Surgery

You will be asked to arrive **one and a half (1 ½) hours** before the designated time of surgery to the new **BENDANN SURGICAL PAVILION, 400 North Broadway, Baltimore, MD 21287**, which is located across the street from the Johns Hopkins Hospital. The first patient of the day must arrive by 6:00 am, or the surgery may be canceled (7:30 am on Thursday mornings)!

Any pediatric patient (under age 18) must be accompanied by a parent or legal guardian, or the surgery cannot be performed. No matter what your age, you must be accompanied home by a responsible adult with the means and capability of transporting you home or to a pre-designated place of care. You cannot have surgery without a responsible person to escort you.

Preparation for Surgery

The Bendann Surgical Pavilion personnel will prepare you for surgery, including giving you a hospital gown, taking temperature and other "vital signs". Do not bring valuables with you.

For children you may bring any special toy, blanket, etc. that may make your child feel more comfortable in the Bendann Surgical Pavilion. For teens and adults, no eye make-up, *please!*

When called by the operating room (we usually stay \pm 30 minutes on schedule), you will be taken back to the prep/holding area, along with an accompanying person. Children (under 18 years old) must be accompanied by at least one adult. Additional accompanying persons usually wait in the waiting room (lobby).

Anesthesia

Children are usually accompanied into the operating room by one parent (with gown, cap, and mask provided) until the child is asleep. If you are anxious, however, your child will perceive this, and the situation will be worse rather than better.

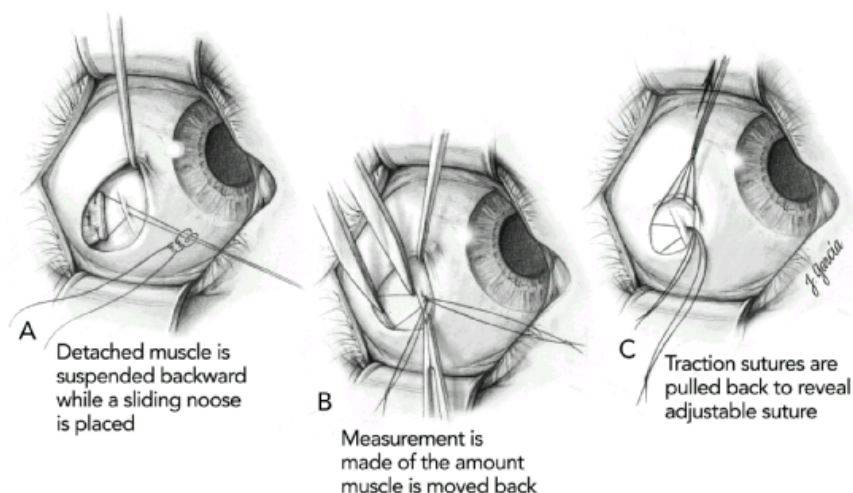
Young children are put to sleep by breathing gas from a mask held near the child's face, not clamped tightly. An IV (intravenous) line and breathing tube are placed after the child is asleep, and the breathing tube is removed before the child is fully awake. Older children and adults are given an IV 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, usually 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, as illustrated in the following drawings. If an adjustable suture is used, the muscle can be repositioned after the patient wakes up (but before leaving the Bendann Surgical Pavilion) by gently adjusting threads that remain attached to the repositioned muscle. In young children, adjustments can be made (if needed) using brief IV anesthesia in the recovery room 1-2 hours after surgery.



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 a snack (there is a cafeteria in a nearby building - just ask), but be sure to let the front desk know where you can be reached any time you are not in the waiting area.

Recovery Room

We will find you or your relatives in the main OR waiting room (lobby) (or in the OR prep/holding area if preferred) when surgery is finished, for reassurance that all is well. Patients undergoing general anesthesia will be kept in the Recovery Room, within the operating suite, for another hour or two, until they recognize where they are and it is safe to take them to the holding area. Patients undergoing local anesthesia may be kept in the Recovery Room for a short observation period, but often they are taken immediately to the holding area. With children it is usually possible for one or both parents to join the child 20-30 minutes after surgery in the Recovery Room, as the grogginess is wearing off. The nurses will call the parent(s) in. (The rule is one parent, but if the Recovery Room is not too crowded, both parents may be allowed in by the nurses.)

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 Bendann Surgical Pavilion. 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 do not 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 and surgery sometimes produce 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 many cases, we wait up to 5-6 hours after surgery, especially when local anesthesia must wear off before doing the adjustment. These adjustments are performed at the bedside in the holding area.

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 by 3 to 4 hours after the surgery, unless waiting for suture adjustment. 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 may possibly be discharged at that time. We will check the post-operative result in your room. We must see the patient before discharge, however.

Because of the required waiting time after surgery before adjustment can be done, **SOME** patients operated on may not be able to leave until 6:00 or 7:00 p.m. **You must have arranged for a responsible adult to accompany you to your home or hotel when you leave the Bendann Surgical Pavilion. Otherwise, JOHNS HOPKINS WILL NOT ALLOW US TO PERFORM YOUR SURGERY.**

Care at Home

Pain medication is rarely necessary after discharge, but some patients find that Tylenol is helpful. We usually provide eye drops to use at home after surgery, an antibiotic drop to prevent infection, and a steroid drop to help the eyes heal with less scarring (sometimes combined into a single drop). Even these are not absolutely necessary, however, and if a young child will not tolerate application of the drops, the eyes will heal without them. You will be given the eye drops before you leave the Bendann Surgical Pavilion. Put one (1) of each type of drop inside the lower lid (or directly on the eyes of squeamish children) twice a day (morning and night) for 5 to 7 days, beginning the morning after surgery.

The only restriction is staying out of swimming pools and hot tubs 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, and 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. With more extensive surgery, the recovery period will be longer. The eyes will stay red for 1-2 weeks, and all of the pinkness may not disappear for several months. A small dark or red "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 a type of incision, inside the upper or lower lid, that rarely leaves a visible scar once healing is complete.

Return Appointment

You will be seen 6-10 weeks after surgery for a full post-operative evaluation of alignment. Please call our patient service coordinators at 410-955-8314, **within a few days after surgery** (because the appointment slots fill early), to schedule the post-operative visit with your surgeon, if this has not already been scheduled. Sometimes you will also be asked to return for a brief visit 2-7 days after surgery.

If your child or you have any problems after you return home, call our office at 410-955-8314. If you are unable to reach us, please call the Physician's Answering Service at 410-955-4331 and ask to speak with the **pediatric ophthalmologist on call**. One of our pediatric 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 – from the Department of Ophthalmology
- (2) anesthesiologist professional fee – from the Department of Anesthesiology
- (3) The Johns Hopkins Hospital bill covering all facility, equipment, and service charges, including anesthesia equipment and supplies

If you have questions after receiving your bill from the Department of Ophthalmology (The Wilmer Eye Institute), please call our Billing Office at 410-933-1200.

If you have questions concerning your medical insurance coverage **prior to** your surgical procedure, please call one of our Wilmer Financial Coordinators at 410-955-5489.

Please note that these issues cannot be handled by our secretaries, but the Billing Office and the Wilmer Financial Coordinators will be pleased to assist you.

EYE MUSCLE SURGERY SUMMARY OF THINGS TO DO

1-4 weeks before surgery:

1. Contact your insurance company or HMO to verify coverage for outpatient eye muscle surgery. If your insurance changes, notify our office at 410-955-8314!
2. Have a pre-operative medical examination and have the enclosed form completed by pediatrician/internist/general practitioner. Fax or send to us as indicated on the form, arriving here by **7 days** before the day of surgery.
3. Stop taking aspirin or ibuprofen (Motrin, Advil, Nuprin, etc.) one week before surgery, unless otherwise instructed by your physician.

1-2 days before surgery:

1. Pre-operative eye examination and discussion with your ophthalmologist, if not already done
2. Discuss surgery with your child (if applicable).
3. Call 410-955-6250 to find out the time to report to the Bendann Surgical Pavilion.

Day of surgery:

1. **NOTHING TO EAT OR DRINK AFTER MIDNIGHT.** Allowable exceptions for young children are listed on page 2.
2. Essential medications may be taken with a small sip of water. *Be sure to tell the anesthesiologist before the surgery that you have done so.*
3. Report **1 ½ hours** before your scheduled start time, to:
Bendann Surgical Pavilion, 400 North Broadway, Baltimore, MD 21287, directly across the street from the Johns Hopkins Hospital. At the time your surgery is scheduled, a Wilmer Surgical Coordinator will provide a map of the Bendann Surgical Pavilion and a parking token, which is required to access the free parking lot adjacent to the Bendann Surgical Pavilion.
4. Expect to spend the day at the Bendann Surgical Pavilion.
5. All patients under age 18 must be accompanied by a parent or legal guardian.
6. All patients must arrange to be escorted home by a responsible adult.

Attachment: Sample permission form
Wilmer Pre-Operative Medical Consultation Form
Testing Checklist (on first page of Medical Consultation Form)