Strabismus is a misalignment of the eyes. The eyes may cross or drift up or out. Strabismus may be present from birth or may develop in childhood. There is a common misconception that strabismus is difficult or impossible to correct. Actually, treatment for this condition is safe and effective for children and adults. Strabismus can sometimes be cured with glasses, but often requires eye muscle surgery. Eye muscle surgery is performed under general anesthesia and takes less than an hour to complete. During the procedure, the eye muscles are carefully repositioned to straighten the eyes. Depending on the underlying problem, the muscles may be strengthened or weakened. For instance, in a patient with crossed eyes, the muscles that pull the eyes in are surgically weakened. Because the surgery is completed without ever entering the eyes, the risks involved are extremely small. Children are usually back to school and adults back to work within three days after surgery.

I am on staff and perform surgery at the following facilities:

- HCA Gulf Coast Surgery Center of Bradenton
- HCA Doctors Hospital Surgery Center of Sarasota
- All Children’s Hospital of St. Petersburg

For children less than ten years of age, fellowship-trained pediatric anesthesiologists are available at the Gulf Coast Surgery Center and All Children’s Hospital.
**Preoperative Visit**

You may be given an office appointment just prior to surgery. On that day, certain aspects of the eye examination will be repeated and I will answer any remaining questions that you have. I will also repeat the physical examination of the heart and lungs. If your child gets a severe cold before surgery, we usually postpone the surgery to limit the risks of anesthesia. If your child becomes sick before surgery, please notify us as soon as possible.

You will be asked to sign a surgical consent form which mentions four primary risk factors associated with eye muscle surgery. These are: (1) the possible need for additional surgery, (2) double vision, (3) loss of vision, and (4) anesthesia risk. While many eye muscle problems can be effectively treated with one operation, you must be aware that additional surgery may be needed. Sometimes, two or more eye muscle surgeries are necessary to correct the underlying problem. Development or worsening of double vision is uncommon after eye muscle surgery. When this occurs, it is usually temporary. In some cases, transitory double vision is desirable immediately after surgery because it helps the brain to restore complete alignment of the eyes. In the rare event that double vision persists, a second surgery can be done to correct it. Loss of vision after eye muscle surgery is extremely rare. Although cases of vision loss due to infection, bleeding, or retinal detachment have been reported in the medical literature, I have never encountered this complication in the thousands of eye muscle surgeries that I have performed. To decrease the chance of bleeding, do not take aspirin or Motrin type medicines or any herbal medicines (especially garlic, ginger, or gingko) for two weeks before surgery; use Tylenol instead.

You must also be aware that there is a small risk associated with anesthesia. However, the chance of a serious problem such as stroke, heart attack, or death is extremely small. I have never encountered this in my practice.

Eating is not allowed for eight hours before surgery. However, clear liquids are allowed up until four hours (two hours for children less than 10 years) before surgery. Clear liquids are drinks you can see through including water, clear fruit juices without pulp such as apple and grape juice, Gatorade, Kool-aid, Sprite, Jell-O and popsicles made from clear juices. For infants, a mixture of clear apple juice and water is an excellent choice. Milk is not a clear liquid. Within two hours of surgery, no food or liquids of any kind are allowed.
After Eye Muscle Surgery

What to expect:

• A temperature up to 100º is normal after surgery. Use Tylenol (children’s Tylenol for kids) for this.

• There will be mild discomfort and sensitivity to light for a few days after surgery. Cool compresses with a clean towel, Tylenol (children’s Tylenol for kids), and outdoor sunglasses will help.

• A sensation of something being in the eye may persist for up to two weeks after surgery.

• Redness and swelling of the eye and eyelid are normal. These should progressively improve each day after surgery. **If you notice increased redness, swelling, pain, discharge, or decreased vision, call us immediately, as this could be a sign of infection.**

• Most patients sleep the majority of the day of surgery.

• Nausea or vomiting may occur after surgery.

Instructions:

• You will receive a prescription for an eye ointment. Beginning one day after surgery, you should apply this twice a day in the lower pouch of the operated eye(s).

• Any glasses worn prior to surgery should be worn after surgery as well, unless otherwise instructed.

Restrictions:

• Bathing is allowed after surgery, but take care not to allow shampoo or water to enter the eyes.

• Children should refrain from extended playing in the bathtub for three weeks after surgery.

• Children may go back to school as soon as they feel well enough, usually within three days.

• Adults should not drive a car or drink alcoholic beverages for at least 24 hours after surgery.

• Refrain from activities in which the eye may be struck (i.e., basketball) for three weeks after surgery.

• No swimming for three weeks.
Commonly Asked Questions About Eye Muscle Surgery

How long does it take?
The surgery itself usually takes between thirty to sixty minutes to complete.

Do you take the eye out of the head and put it back during surgery?
No. The surgery is done with the lids held open, with the eye in its normal position.

Are there any scars after surgery?
The surgical incision is made through the thin tissue covering the white part of the eye. In most cases, the small scar is not noticeable. Incisions are never made through the skin.

What are the goals of surgery?
The primary goal is to restore normal eye alignment. In patients with double vision, the goal is to reduce the double vision as much as possible. Many patients also benefit from improved cosmetic appearance.

How do you know how much surgery to do?
The amount of surgery is based on the measurements of ocular misalignment done in the office.

Why are you doing surgery on both eyes when I only notice one eye to drift?
When an eye drifts, it is usually not a problem with one eye versus the other. Rather, it is a problem with the balance between the eyes and the brain. In a patient with crossed eyes, when the right eye looks straight ahead, the left eye crosses in. When the left eye looks straight ahead, the right eye crosses in. Some patients favor one eye strongly, so only one eye seems to drift, when the problem is actually in both eyes. Based on the severity of misalignment, surgery may be recommended on one eye or both eyes.
Does the patient wear patches after surgery?
Generally not. On occasion, a temporary patch is needed.

What is the chance of needing a second operation?
The likelihood of needing a second operation depends largely upon the problem for which the surgery is being done. Many eye muscle problems can be taken care of with one operation while others will likely need two or more surgeries. Ask me for details about your particular case.

What is the success rate of a second operation?
The success rate of the second surgery is usually as high as the first operation.

Is recovery painful?
After surgery, the eyes feel “scratchy”, but not very painful. Some have more discomfort than others.

What do we watch for after the surgery?
Redness and swelling of the eye and eyelid are normal. These should progressively improve each day after surgery. If you notice increased redness, swelling, pain, discharge, or decreased vision, call us immediately, as this could be a sign of infection.

In a patient with drifting out of the eyes before surgery, is crossing and double vision normal after surgery?
Yes. In patients with drifting out of the eyes before surgery, it is normal for the eyes to cross inward and to experience double vision for a period of time after surgery. This immediate overcorrection is desirable since the eyes tend to progressively drift back outward after surgery. As the eyes progressively drift outward over the days to weeks after surgery, crossing and double vision almost always resolves.
Before and After Surgery Photos of Dr. Silverman’s Patients