

# Strabismus Surgery

## WHAT IS STRABISMUS SURGERY?

Strabismus surgery loosens or tightens eye muscles, changing the alignment of the eyes.

## WHAT KIND OF ANESTHESIA IS USED FOR STRABISMUS SURGERY?

The type of anesthesia depends on patient age and health as well as patient and surgeon preference. Most children undergo general anesthesia. Adults may have general anesthesia or conscious sedation with local anesthesia. The procedure may occur in a hospital or surgery center. The procedure is usually performed as an outpatient (patients do not stay overnight in the facility).

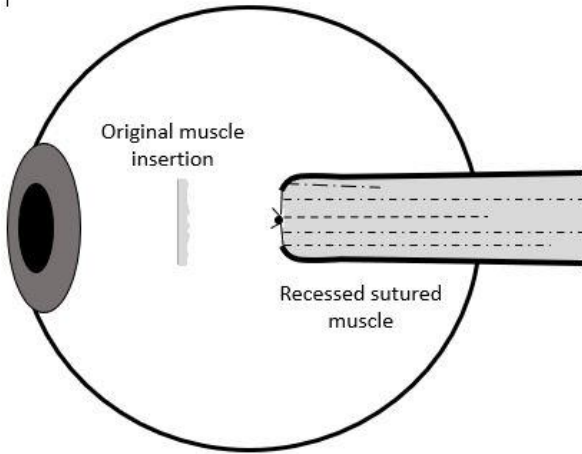
## HOW DOES THE SURGEON APPROACH THE EYE MUSCLES?

The eye muscles attach to the sclera (outer covering of the eye). The muscles are covered by a thin layer of transparent tissue called the conjunctiva. The eyelids are held open by a lid speculum. The surgeon incises the conjunctiva to access the eye muscle(s), and uses small instruments to identify the muscle targeted for surgery. No skin incisions are made. The eyeball is NOT removed from the eye socket during strabismus surgery.

## WHAT IS A RECESSION?

A recession weakens function by changing the attachment site of the muscle on the eyeball. Once the muscle has been identified, a stitch is placed through the muscle. The muscle is cut from the surface of the eye and stitched back to the eye in a new—weaker location. The muscle is no longer taut, similar to an elastic band that has been released. This effectively reduces the resting tension of the muscle. [See figure 1].

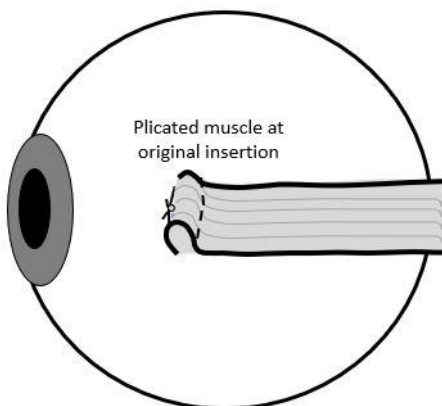
**Fig. 1:** In a recession procedure the muscle is cut from the surface of the eye and reattached further back from the front of the eye.



### WHAT IS A RESECTION/PLICATION?

A resection strengthens muscle function by shortening the muscle and then reattaching it to the eyeball at its original position, similar to cutting an elastic band, but still stretching it to the original length. A suture is placed through the muscle at the new intended length. The segment of muscle between the suture and the eyeball is removed or folded over (plication), and the shortened muscle is reattached to the eye [See figure 2].

Fig. 2: In a plication procedure a segment of muscle is folded over to shorten it.



### WHAT IS AN ADJUSTABLE SUTURE?

Strabismus surgery involves sewing the eye muscle to the outer covering of the eye after altering the insertion position and/or the length of the muscle. Standard strabismus



surgery without adjustable suture utilizes a permanent knot tied during the surgical procedure. Adjustable suture technique utilizes a bow-knot or slip-knot (temporary knot) on the muscle which can be changed. After surgery, the eye alignment can be altered by adjusting the temporary knot. The adjustment is typically done with the patient awake and the operated eye numbed. Adjustable suture surgery is generally only offered to patients who are able to fully cooperate with the adjustment process. This adjustment may be done in the postoperative room, the next day, or later in the week, depending upon the surgeon's preference.

### **ARE THE EYES RED AFTER STRABISMUS SURGERY?**

It is normal for the white part of the eyes to be red after surgery. It may take several weeks or occasionally months for the redness to disappear. The eyes are usually scratchy and sore with eye movement. The soreness usually improves after a few days depending upon the exact surgery performed.

### **IS MEDICINE USED AFTER SURGERY?**

All surgeons apply antibiotic or antibiotic/steroid drops or ointment at the end of the surgery. Some surgeons will prescribe a similar drop after surgery for a few days as well.

More technical information may be found on [https://eyewiki.aaos.org/Strabismus\\_Surgery,\\_Horizontal](https://eyewiki.aaos.org/Strabismus_Surgery,_Horizontal)

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