

**INFORMATION FOR PATIENTS OF DR. TINGLEY
REGARDING STRABISMUS
(EYE MUSCLE) SURGERY**

Strabismus means that an eye is not straight. There are many different types of strabismus, such as, “crossed eyes” (esotropia), “wall eyes” (exotropia) or vertically misaligned eyes (hypertropia). Since there are 6 muscles that move each eye, there are many combinations of weak or strong muscles that can cause eyes not to be parallel to one another. Surgery involves tightening weak eye muscles and loosening stronger muscles to balance their powers. This realigns the eyes so they are parallel. Stitches (sutures) are used to place the eye muscles in new positions on the surface of the eyeball. Lasers are not used in this surgery and the eye is never removed from the socket.

Surgery is done if all non-surgical treatments have been unsuccessful in straightening the eyes. These include glasses, prisms, eye exercises or medications if appropriate. In some children, patching is used before surgery to improve the vision in the eye that is not straight or to prevent the angle of the misalignment from getting larger.

Surgery can be performed with a general anesthetic, or in some cases, using local anesthetic along with sedation. In adults, surgery can be done using “adjustable suture” technique: instead of firmly tying the muscle stitches at the end of the operation (as is usually the case), they are left loose in a bow tie knot. After the patient recovers from the anesthetic and is alert, the eye surgeon can measure the eye position and then change the muscle positions if the eye is not straight. This adjusting process is generally painless with anesthetic eye drops placed in the eye at the time of muscle adjustment.

Strabismus surgery is usually done as an ambulatory procedure. Generally if the patient is scheduled for an adjustable suture procedure, the adjustment is done the next day in the office.

Follow up appointments are usually scheduled in the first week and 3 months after the surgery. The assessments at these appointments are as important as the surgery itself in leading to a successful result. After the surgery, the eyes are red and slightly swollen around the muscle that was operated on. The redness improves over four or five weeks. The stitches dissolve on their own after a few days.

Many patients experience double vision (seeing two of everything) after surgery because they are not accustomed to the new parallel position of the eyes after having had misaligned eyes for a prolonged time. The double vision goes away in at least 90% of cases as patients get used to their straighter eyes. This can take a few days or weeks.

Other risks of surgery include:

1. Infections on the surface of the eye (risk 1 in 50) or inflammation around the stitches (risk 1 in 50).
2. Infection in the eye socket (risk 1 in 500), infections within the eyeball (risk 1 in 5,000) and damage to the eyeball from suture needles (risk 1 in 1,000). Any of these three complications can lead to loss of vision in the eye.
3. Risks associated with general or local anesthetics are very uncommon (1 in 10,000 to 100,000). Antibiotic use is applied during the time of surgery and usually for three days following the surgery to avoid the risk of infection about the eye. No swimming is allowed for one week following the surgery to avoid infections to the eye. Generally normal activity can be carried out with a return to work in most cases for adults in one week following surgery.

Overall, strabismus surgery leads to straight eyes in 80% of cases. Therefore approximately one in five patients require further treatment or surgery to successfully align the eyes. Because of the many combinations of eye muscle problems that can arise, the success rates vary among different types of strabismus.

If you have any other questions, do ask your doctor. We are happy to help.