

Strabismus (crossed eyes): diagnosis and operation

This leaflet contains information on the operation performed to correct strabismus (crossed eyes). The information presented in this leaflet applies to both adults and children.

Diagnosis

You may need an operation if:

- one of your eyes is turned inwards, outwards, upwards or downwards. It is called strabismus (crossed eyes).
- your eyes don't move properly. This may result in crossed eyes and/or double vision.
- you don't like the look of crossed eyes (i.e. for cosmetic reasons).

Purpose of the operation

The purpose of the operation differs from one person to the next. Generally, the purpose is to properly realign the eyes. If you have double vision or headaches, the operation is designed to alleviate your symptoms. In addition, the operation may cause your eyes to work together better. It is not always possible to fix strabismus entirely. Some patients will need a device afterwards, such as a prism.

Your orthoptist will tell you whether you need to undergo surgery on one eye or both. The orthoptist will also tell you which muscles will be targeted in the operation. This depends on the position of your eyes, the mobility of your eyes, and any operations you may have undergone before.

The preliminary examination

The extent to which your eyes are misaligned will be measured a few times by your orthoptist. The results of these measurements will be used to draw up a plan for the operation. This plan will be discussed in a meeting. This meeting is called the orthoptic surgery hour, and it is attended by a team of orthoptists, an ophthalmologist (eye doctor) and yourself.

Before the operation, you will also talk to a nurse and the anaesthetist. This is called an intake interview. Where necessary, you will also talk to the internist. Children will only be called or seen by the anaesthetist. During this meeting, you will be able to ask questions. Please note that there will be some waiting time between the various examinations. We advise you to bring something that will keep you pleasantly occupied during the waiting time.

Before the operation

- The operation is performed under general anaesthesia (narcosis) or under local anaesthesia. With children, the operation is always performed under general anaesthesia.

- If only one of your eyes is to be operated on, a local anaesthetic may be enough in some cases. You will have discussed which type of anaesthesia is best for you with your orthoptist or ophthalmologist beforehand.
- Are you taking any medications? Then your ophthalmologist will have told you that certain medications can be taken as usual. Please do so with a **little sip** of water.
- The operation will be a day treatment, which means you won't have to spend the night at the hospital.
- You will be prepared for your operation at the nursing ward on the second floor.
- You can keep on your own clothes. The nurse will take you to the operating theatre,
- where you will receive your anaesthetic.

During the operation

During the operation, your eye muscles, which are connected to your eyeball, will be readjusted. In order to do so, the ophthalmologist will have to make a small incision into the white conjunctiva of the eye. He or she will find the eye, suture it with two stitches, and cut it. The muscle is then shortened or readjusted and reconnected to the eyeball.

The conjunctiva is sutured with one or more super thin stitches. These will dissolve of their own accord.

Lastly, an ointment containing an antibiotic will be applied to your eye.

If you are undergoing surgery under local anaesthesia, you will wear a eye pad dressing covering the eye for 1 day.

Rules to observe after the operation

Please find below the rules you must follow after the operation:

- The day after the operation: if necessary, you can clean your eye with a gauze swab dipped into lukewarm tap water. If you find any dried-up discharge (fluid leaking from the wound) in the corner of your eye, you may wipe it away (from the ear towards the nose).
- Then start applying Trafloxal drops. You will have to apply the drops 3 times daily for 1 week.
- The sutures in your eye will dissolve of their own accord within a few weeks. Afterwards, you will no longer experience any discomfort.
- Once you have recovered from the operation and anaesthesia, you can start working again, or go back to school. The amount of time it takes to recover differs from one person to the next. For most people, it takes 4 or 5 days.
- Are you sensitive to light? This is normal. If light hurts your eyes, wear sunglasses.
- Make sure you don't get any dirt in your eyes. Avoid entering dusty rooms in the first 2 weeks after your operation.
- Children are not allowed to play in sandpits for 2 weeks.
- You are not allowed to swim for 2 weeks.
- However, you can take showers and wash your hair as usual.

Possible complications

- The whites of your eyes will be quite red and sensitive after the operation, at operationsite. This is normal and usually lasts a few days.
- If your eyes grow more red, rather than less red, after a few days, there may be some inflammation. If this is the case, please contact your general practitioner or Oogziekenhuis Rotterdam's Medical Helpline on 010 401 7634.
- You may experience some confusion after the operation. Usually, this side-effect will disappear of its own accord within 2 or 3 weeks. In some people it may take a little longer.
- Your eyesight may be a little blurry after the operation. This blurriness will disappear of its own accord.
- In less than 1 in 10,000 people, the eye will get infected after the operation, or the retina will detach.

When an eye muscle is operated on, the doctor will measure beforehand exactly by how many millimetres the muscle must be shortened or readjusted. Even so, the operation may have too much or too little effect (overcorrection or under-correction). If this happens in your operation, you may experience double vision. This is because the brain cannot suppress this over- or under-correction.

The orthoptist will check this during the first follow-up check-up after the operation. She will discuss the solution or proposed treatment with you. In some people, the double vision will disappear of its own accord after a few weeks.

Other complications you may experience are the following: allergic reactions to the sutures used, problems relating to the cornea and mild infections. These are annoying side effects, but they can be treated easily with eye drops.

Check-ups

The first check-up will be performed at your orthoptist's about 2 weeks after the operation. During this check-up, the position of your eye will be assessed, and the orthoptist will check whether your eye has made a good recovery. Some patients will be advised to do exercises to make sure their eye movements are smooth. Or they will be prescribed exercises to be able to improve the position of their eye themselves. You will be told whether or not you have to do any exercises at the first follow-up appointment.

Result

Before the operation, your orthoptist will discuss with you what kind of result to expect. Results differ from person to person. Factors which may affect the result of the operation include the following:

- the position of your eye;
- the cause of the misalignment;

- the mobility of your eye;
- the visual acuity (sharpness of vision) in both eyes;
- whether this will be your first operation or a re-operation.

During the first few weeks or months after the operation, the position of your eye may change. The final result can be assessed 2 to 3 months after the operation. Your orthoptist will assess the result by examining your eyes very thoroughly. If everything is fine in this examination, you probably won't have to see the ophthalmologist for follow-up again.

Some patients may need another operation, though. This is called a re-operation. Since your eye muscles will have to make a full recovery first, you will generally have to wait half a year before you can undergo another operation.

The operation performed on your eye muscles will not affect your lens strength or visual acuity. However, it's not a good idea to have your eyesight tested or to buy other glasses soon after the operation, unless your ophthalmologist or orthoptist advises you to do so.

Undergoing treatment at Oogziekenhuis Rotterdam

Oogziekenhuis Rotterdam trains doctors, paramedics and nurses. This means that you or your child may be (partially) treated by someone who is still training to become an ophthalmologist. This is always done under the supervision and responsibility of a fully qualified ophthalmologist.

Oogziekenhuis Rotterdam's policy is to refer patients back to their own ophthalmologist, or to another ophthalmologist closer to their own home. Naturally, we will only refer you back if your ophthalmic symptoms are fully under control. This is also true for patients who came to Oogziekenhuis Rotterdam of their own accord, to obtain a 'second opinion'.

More information

You will be given more information by your ophthalmologist and orthoptist during the orthoptic surgery hour. If you have any questions after reading this leaflet, please don't hesitate to ask them to your orthoptist at your next appointment. Or you can contact:

- Our nursing ward, phone number 010 401 7679.
- The Children's EYE Centre and Orthoptics unit, phone number 010 401 7741.

Both units can be reached Monday through Friday, between 8.15am and 4.30pm.