

Ophthalmology department

Orbital decompression surgery

Information for patients, relatives and carers

Introduction

Exophthalmos, also known as proptosis, is the medical term for bulging or protruding eyeballs. It can affect 1 or both eyes and is most often caused by thyroid eye disease.

This leaflet has been designed to answer some of the questions that you or those who care for you may have about orbital decompression surgery to treat exophthalmos. If you have any questions about the information below, please contact us.

Many of the symptoms of thyroid eye disease tend to improve over time, although this can take several years. There's a chance your eyes will continue to protrude if corrective surgery is not done.

Some people with exophthalmos are left with long-term vision problems, such as double vision. However, permanent loss of vision is rare if the condition is diagnosed and treated quickly.

What is orbital decompression surgery?

Orbital decompression is usually used to treat patients with proptosis (bulging eyes) due to thyroid eye disease (TED). This is where the muscles and/or other tissue connected to the eye gets too big for the holes in the skull where they sit. This can cause problems such as loss of vision. Orbital decompression surgery increases the space for these muscles and/or tissue, which helps to reduce the effect of the proptosis.

The operation involves removing part of the wall(s) of the eye 'socket'. In some patients, some extra tissue is also removed from around the eye to make space. Depending on the proptosis, the surgery may involve removing one or more of the eye socket walls.

Patients with long-term TED may have the procedure to reverse the effects of some of the disfigurement caused by the disease. This helps to correct the placement of the lower eye-lid and some of the bulging of the upper eyelid. However, this may need more surgery after recovery from orbital decompression surgery.

How is orbital decompression surgery performed?

The surgery is performed under a general anaesthetic. You will need to stay one night in hospital after your surgery.

Depending on the number of walls and whether one or both eye sockets need decompression, the operation may take up to three and a half hours. Both eyes are usually padded after

surgery, and these are removed on the ward the following morning. There will also often be surgical drains that are removed in the morning.

We will give you antibiotics in the operating theatre and **you must not blow your nose** after a medial wall decompression for 2 weeks. Eye drops or eye ointment are prescribed and a follow-up appointment arranged for two weeks later.

Types of orbital decompression surgery

Lateral wall decompression: A 10 – 15 mm long incision (cut) is made in the ‘laughter line’ of the outer eyelids, and a section of bone behind the orbital rim (the outer wall of the eye socket) is removed. The skin is closed with a few stitches which are removed after two weeks.

Medial (inner) wall decompression: A fine incision is made behind the inner corner of the eyelids to allow the inner wall of the eye socket and the sinuses to be removed. The incision leaves no visible external scar. Alternatively, the medial wall can be removed by an Ear Nose Throat (ENT) surgeon via through the nose (endonasal medial wall decompression)

Orbital floor: Part the floor of the eye socket underneath the eyeball can be removed through a lateral wall approach or a medial wall approach as above the nerve to the cheek runs through the bone of the floor that can sometimes be affected by the surgery accounting for the numbness which often follows, but which typically improves with time.

Balanced two and a half wall decompression (lateral and medial walls): A combination of the medial and lateral wall decompression and some of the orbital floor as above.

Fat decompression: As thyroid eye disease is often associated with an increase in orbital fat during the surgery fat may be removed through one of the bony openings to decompress the orbit further.

What are the risks of orbital decompression surgery?

Orbital decompression is major surgery and should only be considered after careful discussion with your ophthalmologist and with an understanding of all the associated risks.

Lateral wall decompression

- **A fine linear scar** hidden within the ‘laughter lines’ of the outer corner of the eyelids
- **Swelling** of the upper and lower eyelids, this settling over a few months
- **A ‘wobble’** of the vision on eating (‘masticatory oscillopsia’) – this occurring in about 40 per cent of patients but quickly settle in nearly all patients
- New onset (beginning of) double vision is very rare with a lateral wall decompression.

Medial wall decompression

When the disease is sight-threatening cases **medial wall decompression** alone can be undertaken. The incision can either be made in the inner part of the eyelids (transcaruncular) or via an endonasal (through the nose) approach. The endonasal approach is generally carried out by ENT surgeons. This can provide good decompression of the optic nerve.

The following risks are present (to different degrees) **with all forms of decompression:**

- **Soreness and tenderness** – this should settle over a number of weeks
- **Upper and lower lid swelling** – this settles over a number of weeks
- **Numbness of the upper cheek and upper teeth** – this affects most patients but disappears over time
- **New / increased double vision** – if a patient already has bad double vision then orbital decompression surgery can change the nature of it and may make it worse. This group of patients are likely to need eye muscle surgery to treat their double vision after they have recovered from their decompression surgery
- **Risk to sight** – very rare –there is a very remote chance of irreversible sight loss in each eye with simultaneous right and left surgery. If a patient does not want to take this risk, surgery can be arranged on one side at a time
- **Numbness in the area around the eyes and lips and teeth** – especially if part of the orbital floor is removed
- **Risk to life** – this risk is extremely small
- **Damage to the tear drainage** – as the medial wall decompression surgical area is close to the tear drainage there is a risk that surgery can cause scarring of the tear ducts leading to watering eyes. If this is severe then further surgery may be needed

What should I do to prepare for surgery?

Do not take aspirin, aspirin-type medications, or anti-inflammatory medicines for three weeks before surgery.

For patients on other blood-thinning medications, these should be stopped according to local anti-coagulation protocols before surgery as advised by your GP or cardiologist. We will provide further advice at your pre-assessment appointment.

What happens after the surgery?

Eye pads are placed over the operated eye(s), and these are gently removed the next day before leaving hospital.

Sleeping on an extra pillow at night helps to reduce any swelling and bruising and this should settle within a few weeks of surgery.

With a medial wall decompression, drainage of the air sinuses around the eye may be temporarily affected; **nose blowing, flying and scuba-diving must be avoided** for at least three weeks. Rarely, however, sinus symptoms can continue after surgery and this may need medical or surgical treatment in its own right.

Driving should be avoided if you experience new or worsening double vision.

Postoperative appointments are scheduled for 2 weeks after surgery, when the stitches are removed, and again about 1 - 2 months later.

Who can I contact for more information?

If you have any questions or concerns please call:

- Ophthalmology emergency department: **020 3312 3245**
- Western Eye Hospital eye clinic: **020 3312 3236**
- Charing Cross Hospital eye clinic: **020 3311 0137**
- Riverside unit, nurses station Charing Cross Hospital: **020 3311 5013**
- Pre-assessment at Charing Cross Hospital: **020 3314 8182**

Patient support

The [British Thyroid Foundation](#) can also offer some help. They can be contacted on **01423 810093** or email: info@btf-thyroid.org

How do I make a comment about my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on **020 3312 7777** (10.00-16.00, Monday to Friday). You can also email PALS at imperial.pals@nhs.net The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to complain by contacting our complaints department:

Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street
London W2 1NY

Email: ICHC-tr.Complaints@nhs.net

Telephone: **020 3312 1337 / 1349**

Alternative formats

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