Orbital Decompression Surgery
for Thyroid Eye Disease
Corneo-Plastic Unit

What does orbital decompression surgery involve?
The purpose of this surgery is to relieve orbital pressure (improving the circulation of blood around the orbit), and increase the available space for the orbital contents (allowing the eye to settle back to a more normal position within the socket).

Surgery is usually performed under a general anaesthetic. Patients usually stay in hospital for one to two days after surgery before being discharged home. The amount of surgery required depends upon the severity of disease and how much the eyes bulge. Of the four ‘walls’ of the orbit, three can be decompressed and also some fat can be removed from the orbit. Incisions are made on the inside of the eyelids or in skin creases in the eyelids to hide or camouflage surgical scars.

What is the rate of recovery after orbital decompression?
Orbital decompression is a major operation and the scale of surgery should not be judged by the small incisions involved. Although the skin incision settles over a few weeks, natural repair of the deeper tissues can take many months, and this may account for the occasional deeper ache or discomfort during healing.

Swelling and some bruising of the eyelids can develop in the week following surgery, and this swelling can take a few months to settle completely. Double vision may occur, or even worsen in 5-10% of patients, during this healing period and if it does not improve, may require subsequent surgery to re-align the eyes if it does not improve. You may be advised not to drive or work for several weeks after the surgery and you should take this into account when planning treatment.

What are the possible complications of orbital decompression?
As with all surgery, side-effects of orbital decompression may include infection, scarring and swelling. Specific side-effects may include poorer vision, double vision and a change in eyelid height or position.
Some surgeons routinely create a window in the outer wall of the eye socket (lateral wall decompression). This effectively creates a window to the muscles of the temple. However, in our experience this can cause hollowness over the outer sides of the eye sockets and give a sensation of eye movement when chewing. It is our practice to keep a thin wall of bone intact to prevent these problems.

With decompression of the orbital floor (this being undertaken only in patients with more severe bulging and when the medial or lateral wall decompression extends to the floor), numbness over the upper cheek and upper front teeth can occur. In the great majority of patients (over 90%), this recovers completely.

All forms of decompression surgery carry a risk of permanent visual loss of 1 in 1000 for each eye. Patients with visual loss before surgery may not regain their vision completely.

When decompression surgery extends into the sinuses, nose blowing, flying and scuba-diving must be avoided for at least three weeks after surgery as drainage of the sinuses around the eye may be temporarily affected. Your surgeon will advise you. Rarely, surgery to improve sinus drainage is required after orbital decompression if medical treatments do not help.

With all surgery, there remains a minute risk of neurological injury, and indeed to life itself, this being due to anaesthesia or surgery, or a combination of both. As with all surgery, the possible risks versus the benefits are very carefully considered for each and every patient before surgery is arranged.

**What happens after orbital decompression?**

Once you have recovered fully from orbital surgery, your consultant will discuss further surgery with you, if necessary.

This may be surgery to the muscles that control the eye movements in order to resolve or reduce double vision (strabismus or squint). Rarely, more than one procedure may be necessary and sometimes incorporating prisms into your glasses may be necessary to completely resolve the double vision if surgery does not completely resolve the issue.

Squint surgery for thyroid eye disease requires general anaesthesia, although if general anaesthesia is not an option it can occasionally be carried out under local anaesthesia with sedation. It is usually a day-case procedure.
Once you have recovered from the squint surgery, or if you do not need it in the first place, you may require surgery to your eyelids. This is often in the form of lowering the upper eyelids and is usually carried out through the inside of the eyelid, without the need for further skin incisions. This is ideally carried out under local anaesthesia with sedation as a day-case procedure so that the eyelid appearance can be adjusted during the operation in order to achieve the best outcome. Your consultant will discuss all the aspects that are relevant to your condition. It is helpful if you give us photographs of how you looked before your thyroid condition started.

In general, medical therapy and surgical rehabilitation may often take 1 to 2 years. During this period your eyes will gradually improve in comfort and appearance. The aim of rehabilitation is to restore a natural appearance with comfortable eyes and normal sight.

There is a very small likelihood of reactivation of thyroid eye disease in the long term and it is very important that for the rest of your life you avoid smoking and that your thyroid function remains stable.

**Further Information**
For further information visit the British Oculoplastic Surgery Society website www.bopss.org

For further information about the risks of anaesthetics please see the booklet ‘You and your anaesthetic’ or visit the Royal College of Anaesthetists’ website www.rcoa.ac.uk

**Contact us**
Should you have any further questions or concerns, please do not hesitate to contact us:

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Please ask if you would like this leaflet in larger print or an alternative format.