

ORBITAL DECOMPRESSION AND ORBITAL EXPANSION FOR THYROID EYE DISEASE

Once the “active” inflammatory phase of thyroid eye disease has subsided, an individual may be left with structural changes, such as eye protrusion, eyelid retraction, and in some cases, double vision. Luckily, there are corrective procedures that can be performed to address these problems.

In most people the build-up of tissue and swelling behind the eye is not severe enough to damage the optic nerve, but it may cause a striking bulging of the eye which in itself is a distressing situation, not only from the standpoint of exposure of the eye, but also because of the disfigurement that it produces.

Fortunately, orbital expansion and/or decompression procedures can often address eye bulging. With orbital ex, the eye socket is enlarged to accommodate the extra tissue that the thyroid disease has deposited behind the eye. This allows the eye to settle back into a more normal position.

Around the *orbit* (the bone socket in which the eyeball sits) there are a number of sinus cavities that can be used to surgically expand the orbit. The sinus below the eye is called the *maxillary* sinus, and the sinus toward the nose is called the *ethmoidal* sinus. A *maxillary-ethmoidal* expansion is the most frequently used procedure for accommodating the extra tissues behind the eye. However, in some cases, the outside wall of the orbit (lateral wall) can also be removed; and finally, orbital roof, frontal sinus, or sphenoid sinus surgery may be helpful. Most people, however, require only a two wall maxillary-ethmoidal orbital expansion. Using magnification, specific portions of the orbit bones may be carefully removed, allowing communication between the orbit and the nearby sinuses. There is a nerve of sensation that runs through the bone underneath the orbit. This nerve provides sensation to the cheek, the lip, and some of the upper teeth on that side. Great care is taken to nibble the bone away from this nerve so that the nerve is preserved. Despite extreme caution, and the use of microsurgical techniques, some numbness occurs in 50% of cases. If numbness develops, 90% of people have 100% nerve recovery within 9 months.

We have developed and perfected a new technique called “Small Bone Decompression” that is now commonly used in patients with only moderate proptosis and excessive fat accumulation behind the eye. This technique provides outstanding results with much faster recovery and minimal risks. As we’ve discussed, broadly speaking, setting an eye back in the socket can be accomplished in one of two ways. Removing extra fat tissue from behind the eye or making the eye socket bigger. Although both types of procedures are often called orbital decompression, in our practice we often refer to procedures that focus mostly on fat removal with minimal bone modifications as “small bone decompressions” and procedures that are weighted more towards bone removal as “large bone decompressions” or “orbital expansions”. The method used to perform most orbital decompressions and expansions requires a very small incision in the skin on the outside corner of the eye, and this incision heals very well into the normal laugh lines around the eye.