Scleral Buckle

Scleral buckle is a surgical procedure used to repair retinal detachment. Retinal detachment occurs when the gel inside the eye (the vitreous gel) pulls away from the retina and causes a retinal tear. Sometimes this occurs because of trauma but most of the time it is a natural age-related process. Once the retina is torn, fluid can move from the middle of the eye through the tear into the space between the retina and the eye wall. As more fluid enters this space, the retina cleaves (or "detaches") from the eye wall. If the retinal detachment extends into the central part of the retina, central vision may be damaged.

Scleral buckle surgery takes place in an operating room and usually takes 1-2 hours to complete. Actual time in the hospital or surgery center is longer due to preparation time, anesthesia induction and recovery, safety checks and administrative work. Scleral buckle surgery is usually performed as an outpatient procedure, meaning that overnight hospitalization is not required. The surgery may be performed under either local anesthesia (sedation and a numbing injection around the eye) or under general anesthesia (completely asleep). The decision to use local versus general anesthesia is made by the surgeon in conjunction with the patient and anesthesiologist.

The term "scleral buckle" refers to a silicone band which is placed around the outside of the eye, gently squeezing the eye wall and supporting the weak areas in the retina, including the tears that caused the retinal detachment. Sometimes multiple silicone elements are used in order to provide appropriate support. In some cases, the surgeon will drain the fluid that has collected under the retina, and after draining this fluid the surgeon may inject a bubble of air or gas into the eye. If air or gas is injected into the eye, the surgeon may ask the patient to position the head after surgery so that the bubble supports the retina while it heals.

Unlike vitrectomy surgery, which takes place primarily inside the eye, scleral buckle surgery takes place primarily outside of the eye. A patch and shield are placed on the eye at the end of surgery, and both the eyelids and the white part of the eye may appear red and swollen when the patch is removed. This redness and swelling usually decrease over 1-2 weeks following surgery. It is normal to experience a foreign body sensation after surgery (a sensation of sand or grit in the eye). This sensation comes from the stitches used on the surface of the eye as well as the eye surface tissue which has been manipulated during surgery. This sensation should decrease as the days and weeks go by after surgery.

After surgery, the prescription for glasses or contact lenses may change slightly. We recommend waiting several months after surgery before changing the prescription since an accurate prescription is difficult to obtain until the eye has healed properly.



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