

Pterygium

Pterygia (plural of pterygium) are growths on the surface of the eye. The term comes from the Greek, meaning wing-like, describing the appearance of the growth. Most often the growths appear on the nasal side of an eye, coming from the conjunctiva (the transparent skin that covers the white wall of the eye) and growing onto the surface of the cornea. Patients will frequently describe the growths as being on the iris. This is not true: the iris, the brown or blue part of our eyes is beneath the cornea, which is the transparent dome that vaults and covers the iris. Pterygia grow on the surface, not inside, the eye.

In the earliest stages, the growth will appear as a small, whitish lump on the conjunctiva (known as a *pinguecula* = baby pterygium). As it develops, it extends onto the surface of the cornea, giving its characteristic shape. The good news is that these growths are not cancer, but more like callous on the palm of your hand: a response to environmental irritation.

By “environmental irritation” we’re referring to things like UV-light, wind, smoke, and chemicals in the air (smog). Just like irritation on the palm of your hand (friction from using a tool) can lead to the development of a callous, repeated irritation of your eye can lead to the development of a pterygium.

Patients usually present with complaints of periodic redness and sometimes discomfort. The redness and growth (combined with comments from acquaintances) encourages them to seek help.



Small pterygium ($\approx 1\text{mm}$)



Large pterygium ($\approx 6\text{mm}$), affecting optical axis

In the early stages, treatment is conservative, when the growths are small and flat (not elevated off the surface of the eye): eye drops, UV-protection (sunglasses), and a hat. The recommended eye drops are preservative-free, which are over-the-counter. Occasionally, Restasis® is prescribed. This eye drop may help to reduce the progression of the growth.

Typical monitoring is every 6 months, or sooner if the patient notices any change.

If the growths remain flat and are not extending more than 1mm onto the corneal surface, they can be left alone. However, if they’re elevated or extending more than 3mm, and if they’re often red, they should probably be removed. The rationale for this is that if elevated and red, they’re probably growing. If they’re more than 3mm onto the corneal surface, they’re encroaching into the optical axis and if allowed to reach the center, a residual scar (even after removal of the pterygium) can have an adverse impact on vision.

Surgical removal involves going to the operating room and removing the growth, cleaning any tissue off the corneal surface, MMC treatment (best discussed with your surgeon), and placing an amniotic graft onto the cleared surface. The graft is “glued” in place with a bio-adhesive. This approach, compared to many older techniques, results in less recurrence and a much more comfortable eye in the post-operative period.

Follow-up after surgery is very important. The final step in the surgery, to prevent recurrence, is conducted as an outpatient. This step is the prolonged use of steroid eye drops (for up to 3 months). These eye drops can have various side effects so close monitoring is required. Once completed, the pterygium is usually gone and the eye is white and comfortable. However, if the patient continues to allow “environmental irritation”, the pterygium can recur.