

Epiretinal membranes (ERM)

The retina is a light sensitive layer of tissue lining the back wall of the eye. The main cavity of the eye is filled with a jelly-like substance called vitreous humour. As light enters the eye it is focused by the cornea and lens, through the vitreous humour, onto the retina.

The macula is part of the retina at the back of the eye. It is only about 5mm across but is responsible for our central vision, most of our colour vision and the fine detail of what we see. The macula has a very high concentration of photoreceptor cells – the cells which detect light. They send signals to the brain, which interprets them as images. The rest of the retina processes our peripheral vision.

ERM occur when cells grow and form a translucent or semi-transparent membrane along the surface of the retina over the macula, which can thicken and contract, causing the surface of the retina to wrinkle.

The most common cause is idiopathic (i.e. unknown cause). They can occur when the jelly separates from the back of the eye, when there are tears in the retina, from various retinal treatments, and from inflammation.

There are many names given to the various stages of ERM. At one end of the spectrum, these membranes are picked up during a routine eye examination by an optometrist and do not affect vision. At the other end of the spectrum, patients will seek help because the vision is distorted and blurred.

At the very mild end of the spectrum, visual symptoms are non-existent or very slight. Around 1 in 10 people will have evidence of ERM and it is most common in 70-80 year olds.

Many of these membranes will not change significantly over time and nothing needs to be done. Some ERMs will progress and cause contraction over the surface of the retina. If the retina wrinkles, distortion in the vision results such that straight lines appear to have kinks or bends in them.

As the retina thickens vision also becomes slightly blurred, usually over several months. The decision for surgery will be made between the patient and the eye doctor, balancing the risks and benefits of surgery.

Risks and benefits of surgery

Surgery involves removing the jelly from the eye and then removing scar tissue from the retina, usually under local anaesthetic. At the end of the procedure any tears or breaks in the retina are repaired with laser or freezing therapy.

Sometimes an air or gas bubble will be placed into the eye at the end of the procedure, this disperses over a week to a month. You cannot see through the air or gas but this gets smaller, rounder and lower in your vision until it goes completely.

The main aim of surgery is to stop things getting worse and to reduce the distortion. The process can leave the retina a little swollen and vision can take three months to get back to pre-surgery level. Vision will continue to improve for one year and an average gain of a couple of lines on the eye chart can be expected.

The main risk is retinal detachment, which affects around 3-6 people per hundred. Other risks include infection, which is rare, raised pressure requiring eye drops, or a persistent swelling of the retina.

Eye surgery often causes cataracts so some surgeons will perform cataract surgery at the same time. There is usually no need to restrict your head movement after this surgery unless a tear in the retina has been treated.