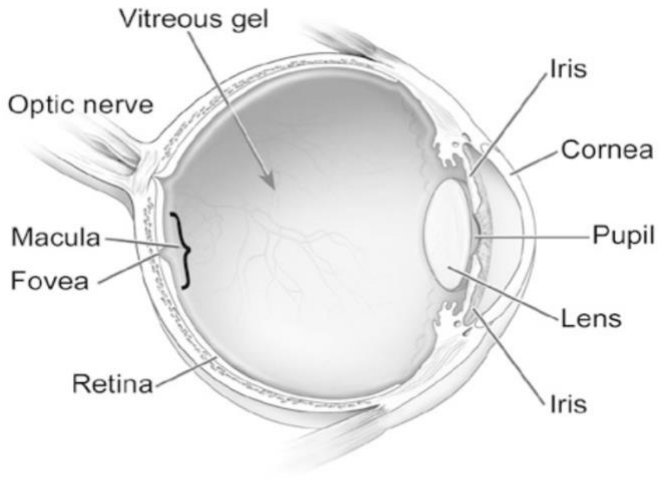
Epiretinal membrane (ERM) patient information leaflet

I have advised that you have an Epiretinal membrane and this is bothering you because of distortion and / or reduced vision. This leaflet will help to explain this condition and the 'pros and cons' of going ahead with surgery.

What is an Epiretinal membrane (ERM)?

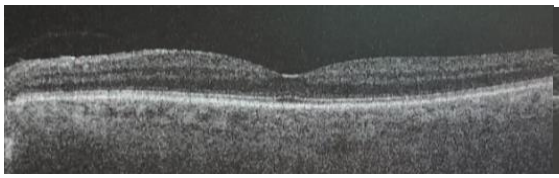
The retina lines the back of the eye and acts like the film in a camera (For those of you that remember these!) The very central part of the retina is the only part that sees fine detail and it is this part that has the problem, it is known as the macula. This is NOT macular degeneration.



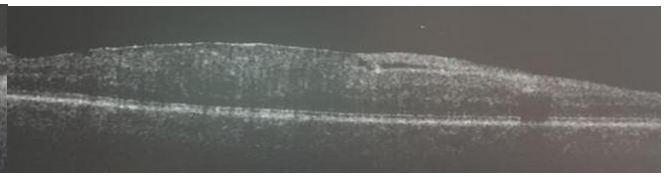
The normal anatomy of the eye
Image courtesy of the National Eye Institute

An ERM is a thin layer of scar tissue that grows over the surface of the macula and then contracts. If you imagine your open hand on a smooth bedsheet and then you scrunch your hand it throws the bedsheet into folds. The ERM does the same thing, it contracts and shrinks and pulls the retina into little folds and it is these folds that give rise to the distortion you see and as the macula gets heaped up and damaged the vision get worse. Sometimes the vision is so bad you are unable to see the distortion and at other times the vision is excellent and the distortion is very visible and very bothersome. In the picture below you can see a side view of the very central part of the retina (the macula) and the small dip in the centre (the fovea) which is essential for very fine detailed

vision. On the left this is normal but, on the right, you can see the ERM pulling and distorting the retina.



Cross section of healthy retina



Cross section of Epiretinal membrane

How common are ERMs?

These are the one of the most common non-emergency procedures retinal surgeons carry out and they affect up to 1 in 10 of the general population. However, many ERMs do not cause problems and do not require any surgery. Doctors treat patients not scans.

Why do I have an ERM?

I most cases we do not know why but it is likely to be due to the separation of the jelly from the back of the eye which happens first in the central (Macular) region. They can be associated with diabetes or blockages of vessels and also retinal tears and inflammation in the eye as well as following eye surgery.

How is it treated?

If you have ERM and your vision is distorted and / or blurred *and* it bothers you the only way to treat this is surgery. Without surgery many ERMs will get worse but some may remain stable. If you were picked up as having an ERM from an optometrist scan (OCT) following a routine eye test without complaining of any problems, it is very likely that your ERM does not need to be treated however, you should be aware that if distortion or reduced vision develop over time it would be worth being seen by an eye doctor for review. You can get referred by your optometrist or GP.

The operation for ERM is done under a local anaesthetic as day case surgery and usually takes between 30 minutes to an hour to complete. Your eye will be numbed with anaesthetic such that you will be unable to move your eye and you may find the vision becomes dull as a result of the anaesthetic. You will not see instruments coming towards your eye and you will feel nothing. Most of what you are afraid of happening will not happen. The surgery involves

removing the jelly from the centre of your eye (Vitrectomy) and very often early cataract is removed at the same time to reduce your hospital visits and improve your recovery time as cataracts usually develop quickly in older people following this type of surgery, usually within 6 to 12 months. Most of the jelly is removed with a tiny instrument that cuts and sucks the jelly from the eye and then the scar tissue is gently peeled off the surface of the retina with tiny tweezers. A small air bubble may be placed in the eye which usually goes away slowly over a few days or sometimes you will need a gas bubble in the eye which can last a couple of weeks. Your surgeon will advise you what has been placed in the eye at the end of surgery. Following surgery, you may rarely require tiny stitches in the eye that will dissolve over a few weeks and can be a little gritty. You will have an eye pad and shield to wear the first night and drops for one month. It is important to keep the eye clean for the first week. You will be reviewed around two weeks after surgery

What if I choose not to have it treated?

If you are having some problems and have noticed change in your vision then your vision may well continue to get slowly worse. If it does get worse then damage can occur to the delicate cells that you see with and improvement in vision, even with treatment, may reduce over time.

Will my vision return to normal if I have the operation?

The main aim of surgery is to prevent the vision from getting worse but there is an average gain of 2 lines down the test chart. Over 80 out of one hundred patients see better than before surgery, around 15 out of one hundred remain unchanged and around 5 in one hundred have slightly worse vision than before surgery. Up to half of patients treated are no better or even slightly worse two weeks after treatment but vision continues to improve out to one year after surgery. 3 months is a good time to assess how successful surgery has been.

What are the risks of having surgery?

The main risks of surgery are retinal detachment at around 1-2 patients in 100, swelling of the retina in around 10-20 patients in a hundred which usually settles over time but may require drops or an injection in a few people. The most common complication during surgery is a small tear on the retina in around 3 out of one hundred patients and this will be treated at the time of surgery and may require the surgeon to put a gas bubble in the eye which

usually lasts up to two weeks (Longer acting gases may be used and your surgeon will advise). You cannot see or fly with gas in the eye and the vision returns as the bubble gets smaller and rounder and lower over the two weeks. The risk of serious complication and loss of sight is around 1 in one thousand people, usually due to infection or severe bleeding in the wall of the eye. Raised pressure can occur after surgery but in most cases this settles with drops short term and does not damage the nerve of vision (glaucoma). However around 1 in 100 may require long term treatment for this.

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Five-year cumulative incidence and progression of epiretinal membranes: The Blue Mountains Eye Study☆

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