

Pre-retinal Fibrosis

Pre-retinal fibrosis is an ocular condition that affects the retina. Pre-retinal Fibrosis is also known as “cellophane maculopathy”, “epi-retinal membrane” or “macular pucker”. This is a condition in which an extremely thin membrane of scar-like tissue covers the surface of the macula. The macula is the central-most area of the retina in the back of one’s eye. The macula of one’s eye is responsible for allowing a person to see the most detailed aspect of that person’s vision.

Pre-retinal fibrosis typically occurs in patients over 50 years old after a posterior vitreous detachment (PVD) has occurred. A PVD may release fibrous tissue, which settles on the macula in the back of the eye and begins the formation of the membrane. Pre-retinal fibrosis may also occur after a retinal tear, hole or detachment as well as after severe trauma affecting the back of the eye, previous retinal surgery, retinal vascular disease (e.g. branch retinal vein occlusion) or severe inflammation inside the eye. Some cases of pre-retinal fibrosis have no obvious preceding event and are considered “idiopathic”.

From a vision standpoint, a patient with pre-retinal fibrosis may initially be asymptomatic. However, in time, pre-retinal fibrosis may begin to cause varying degrees of visual distortion (metamorphopsia) in which straight lines turn into wavy lines. Also, a person’s best corrected visual acuity may diminish. These visual changes occur because the pre-retinal membrane becomes more wrinkled and dense. Some patients may even go on to develop a macular cyst or hole. Generalized blurring may also occur, especially if there is associated macular edema caused by the traction of the contracting membrane upon the retina. Pre-retinal fibrosis may occur in one or both eyes.

Specifically, pre-retinal fibrosis occurs because there is proliferation of glial cells over the surface of the internal limiting membrane of the macular region of the retina. When the retina of a person who is affected by this condition is examined, the epi-retinal membrane glistens. This glistening membrane gives the appearance of wrinkled cellophane and may also look “puckered”.

A person with pre-retinal fibrosis must be followed very closely by an eye doctor. Specific testing such as best corrected visual acuity, Amsler grid testing, optical coherence tomography (OCT) of the macula and digital retinal photos are performed at least once a year.

In cases of marked visual distortion, retinal surgery may be recommended. A surgical procedure called a ***pars plana vitrectomy with membrane peel*** is performed in which the epi-retinal membrane is carefully “peeled” off the retina. This delicate surgery is usually very effective in improving vision. Membrane peeling allows the retina to return to a more normal shape. After surgery, gradual visual improvement is slow as the sensitive nerve tissue recovers. Total recovery may take 12 to 16 weeks. Once a vitrectomy with membrane peel has been performed, a cataract usually develops and this too will require surgery at some point.