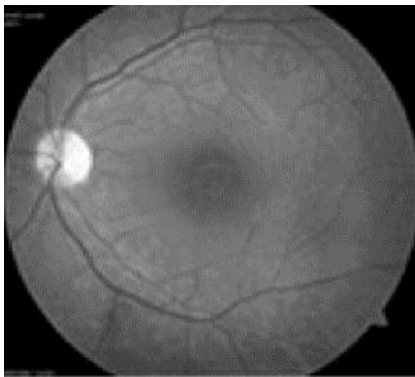


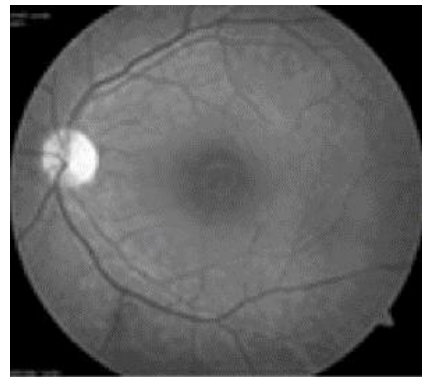
## MACULAR HOLE

A break or hole in the macula usually affects those aged 60 and over, and can cause blurred and distorted central vision.

The macula is the tiny, central area of your retina (the focusing surface at the back of your eye). It allows you to see things directly in front of you, and also lets you see colour and detail. A hole in the macula can cause blurring, blank spots and distortion of your central vision.



Left: Macular hole in a black and white photograph



Right: Macular hole in a colour fundus photograph

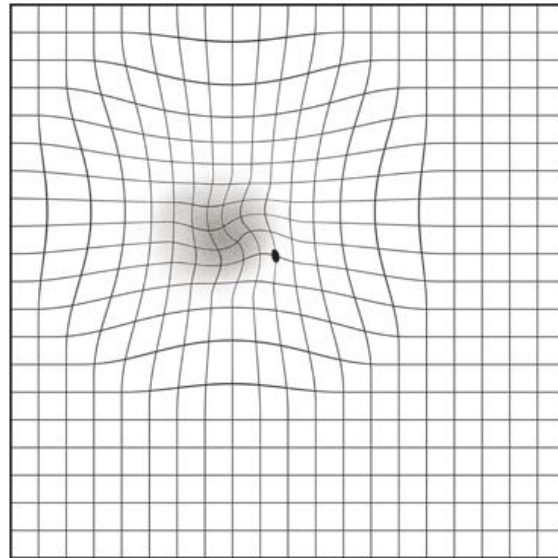
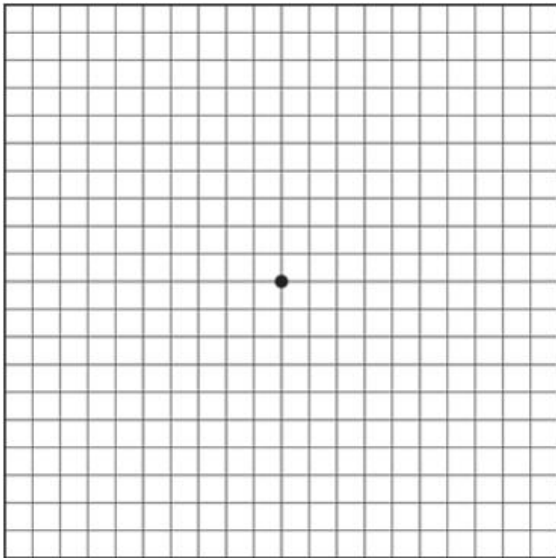
### Symptoms

The symptoms of a macular hole are quite similar to those of macular degeneration. It is also most common in people aged 5 to 70. However, the conditions are quite different, and you should see an eye specialist if you suspect either.

A macular hole generally only affects your central vision, so your peripheral or 'side' vision will remain unaffected. You may have difficulty with reading and close work, and you may notice grey or black spots, or blank areas, in your vision. Macular holes usually affect one eye, rather than both, although it is possible for both eyes to be affected by macular holes.

Macular holes usually develop over time, so you may not notice any symptoms until your vision is affected. Early signs include blurring and distortion of your vision, and you may notice straight lines (such as window frames, telegraph poles or lines of text) appearing bent or wavy.

The Amsler Grid is a simple test that will help you determine if your vision is distorted in this way. You can take it [here](#).



Left: An Amsler Grid with straight lines as seen by a normal-sighted person

Right: A person with macular problems may notice distortion of the grid pattern such as bent lines and irregular box shapes or a grey shaded area.

The size and location of the macular hole will determine how much it affects your vision. There are also three stages of macular hole, and vision will generally deteriorate as the condition worsens.

## Causes

As we age, the vitreous 'gel' inside the eye naturally shrinks and pulls away from the retina. Occasionally, the vitreous gel can pull on the retina and create a macular hole. In some cases, the fluid that fills the gap left by the vitreous gel may seep through the hole onto the macula, causing blurring and distortion.

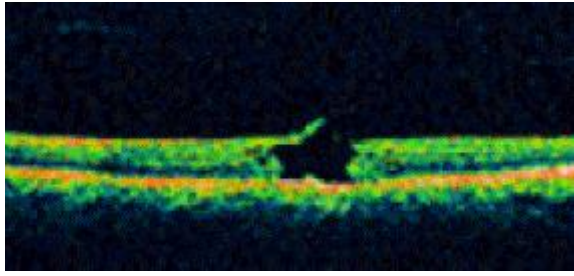
Other conditions that increase risk

The presence of another eye condition may increase your chances of developing a macular hole. These include:

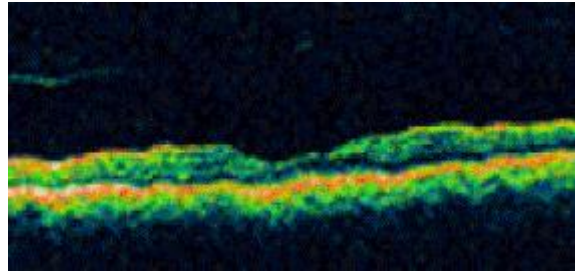
- Severe short sightedness
- Epiretinal membranes that progress to the 'macular pucker' stage
- Retinal detachment
- Diabetic retinopathy
- Eye injury or trauma

## Treatment

Treatment is generally most effective when carried out early in the development of the condition. An operation called a vitrectomy is used to carefully remove the vitreous 'gel' from the affected eye, and replace it with a gas that helps the macula heal.



Left: Macular hole before surgery



Right: Macular hole after surgery