Macular Hole

The retina is a layer of our nervous system located at the back of the eye. It has a light-sensitive layer of cells called the photoreceptors. These cells collect the light signals directed onto them and send them as electrical signals to the optic nerve at the back of our eye and finally the brain. The macula is the central part of the retina and is responsible for our sharp, detailed, central vision. This is the vision we use when we are looking directly at things, when reading, sewing, driving or using a computer.

A macular hole (which is completely different than macular degeneration) is a small break in the center of the macula which can cause blurred and distorted central vision. Macular holes usually occur in people over age 60 and usually only affect one eye, though there is a one in ten chance that the other eye will eventually be affected. Macular hole is cause by traction of the vitreous which eventually pulls the macula away causing a hole in the middle. The Vitreous is a jelly like materials that fills the inside of the
eye and give it its rounded shape. As we become older, the vitreous slowly shrinks and pulls away from the retina and fluids fill the area where the vitreous has contracted. Most of the time this happens with no adverse effects, but if the vitreous was firmly attached to the retina it can tear the retina and create a macular hole as it pulls away. This is most common cause of macular holes but there are other eye diseases that can leads to macular hole such as epi-retinal membrane, high myopia and eye trauma.

The symptoms of macular holes are mainly distortions of the central vision, which can varies from straight lines looking wavy in the early stages to a small blank shadow in the centre of vision in the late stages. People may first notice that they have trouble reading small print or that there is distortion when they look at a printed page.

Early stages of macular holes can seal themselves and require no treatment but advanced cases are treated surgically by removing the vitreous which is pulling the macula away and inserting a gas bubble that acts as an internal, temporary bandage that holds the edge of the macular hole in place as it heals. Surgery is performed under local anesthesia and often on an out-patient basis. Following surgery, patients must remain in a face-down position few days to weeks. This position allows the bubble to press against the macula and be gradually reabsorbed by the eye, sealing the hole. As the bubble is reabsorbed, the vitreous cavity refills with natural eye fluids.

Vision improvement varies from patient to patient. People that have had a macular hole for less than six months have a better chance of recovering vision than those who have had one for a longer period. Discuss vision recovery with your doctor before your surgery. Vision recovery can continue for as long as three months after surgery.

References: