

Retina

About

The **retina** is a thin layer of tissue that lines the back of the inside of the eye, located near the optic nerve.

The role of the retina is to change the light focused on to it by the eye's lens into a signal that the brain can then 'see' as a visual image.

Thanks to the retina, we can recognise colours and we can see different intensity of light – light and shade. This means we can carry out all our basic daily tasks such as reading and driving.

The mechanism by which we see involves the teamwork of the retina capturing the light through its photoreceptor cells, together with the optic nerve which conveys the information through the optic nerve at the back of the eye to the brain. We then rely on the brain to tell us what the image really is, so we can understand it.

If something interrupts this visual process, such as damage to the retina, it may lead to vision loss and even blindness.

Because of the retina's vital role in vision, any damage to it can cause permanent blindness.

Retinal conditions

Damage to the retina is one of the most serious eye conditions and detachment of the retina can be especially threatening, and may stop the retina from processing light. This results in an urgent medical emergency.

This process prevents the brain from receiving this information, and so causes blindness. Conditions at the back of the eye are treated medically using drugs, eye drops or lasers. These conditions include age-related macular degeneration (AMD), retinitis pigmentosa, diabetic retinopathy, retinal blood vessel blockages and inflammation at the back of the eye (uveitis).

- Macular degeneration – deterioration of the central vision
- Diabetic eye disease
- Retinal detachment – where the retina detaches from the back of the eye
- Retinoblastoma – cancer of the retina, which is most common in young children.
- Macular pucker – where the macula has scar tissue

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- Macular hole – a small break in the macula that usually happens to people over the age of 60
- Floaters – cobwebs or specks in your field of vision

Some of these diseases are chronic – slow, long term conditions – and others are acute – sudden, serious deterioration and may be localised or can affect just the macula or the entire retina.

Age-related Macular Degeneration is the most common and affects older people. Hereditary forms of the disease with an early onset also exist, such as Stargardts, Best's Disease or progressive Cone Dystrophy. Generally, these diseases cause severe visual impairment but rarely result in complete blindness.

In contrast, hereditary retinal degenerations that attack the whole of the retina are usually more severe.

Examples of these conditions include Usher Syndrome and Retinitis Pigmentosa (RP), both of which are common types of these diseases.

First symptoms may include loss of the outside of the field of vision (leading to 'tunnel vision') and problems with night vision;

People with Ushers Syndrome suffer from congenital deafness or severe loss of hearing.

People who are suffering from Retina and looking for more information on it can contact a retina specialist in at Moorfields Eye Hospitals UAE.