

Medicine for Managers

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Loss of Vision

In the United Kingdom, it is estimated that two million people are managing sight loss, with 350,000 registered as blind or partially sighted. It presents in different ways. It may be gradual or rapid, affecting peripheral vision or central vision and involving one eye or both eyes. If vision is deteriorating, it is essential to obtain a professional assessment to make a diagnosis. In many cases, intervention arrests or even improves visual acuity.

Visual loss occurs in any circumstance where it is difficult or impossible to see properly. It may result in:

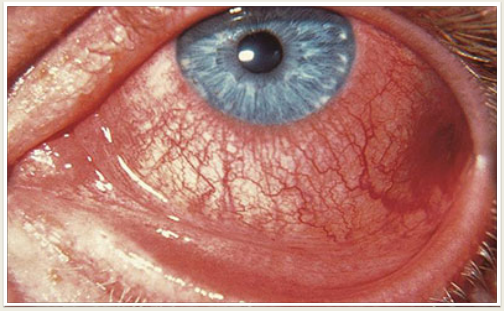
- Loss of peripheral vision, where it is not possible to see things 'out of the corner of the eyes'.
- Loss of central vision where visualisation of items in the middle of the vision are difficult or impossible to see
- Night blindness, where it is difficult to see things at night when the level of light is low
- General loss of vision where someone may be able to see little apart from shapes or shadows, or sometimes nothing at all.

The most common eye diseases are:

- Conjunctivitis
- Cataracts
- Diabetic visual disease
- Glaucoma
- Age-related Macular Degeneration (AMD)
- Retinal Detachment

Conjunctivitis is inflammation of the conjunctiva, the transparent membrane that covers the eye and also the undersurface of the eyelids. It has many causes:

- Bacterial infection
- Viral Infection
- Fungal infection, such as thrush
- Chemical burns
- Allergic reactions
- Autoimmune diseases



The eye appears itchy, red, painful and vision may become blurred, especially in severe cases. The eyes water and may discharge. It is contagious especially amongst children but usually resolves quickly. It may need antibiotic drops.

Cataract is cloudiness and increasing opacification of the lens of the eye. Cataracts tend to develop slowly but eventually interfere with vision.

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They cause:

- Cloudy, blurred or dim vision
- Problems with night vision
- Haloes around lights
- Sensitivity to glare
- Progressive loss of vision
- Needing a bright light to read
- Colour-blindness and 'faded' colours
- Dark spots or lines in the vision
- Difficulty reading or seeing distant objects
- Frequent changes of glasses prescription



The lens normally allows light to pass through producing clear images on the retina. As we get older the lens becomes less flexible and chemical changes cause protein in the lens to thicken. The cataract which forms scatters and blocks light resulting in blurred or diminished vision
Risk factors include:

- Aging
- Diabetes
- Smoking
- Excessive alcohol consumption
- High blood pressure
- Over-exposure to sunlight
- Long-term steroid medication

Treatment, when necessary, is surgery to remove and replace the lens with an artificial lens. The vast majority of patients undergoing surgery have better vision after operation.

It is not possible to prevent cataracts but, given the risk factors, the likelihood may be reduced by stopping smoking, controlling diabetes effectively, using sunglasses and reducing alcohol intake.

Diabetes is one of the country's leading causes of blindness.

In circumstances where the diabetes is poorly controlled, the result is damage to the small blood vessels in the retina (the light-sensitive covering at the back of the eye where images are received) as a result of uncontrolled blood sugar levels.

In the early stages of retinal damage, many people are normally unaware of any visual deficit until the changes are severe but in others there may be symptoms which include:

- Blurred or distorted vision
- Colour disturbances and fading
- Poor night vision
- Spots and streaks in the vision
- Difficulty reading and seeing things far away.

The management of diabetic retinopathy is early diagnosis with the use of regular eye tests to identify any retinal changes.

Diabetic control should be to the highest possible standard to avoid episodes of hyperglycaemia (high blood sugar) and any retinal changes, when identified should be monitored and, if of significance, treated by injection or surgery to the retina to repair or shrink the affected blood vessels.

Glaucoma is a difficult disorder to explain. It is a group of conditions which can damage the optic nerve, usually related to an increase in eye pressure. It can occur at any age but is more common in older adults, and those of black,

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Asian or Hispanic heritage. It is a leading cause of blindness over age 60. Sometimes there are few warning signs, resulting in delayed diagnosis until after eye damage has occurred.

It is essential to have a regular eye examination including the measurement of pressure in both eyes.

The disorder may take many forms and have different causes. Sometimes it is relatively without symptoms, but more commonly, the rising eye pressure may cause eye pain, blurred vision, halos and coloured rings round lights, red eye, headache and nausea. If such symptoms develop suddenly, particularly if the eye pain or the headache is severe, it is an emergency and the person should go immediately to Accident and Emergency.



There is a circulation of fluid within the eye. In the most common form of glaucoma, the circulation and drainage of fluid is obstructed so that it does not drain properly , leading to the increase in eye pressure.

The risk of glaucoma is increased by:

- Having a family history
- Extreme nearsightedness or farsightedness
- History of eye injury
- Diabetes, migraine, and raised blood pressure
- Using steroid tablets or drugs for a prolonged period.

Damage caused by glaucoma cannot be reversed but progression can be prevented once diagnosed.

Treatment may be with eye drops, oral medication, the use of laser treatment or eye surgery. Sometimes a combination of the techniques may be necessary.

Age-Related Macular Degeneration is a common condition which affects the central vision, normally of people in their 50s and 60s. It does not cause total blindness but makes reading and facial recognition difficult. It may happen over a few weeks or over several years, and, although the cause is unknown, it has been linked to having a family history, smoking and high blood pressure.

AMD affects central vision. It may cause distortion of images so that straight lines appear wavy or it may be difficult to see anything.

The degenerative changes may be suspected by a GP or optician who will refer to a specialist ophthalmologist, particularly in circumstances where treatment may be required quickly.

AMD may be ***wet*** or ***dry***.

Dry Macular Degeneration may affect one or both eyes and visual changes may not be noticed if only one eye is affected because the good eye compensates. It does not cause peripheral (side) loss of vision.

Wet Macular Degeneration develops when abnormal blood vessels grow into the macula (an area about 5 mm in diameter and responsible for central vision, most colour vision

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and fine detail). They leak blood into the area causing scarring and rapid loss of central vision. It can develop suddenly but can be treated if caught quickly.

Wet AMD is treated in hospital by injection of drugs into the eyes to stop the growth of abnormal blood vessels. Such injections stop vision worsening in 8-9 out of 10 people and improves vision in about one in three.

Detached retina. This occurs if the thin light sensitive area at the back of the eye becomes loose. It should be treated quickly to avoid permanent damage to vision.

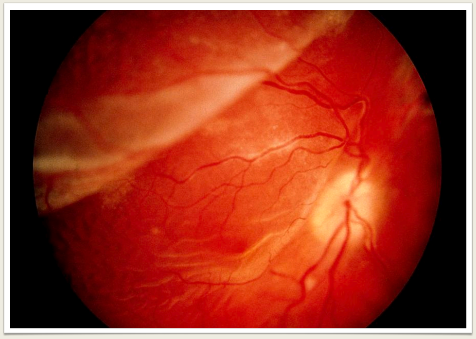
Features of retinal detachment may be:

- Flashes of light
- Floaters (black dots) appear or suddenly increase in number
- The development of a 'dark curtain' moving across the vision
- Sudden blurring of vision

The detachment is usually caused by changes (shrinkage) of the jelly (***vitreous humour***) in the eye. This is an age change and in some people causes the retinal detachment, but it is unclear why certain people are affected and there is nothing that can be done to prevent it. It appears to be more likely in those:

- Who are short-sighted
- Have had cataract surgery
- Have a family history of retinal detachment

Anyone with features suggestive of retinal detachment will be referred to hospital



The picture shows a photograph of a detached retina as seen through an ophthalmoscope.

The retina is repaired surgically, usually under local anaesthesia.

It may involve removing some of the humour and a laser or freezing treatment may be used to plug any holes in the retina, if it has been damaged, and to re-attach it to the back of the eye.

Following a period of recovery, between two and six weeks, it is normally possible to return to the usual activities.

There are a range of other less common diseases and disorders of vision which may impede vision.

Anyone who is blind, or partially sighted, may be referred to specialist low-vision clinics. The staff explain, support and advise about a range of available items such as lighting and visual aids.

The eye clinic may have an Eye Clinic Liaison Officer to provide support.

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There are a range of charities for people with visual loss. They include:

Royal National Institute of Blind People
helpline@rnib.org.uk 0303 123 9999
Glaucoma UK
helpline@glaucoma.uk 01233 648170
The Macular Society
0300 303 0111
Retina UK
helpline@retinauk.org.uk 0300111 4000
Diabetes UK
info@diabetes.org.uk 0345 123 2399

People with visual loss may be eligible to be registered partially sighted or blind.

It requires confirmation by an eye specialist of compliance with parameters for certification as sight impaired or severely sight impaired. Certification and registration enable social services to assist with needs to remain independent and a range of benefits.

Details of all the options and available items for support can be obtained from the

Royal National Institute for Blind People
105, Judd Street, London WC1H 9NE
www.rnib.org.uk
Helpline: helpline@rnib.org.uk
0303 123 9999

paullambden@compuserve.com

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