# Vision Loss e-Learning

## Contents

# Part 1

## Sight Loss

The number of people in the UK with sight loss is set to increase dramatically in the future. As we get older we are increasingly likely to experience sight loss and the UK population is ageing. More than 2 million people live with sight loss; this number is estimated to rise to 2.7 million by 2030.

## Visual Impairment

- can be defined as a condition in which an individual's capacity to see things is not normal. This means that the function of the eye for numerous reasons may become limited.
- can be anything ranging from not being able to see near or far off things, to partial or complete blindness.

The ability of an individual to see objects clearly is termed as their **visual acuity** and is a criterion for diagnosing an individual with Visual Impairment.

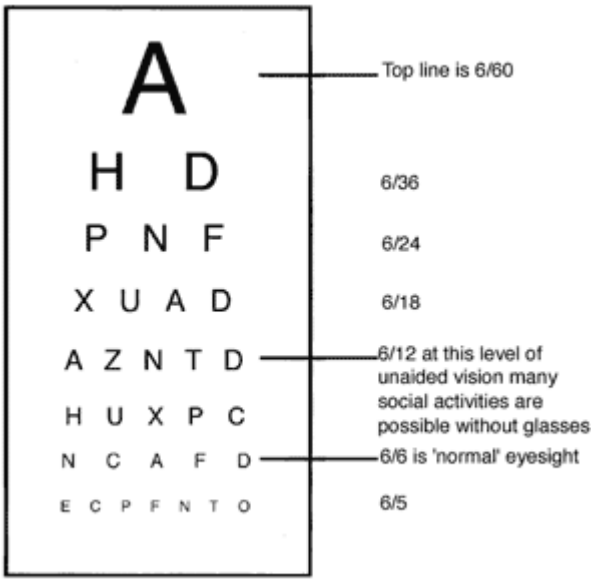
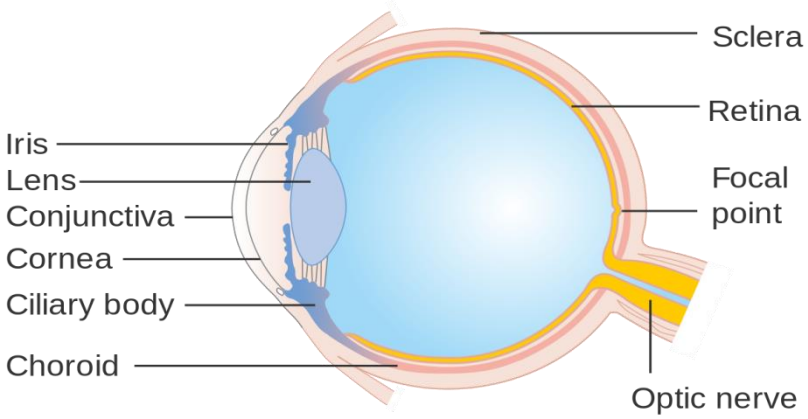



Chart for testing eye sight, 6/6 (or 20/20) is normal vision. The ability for a person to read or see the last line on the visual chart is recorded (at a test distance of **20 feet or 6 metres)** and defined by terminology 6/6 vision (normal).

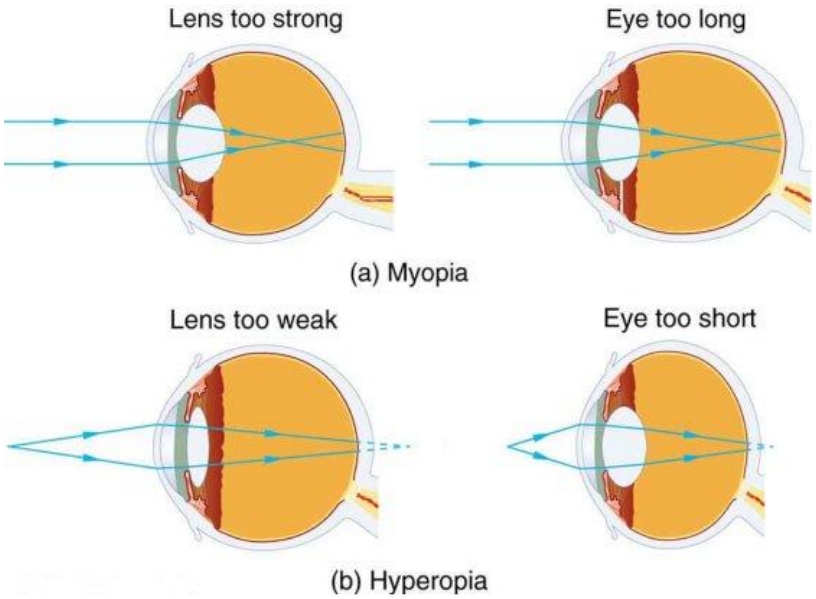
## Diagram of the eye




### How the eye works

When you look at something, light passes through the front of the eye, and is focused by the cornea and then the lens onto the retina. The lens is normally clear so that light can pass directly through to focus on the retina (the lens is clear because of the way the cells in the lens are arranged). When the lens focuses light onto the retina, the light is converted to electrical signals. A network of nerves delivers these signals from the retina to the optic nerve and to the brain. The brain interprets these signals to “see” the world around us.

The lens can change shape, allowing us to focus on objects at different distances – this is called “accommodation of vision”. As we get older, the lens isn’t able to change shape as well as it used to – even people who can see clearly in the distance without glasses may need reading glasses to see things up close. This is a natural change in focusing which occurs in the 40s and is called presbyopia.



Eye diseases (such as glaucoma, cataracts, macular degeneration, diabetic retinopathy) and normal age-related vision changes can cause:

- Blurry or distorted vision
- Sensitivity to bright lights/glare
- Difficulty seeing objects
- Problems seeing edges and changes in surfaces
- Difficulty seeing at night
- Problems judging depth and distances
- Peripheral vision problems - the sensation of seeing through a narrow tube, a condition commonly referred to as tunnel vision.

The effects of vision changes can be-

- Difficulty maintaining balance
- Shuffling or problems walking
- Difficulty seeing clutter or obstacles
- Difficulty going up and down stairs, steps, and curbs
- Reduced activity, leading to decreased strength and balance
- Loss of confidence to socialise

## Glaucoma

Glaucoma is usually, but not always, the result of abnormally high pressure inside your eye. This high pressure can damage the optic nerve which supplies visual information from the brain to the eyes. Over time, the increased pressure can erode the optic nerve tissue, which may lead to vision loss or even blindness.

Glaucoma is often associated with high intraocular pressure (fluid pressure inside the eye) resulting from a problem with the drainage system of the eye. Early detection and treatment are crucial to minimise vision loss.

The most common form of glaucoma starts with the loss of side vision (peripheral vision). There is no associated pain or discomfort. The lack of symptoms makes early detection difficult.

As the disease progresses, symptoms may include:

- Painless blurred vision
- Difficulty adjusting to low light
- Poor vision in dim light which may lead to falls or a loss of confidence
- If untreated the continued loss of peripheral vision can lead to tunnel vision or blindness.

Those most at risk include people who:

- Have a family history of glaucoma
- Are aged 40 years and over

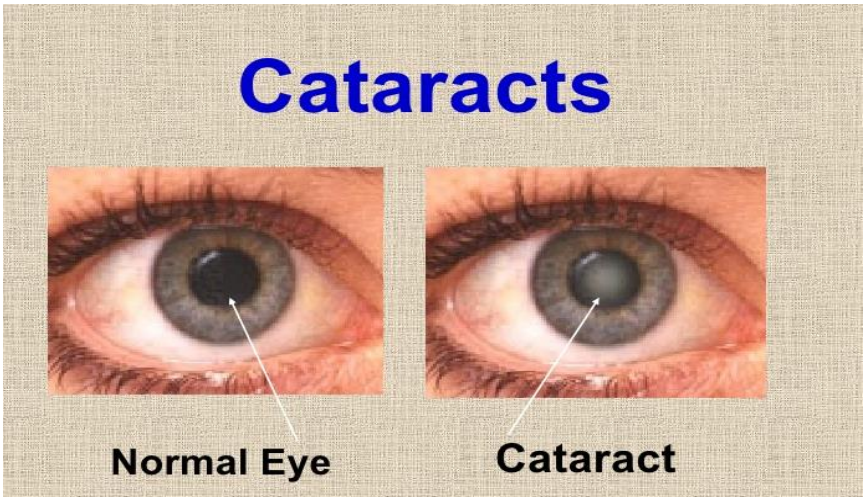
- Are short sighted
- Have diabetes
- Have had a serious injury to the eye
- Used steroids regularly over a long period of time
- Have hypertension.

Glaucoma can be treated with eye drops or other medication, laser treatment or surgery. Treatment needs to be ongoing and cannot restore vision which has already been lost. Early detection and treatment of this condition can prevent or delay vision loss. Regular checks with an eye care professional are important for anyone over 40 but especially those in high-risk categories.

## Cataracts

A cataract is a clouding of the lens caused by proteins in the eye forming clumps which prevents light moving through the eye to the retina (back of the eye). The lens sits behind the iris, (the coloured part of the eye). Normally the lens is clear and helps to focus the light entering the eye. Developing cataracts will cause the sight to become cloudy, misty and sometimes blurry.

Developing cataracts is a normal part of growing older. Most people start to develop cataracts after the age of 65, but some people in their forties and fifties can also develop cataracts and some children have congenital cataracts.




Causes of cataracts can be-

- Diabetes – people who have diabetes often develop cataracts earlier.
- Trauma – having an eye injury can cause the injured eye to develop a cataract.
- Medications – some prescription drugs can cause cataracts, for example steroids.
- Eye surgery – surgery for a retinal problem will likely lead to cataracts in the affected eye at some point in the future.

- Eye conditions – other eye conditions, such as retinitis pigmentosa, glaucoma or uveitis, may also cause cataracts.
- Being very short sighted (myopia) may cause cataracts.

People who have learning disabilities are more likely to develop cataracts and are ten times more likely to have a sight problem than other people.

Cataracts caused by ageing, medications and other eye conditions usually develop in both eyes. Cataracts caused by an eye injury or eye surgery only develop in the affected eye.

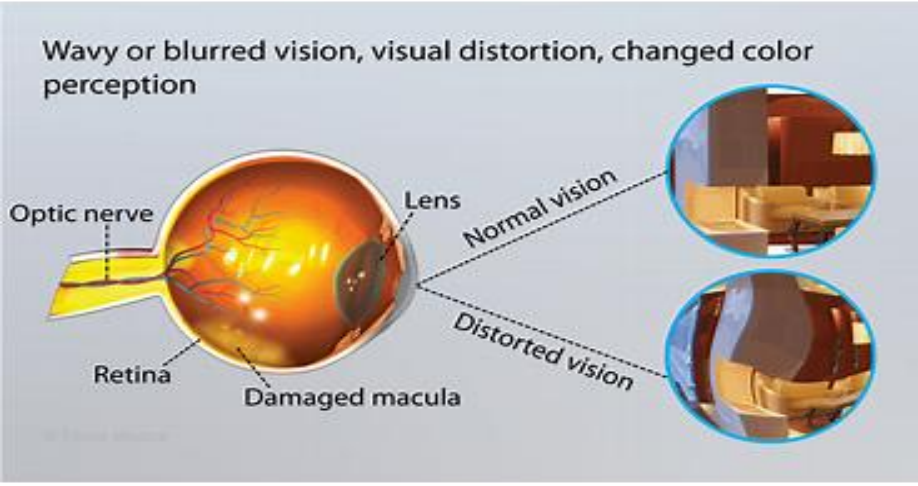
Cataracts can be removed by surgery in which the natural lens is removed and replaced with an artificial (intraocular) lens.

## Macular Degeneration

Age-related macular degeneration (AMD) affects a tiny part of the retina at the back of the eye, called the macula which is very important for seeing detail, colour and things directly in front.
AMD can cause the central vision to become distorted or blurry, and over time, a blank patch may appear in the central vision.

AMD is described as either dry or wet. Dry AMD results in a gradual loss of central vision and wet AMD leads to a sudden loss of central vision. Dry AMD can turn wet and subsequently result in sudden vision loss.

The exact cause for AMD is not known but is thought to be more common in ageing, in females and certain genes have been found which seem to be linked to the development of AMD in some people.



Common symptoms are-

- Objects may appear to change shape, size or colour or seem to move or disappear.
- Difficulty reading - that is not improved with new glasses.
- Distorted vision in the central field and difficulty seeing people's faces clearly.
- Straight lines such as door frames and lamp posts may appear distorted or bent.
- Dimming of colour vision
- Visual hallucinations (see Charles Bonnet Syndrome)

Treatments are available for wet AMD and are aimed at maintaining the vision for as long as possible. In some cases, vision may improve. The desired outcome is to prevent the growth of new abnormal blood vessels in the retina.

Dry AMD treatments are not yet readily available to the general public. However, a healthy diet rich in antioxidants and regular exercise is important in reducing the risk of macular degeneration and in slowing the progression of the disease.

## Diabetic retinopathy

Diabetic retinopathy is a complication of diabetes which can damage the tiny blood vessels inside the retina at the back of the eye. This can cause bleeding and swelling in the retina and seriously affect vision, and in some cases cause blindness.

There may be no symptoms in the early stages as the damaged areas may only affect the edge of the retina. There may be blurred or distorted vision that makes it difficult to read standard print, watch television or see people's faces.

There may be increased sensitivity to glare and difficulty seeing at night. Peripheral vision may be affected so that driving is no longer possible and there may be an increased risk of falls.

People with diabetes are at risk especially if they have:

- High blood-sugar levels or poorly managed diabetes
- High blood pressure, particularly if they also have kidney disease
- A long history of diabetes

There are a range of treatments available to minimise the vision loss associated with diabetic retinopathy, including laser therapy, injections or surgical procedures.

# Charles Bonnet Syndrome

This syndrome is characterised by the presence of complex visual hallucinations seen by people who are vision impaired. The hallucinations can involve detailed images of people, buildings or simple patterns of straight lines. This experience can be pleasant but can sometimes cause distress.
The content of these hallucinations also varies from person to person, but they may include:

*Insects
*Animals
*People
*Costumed people
*Landscapes
*Buildings
*Geometric shapes
*Repeating patterns such as lines or grids
*Fantasy creatures such as fairies, ghosts or dragons.

Charles Bonnet Syndrome is an under-recognised condition and can affect people with significant vision impairment of all ages. However, it is more common in those who lose their sight later in life.

The condition often appears after a period of worsening sight and is common in people with age-related macular degeneration, glaucoma and diabetic retinopathy. Visual hallucinations may continue for up to 18 months before they subside but it is a highly variable condition.

People who have Charles Bonnet Syndrome are aware that these images are not real but may need reassurance that it is not related to mental ill health or dementia.

Although there is no cure or treatment for Charles Bonnet Syndrome, simply knowing the hallucinations are not a result of mental illness can help people manage the condition.

**Stroke and vision loss**

Stroke happens when the blood flow to the brain is disrupted, cutting off the oxygen supply and leading to brain cell death or damage.

Depending on the part of the brain affected, stroke can also affect visual perception, resulting in impaired spatial awareness, neglect or object recognition. Changes in visual acuity can result in blurred vision.
If the ocular nerves and muscles are affected this can result in double vision and difficulties with tracking eye movements.

Hemianopia is where there is loss of half of the visual field. This may mean that the person is unable to see to either the left or right from the centre of their field of vision in both eyes.

## Part 2

## Supporting patients with vision loss

To understand how we can support patients with vision loss remember that they can experience-

- Blurry or distorted vision
- Sensitivity to bright lights/glare
- Difficulty seeing objects
- Problems seeing edges and changes in surfaces
- Difficulty seeing at night
- Problems judging depth and distances
- Peripheral vision problems - the sensation of seeing through a narrow tube, a condition commonly referred to as tunnel vision.

The effects of these vision changes can be-

- Difficulty maintaining balance
- Shuffling or problems walking
- Difficulty seeing clutter or obstacles
- Difficulty going up and down stairs, steps, and curbs
- Reduced activity, leading to decreased strength and balance
- Loss of confidence

**Communication with them about how much or how little help they need is vital, don't be afraid to ask!**

### Communicate with them …….Approach, Ask, Assist.


- **Approach**: if you suspect someone may need assistance, walk up, greet them and identify yourself.
- **Ask**: "Would you like some help?" The person will accept the offer or tell you if they don't require assistance.
- **Assist**: listen to the reply and assist as required. Not all people who are blind or have vision loss will want assistance - don't be offended if the assistance is not required.
- Avoid situations where there is competing noise.
- Let the person who is blind or has low vision know that you have entered the room.
- Identify yourself - don't assume the person will recognise you by your voice.

- Address people who are blind or have low vision by their name so they know you are speaking to them.
- Speak naturally and clearly, continue to use body language. This will affect the tone of the voice and give a lot of extra information to the person who has vision loss.
- Use everyday language. Don't avoid words like "see" or "look" or talking about everyday activities such as watching TV or videos.
- Be aware that wearing a face mask may prevent a person with vision loss from lip reading or understanding your facial expression.
- Never channel conversation through a third person. In a group situation, introduce the other people present.
- Be aware that the person who is blind or has low vision will be disadvantaged by not seeing what is going on, therefore talk about what is happening.
- Never leave a conversation with a person with vision loss without saying so.
- Use accurate and specific language when giving directions. For example, "the door is on the left", rather than "the door is over there".
- Direct people who are blind or have vision loss to their left and right, not yours.
- Be aware that they may wish to have their therapy dog with them and this is something we can accommodate, (please see Therapy Dog Policy on intranet page).

## Safety

- Explain what nurse call buzzers, fire alarm and emergency bells sound like so the patient is not alarmed.
- When seating people who are blind or have vision loss, put their hands on the back of the chair and they will then be able to seat themselves.
- In dangerous situations say "**STOP**" rather than "LOOK OUT"
- Do not relocate objects or furniture without telling the person who is blind or has vision loss.
- Describe the surroundings and obstacles in a person's pathway (remember to look up as well as down).
- Warn of the presence of obstacles, such as catheter tubing, drip stands, medicine carts, observation machines, meal trolleys.
- Make other staff who don’t know the patient aware of the need to maintain a safe area.
- Do not leave doors ajar. Close them, or open them fully.
- Orientate people who have vision loss to their bed space, toilet, chair and introduce them to patients in surrounding beds.
- Ask sensitively whether help is required, if yes, allow the patient to take your arm or hand.
- Walk one step ahead, giving appropriate directions, and warn of any impending obstacles along the route.

- When approaching a door, stand on the same side as the door handle, open the door, step through and hand the door handle to the patient, who then has control over closing the door.
- When negotiating a narrow space, your arm should be placed behind your back and the patient asked to walk behind you.
- When approaching stairs, you should be one step ahead of the patient, giving instructions as to whether to step up or down.
- Take responsibility for instigating safety measures, such as good lighting, placing the bedside locker on the side most appropriate for the individual patient, and ensuring that the call bell is placed within easy reach.
- Appropriate supervision must also be provided when a patient needs to visit the toilet.
- Ensure all personal belongings are to hand and you have explained where all their belonging are.

## Nutrition and hydration

- Always ask first to check if help is needed- determine the degree of assistance required with eating and drinking.
- Offer plates, cups and beakers in different colours as these may be easier to see. Don't assume they will want a beaker with a spout lid, check if they would prefer a cup or a mug.
- Provide a braille or audio menu.
- Ask where it is best for certain items such as cutlery, cup, glass, and plate to be placed.
- Eating can be made easier and more enjoyable if the type of food and its position on the plate can be identified. This can be done by using the 'hands of the clock' method, for example, meat at 12 o'clock, peas at six, and potatoes at nine o'clock.
- Overfilling of cups or glasses, especially with hot fluids, is best avoided to prevent any spilling and potential scalding of mouth and lips.
- The level of the liquid should always be indicated to the patient, with cool liquids this can be done by allowing the patient to feel for the level of the liquid by placing his or her index finger just inside the vessel.
- Hygiene is important where food is concerned, and facilities for handwashing should be provided both before and after a meal, because many patients will need to 'feel' their food.

## Care Planning


- Admission and discharge procedures may take much longer with a patient with vision loss than with one has sight, so allow adequate time for the overall planning of care and educating the patient to care for him or herself. (reasonable adjustments
- Introduce the patient to immediate neighbours to establish social orientation and acceptance.
- Orientate to their new environment; show them the layout of the ward or unit by allowing them to 'feel' their way to areas such as the bathroom, toilets and social area.
- Allow them to place their hands in contact with the physical structures of the environment; for example, a wall or a piece of furniture. This will help not only their orientation but also their balance.
- Escort the patient around the ward/unit as and when required, this will help to meet the need for safety, promote some orientation and instill a feeling of security.
- Instil a patient's eye drops and ointment effectively, or supervise the patient's technique for safe instillation of eye medication or any other drug.
- Keep the patient informed of their progress, well-informed patients have less anxiety and depression and are better able to manage their health and treatment than those who are not informed.
- Encourage some independence; this is conducive to promoting confidence and maintaining self-esteem.
- When a procedure needs to be undertaken at the bedside, give advance warning of approaching by starting to speak before reaching the bedside so as not to startle the patient.
- Encourage the patient with vision loss who enjoys reading, that visual reading may be supplemented with speech output devices such as spoken computer programs and books on audiotape. Encourage them to bring in Talking books or clocks with them.

## Patient records

During the Nursing Admission process, ask –

1. Ask ‘Do you wear glasses, contact lenses?’ Yes/No (tick which and enter detail in EPR )
2. ‘Do you have vision loss that affects your day to day activities?’ If No, no further care plan required, but if Yes-

a. Complete a Complex Care flow chart for vision loss.
b. Refer to Complex Care nurse (via Safeguarding referral order) and tick ‘vision loss’ as a reason for referral.
c. Enter a Complex Care order in the EPR banner
d. Complete a Reasonable Adjustment risk assessment
e. Ask the patient if we can place the Hidden Disability sign (sunflower) over the bed.
f. Offer the patient a Hidden Disability lanyard/wrist band to wear.
g. Offer assistance if they wish to complete a Hospital Passport (or utilise one that they have bought in).
h. Follow the Accessible Information standards (**The Equality Act 2010)** and ask what format they want information in, e.g. audio, braille, large print (RNIB recommend font 18).
i. Identify a member of staff each shift who has key responsibility to support this patient in the event of a fire or emergency evacuation (Fire Buddy).
j. Contact pharmacy if the patient needs any support with medication, such as larger font labels, blister pack or adaptive aids.
k. For more information or support, contact Christina Kenny, Matron - Patient Experience exn 3008 or the specialist team consisting of OT, Physio, Pharmacist, MSW and Discharge Team, SALT

## Support and further information

National Talking Newspapers and Magazines scheme, which can provide audio versions of more than 230 titles online or on a CD

RNIB Talking Books Service, audio books are provided listen to on the computer or on a device known as a DAISY player

Screen-reading software can be installed on a computer that will read out emails, documents and text on the internet.

**MSDP - Merseyside Society for Deaf People** www.mdsp.org.uk

**Deafness Resource Centre** (St. Helens) www.deafnessresourcecentre.org

**Bradbury Fields** www.bradburyfields.org.uk

**Action on Hearing Loss** www.actiononhearingloss.org.uk

**Deafblind UK** www.deafblind.org.uk

**Sense** www.sense.org.uk

**Guide Dogs UK** www.guidedogs.org.uk

**Wirral Society of the Blind and Partially Sighted** www.wirralsociety.org.uk