



## Information about Vision Impairment

### What is vision Impairment?

Vision impairment is a condition that prevents normal vision in one or both eyes. There are many problems with vision such as being near or short sighted (myopic), long sighted (hypermetropic), having normal vision in one eye only (monocular) or a turned eye (strabismus). Sometimes strabismus will be called a squint.

Many people have poor eye sight which can be corrected by wearing glasses or contact lenses.

However, there are a number of serious vision problems that cannot be corrected by glasses or contact lenses.

Some of these are:

- **Cataracts** (where the lens inside the eye becomes cloudy). People with cataracts lose clear vision and become sensitive to light. The main cause of cataracts is ageing and it is the leading cause of vision loss among the over 55 age bracket. Diseases such as diabetes, eye injuries and different types of medications may also cause cataracts. Symptoms of cataracts include double or blurred vision. There may also be a diminishing ability to distinguish colour and a heightened sensitivity to light and glare.
- **Albinism** (an inherited condition that affects clear vision and causes sensitivity to bright light, glare and direct sunlight)
- **Optic Nerve Damage** (damage to the nerves involved in vision). Optic nerve damage will affect a person's field of vision (see 'Vision field' below). Glaucoma is one type of eye condition that can cause optic nerve damage.
- **Glaucoma** is a group of eye diseases that affects the optic nerve of the eye; the nerve that sends information from the eye to the brain. There are two main forms: open angle and closed angle. Open angled affects 95% of all diagnosed cases of glaucoma. Both forms result in the loss of peripheral vision. Different forms of glaucoma have different symptoms. However, the most common form, open-angle, has no symptoms initially. Gradually, peripheral vision loss will occur and if not treated properly will result in blindness. Other symptoms include a difficulty in adjusting to darkness and focusing on items up close.
- **Macular Degeneration** (where damage happens to a small section of the retina inside of the eye that allows us to see colour and fine detail) is a progressive condition that targets the macula. The macula, located at the back of the eye is a small spot on the retina which is responsible for central vision. As a result, people with AMD experience a loss of sight to their central vision and rely on their peripheral vision to see. There are two types of AMD; the "dry" form and the "wet" form. The dry form is far more common and accounts for 85% - 90% of all cases. It is the milder version of the two and has a significantly lower vision loss than the wet form. In both cases, however, AMD is highly unlikely to lead to total blindness as the peripheral vision is never affected. It is the most common cause of low vision in people over 60 years of age. The loss of central vision can occur gradually or quite quickly. There is heightened sensitivity to light and objects and shapes become blurred. Finding it harder to adjust to varying levels of light and an increased discomfort to glare makes it difficult to see objects in ones path.
- **Retinitis pigmentosa** (a degenerative condition that reduces the field of vision - degenerative means that it gets worse)
- **Diabetic Retinopathy** is a result of diabetes and affects the retina part of the eye. The retina often referred to as the "seeing part of the eye" is a light sensitive tissue that is located at the back of the eye. Diabetic retinopathy causes the blood vessels of the eyes to become blocked and can result in vision loss and blindness. In the early stages, there are no symptoms and changes in vision may not occur until it is in an advanced stage. It is important that once diagnosed with diabetes to take an eye test once every two years. It is during an examination that characteristic changes of the retina can be found.

- **Retinopathy of prematurity -ROP** (damage to the retina that occurs in some premature babies who are treated with oxygen at birth)
- **Nystagmus** (an involuntary repetitive movement [flicking] of the eyes)
- **Usher's Syndrome** (a genetic disorder that includes hearing loss and retinitis pigmentosa).

A person's level of vision (or sight) may remain the same over time or it may change. Eye sight will get worse as part of some conditions, such as retinitis pigmentosa and untreated cataracts.

### **Low vision**

Low vision exists when a person's sight cannot be corrected to normal vision by wearing eye glasses or contact lenses but the person has some vision. People who have low vision are sometimes called 'legally blind'. Legally blind is a term used to help determine who will be eligible for government benefits and services.

There are two main types of vision problems which can cause low vision. These involve a person's 'visual acuity' and 'vision field'.

- **Visual acuity (clarity of sight)** People who have low vision may have problems seeing objects clearly (visual acuity). They will often have trouble seeing printed words and may need to have very large print or highly magnified glasses to read.
- **Vision field (range of sight)** How much a person is able to see when looking straight ahead is called the 'visual field'. Normally, this is a field of 180 degrees (when looking straight ahead, a person can see objects that are on either side to a line which is parallel to their shoulders). Vision problems related to 'visual field' can mean that the height or width of what a person sees is reduced. This can be like looking through a telescope. Only things which are straight ahead can be seen. Things that are to the side or above or below are no longer seen. Sometimes, there will be blank spots in part of what a person is seeing. The person will have an incomplete picture in the same way that a camera with a dirty lens will record only part of a scene.

### **Blindness**

Being blind means that a child has no vision in one or both eyes. This may be due to damage to the eye, nerves or brain, or because the child does not have an eye.

### **Causes of vision impairment**

- There are many causes of vision loss that can affect different parts of the eye.
- Vision impairment can be present from birth (congenital).
- Vision impairment may also develop later in life due to an accident, illness or disease.
- Some people inherit genetic conditions, such as Usher's syndrome, retinitis pigmentosa or albinism, that cause vision impairment to develop over time.
- Other disabilities, such as epilepsy, intellectual disability and Down syndrome may be associated with vision impairment.
- If left untreated, some types of conjunctivitis can cause permanent damage to vision.

### **Treatment**

- Some vision problems can be treated. For example, when a person has cataracts, surgeons can replace the cloudy lens with an artificial lens.
- Blindness and degenerative conditions (conditions that get worse over time), such as retinitis pigmentosa, are not curable.