

Vision Problems

THIS FACT SHEET describes the ways in which a neurological condition or acquired brain injury (ABI) can affect a person's vision and suggests some strategies and therapies to assist.

Our ability to see and to understand what we see relies not only on our eyes, but on many parts of our brain. Damage to a particular part of the brain or to the optic nerves (the nerves that connect the eyes to the brain) can affect our vision in many different ways.

Some possible problems include: partial vision, seeing double, hazy or blurred vision, an inability to recognise or interpret what you see, being able to see only one side of your surroundings, tunnel vision (as if looking down a tunnel), trouble seeing in dim or glary light.

Three common problems that may occur after acquired brain injury, stroke or tumours are hemianopia, visual neglect and visual agnosia.

Hemianopia

Hemianopia (hemi – an – o – pia) is a type of blindness. It affects the same half of each eye, either the left half or the right half ; or a person may have a hemianopia of one eye only dependant on the lesion site. It occurs as a result of damage to the connections and wiring of the visual system of the brain.

In medical terms, the person loses half (sometimes less) of their "visual field". It's like losing a wedge of sight or a portion of your vision.

People with hemianopia can be affected in various ways, and in varying degrees; they may bump into things on one side, knock over drinks on one side and can be startled by objects that "suddenly appear" on their affected side. Reading can be very difficult, as the person may not see one side of the page unless they turn their head.

Carer strategies: Usually the person has an understanding or insight into their sight difficulty and some people learn to compensate well for these difficulties. Carers can help a great deal by drawing attention to objects or activities on the affected (non-seeing) side.

Approach the person from the non-seeing side or encourage the person to turn their head to you when talking to them or helping them to dress so that they become more aware of it.

Reading and writing are easier if there is a clear edge down the affected side of the page – a ruled black or red line or a brightly coloured strip of cardboard might help to direct attention to the start or end of a line of text.

Compensation strategies can include teaching the person to turn their head to scan the environment and to place objects in their field of vision.

If the brain damage is significant or as the neurological condition advances, you may need to approach your family member *only* on their non-affected side and always assist them with activities, such as dressing, on their affected side.

Visual Neglect

While hemianopia is a *sensory loss of vision* to one side, visual neglect is a *loss of attention* to one side of the body. It is a spatial inattention disorder, usually caused by damage to the parietal lobe of the brain, which deals with spatial awareness and the perception of sensations, the person may not have an insight into the problem.

A person with visual neglect may not shave one side of their face or not eat the food on one side of the plate, for example.

Carer strategies: It is more difficult to overcome the effects of visual neglect because the person's ability to *perceive* that part of their world has been damaged. They usually need persistent prompting to attend to all things on their affected side.

The person may sit slumped towards their good side. Encourage and help them to sit up straight, in the midline.

Visual Agnosia

Visual agnosia is when someone is unable to recognise things. While their eyes still "see" the world, their brain is not able to interpret the information sent from the eyes. It is a processing problem.

A person may look at a cup but have no idea what it is. If they pick it up however, their fingers may recognise it. They may have trouble identifying objects in a cluttered pantry or on a supermarket shelf. For a few people, pictures or faces may become meaningless or unrecognisable.

Visual agnosia can be very frightening because the person's world no longer makes sense to them. Activities we take for granted like moving through busy environments, crossing the road or catching public transport may become terrifying to them.

Carer strategies: Carers can help by recognising the problem and reassuring the person that they are not going mad! You can gradually help them to recognise objects again.

Encourage the person to use other senses, such as sound and touch, to make sense of visual information.

When moving about, encourage the person to set orientation landmarks that are meaningful to them.

Don't always assume they are coping, especially in busy environments. Ask if they would like physical guidance and then offer your arm – don't take theirs – and link arms if they need a stronger grip.

Therapies

Ideally, your family member will work through these problems with a rehabilitation team appointed at the time of their diagnosis or assessment.

Rehabilitation therapists can develop helpful strategies to manage many vision problems. For example, an occupational therapist can teach people how to use what vision they have to scan the environment, enabling safety and independence with tasks such as food preparation and dressing. A person can also be taught how to read labels and recognise signs more effectively.

Loss of vision can affect a person's ability to maintain their balance and gait. A physiotherapist can teach them how to use their remaining vision to scan the environment, without losing their balance.

The Guide Dog Association of Victoria

runs an Acquired Brain Injury Mobility Service for people with vision problems that are caused by acquired brain injury. The team of orientation and mobility officers assesses your family member's vision and how it affects their ability to move about in their home and local community. The team then devises a program that develops the person's other senses and some compensatory skills that use their remaining vision.

Contact

Acquired Brain Injury Mobility Service
Guide Dog Association of Victoria
Private Bag 13, Kew, VIC 3101
telephone: (03) 9854 4473
fax: (03) 9854 4466

e: referrals@guidedogsvictoria.com.au
web: www.guidedogsvictoria.com.au