THE IMPORTANCE OF HEARING AND EYE TESTS

Hearing and eye tests are easily and widely available to any person who has concerns about their sight or hearing. Professional testing is the only way to assess a person's hearing and/or sight loss, and to enable the best possible use of sight and hearing.

It is often not recognised that a person with a known sensory impairment still needs to have a regular sight and hearing test. However, finding appropriate tests can be difficult and additional factors will need to be considered.

This factsheet aims to:

• describe sight and hearing tests;

• highlight some of the problems a deafblind or sensory impaired person might have in getting tested;

• provide advice on how these difficulties can be overcome.

Making the most of residual sight and hearing

It is estimated that 95% of what we learn about the world around us comes through vision and hearing. Most people who are deafblind (or have a dual-sensory impairment) will have some residual (or remaining) sight and/or hearing. Given that these senses are so important, it is essential that a person is able to make best use of any remaining sight or hearing they may have.

For a child with a sensory impairment early diagnosis and follow up with appropriate sensory stimulation will give them the best chance to learn to use what sight and hearing they retain. Early intervention will give them the best chance to learn about their world.

There are many ways in which a person can be helped to use their sight and hearing. They may require a hearing aid, or glasses; or other equipment such as low vision aids, magnifiers, personal amplifiers, or other specialist
equipment. They may also benefit from practical adaptations to their home or environment; or learn new skills, such as mobility skills.

However, it is essential to first obtain accurate information about someone’s sight and/or hearing. Regular testing is also important to help identify changes in sight and/or hearing which may lead to changes in equipment and environmental adaptations. It is also important to monitor the general health of the eyes and ears.

**What is the difference between a clinical and functional test?**

- **A clinical** test would normally be carried out by a professional such as an **optician** (who does an eye test) or an **audiologist** (who does a hearing test). A clinical test is carried out under ‘ideal’ conditions; using standardised tests to indicate how the sense compares to normal sight or hearing.

- A second type of testing is known as **functional**. This provides information about how somebody actually uses his or her sight or hearing. This type of test uses a range of stimuli and a range of conditions. In some ways a functional test expands on the information gained in a clinical test.

**Getting an eye test**

If someone becomes worried about their vision, they are likely to want to have this checked. They may visit their GP, but usually they would go to an **optician** or **optometrist** who will test their eyesight and carry out a health check on the eye. An optician can also detect conditions such as glaucoma, cataract, or detached retina.

It is usually recommended that eyes are tested every two years to pick up on any changes in vision and any disease that may be developing. This is particularly important for people born deafblind, as it can be difficult to identify changes or deterioration in vision, or other problems.

If a problem is identified or suspected by the optician, they will refer the person on to an eye specialist an **ophthalmologist** who is usually based in a hospital.
Other problems with the eyes such as discomfort, pain or discharge would usually involve a visit to the local GP. If the problem couldn't be dealt with by the GP, they would again refer the person on to an ophthalmologist.

For deafblind people the local GP may be the most appropriate first point of contact, although a visit to an optician should not be ruled out.

**Vision problems in deaf children**

Research carried out shows that deaf children are more likely to have vision problems than hearing children. Given their reliance upon their sight, early identification is essential to ensure that these impairments can be identified and, where possible, rectified.

Deaf children can often be unsure about having eye tests, which are usually carried out in an unfamiliar, darkened room. Children need to be reassured and the tests explained. Their hesitancy should not prevent them being tested.

**What tests will an optician carry out?**

There are a variety of standard tests each one designed to test a particular aspect of vision. Some of the tests may be disconcerting if the person being tested doesn't know what to expect, but none of these tests are harmful nor painful.

- **Distance vision**
  This test involves reading letters of decreasing size from a chart which is six metres away. The size of the smallest letter a person can read gives an indication of the person's distance vision.

- **Near vision**
  This is usually tested by asking the person to read printed material in a variety of sizes.

- **Field of vision**
  The test for this usually involves looking straight ahead and then indicating whether or not you can see lights or objects to the side. A machine is often used for this. You rest your chin and look straight ahead at a central point and have to indicate when you can see lights which are illuminated to the sides. More complex equipment may be used, particularly if testing is done
• **Examination of the outside of the eye**
  This may involve the doctor/optician using a reading light or pen torch, or a magnifying glass in order to make a visual examination of the outside of the eye. In some cases a microscope may be used so that the specialist can get a more detailed picture of the eye.

• **Examination of the inside of the eye**
  This is carried out using an ophthalmoscope, which is a special type of torch which allows the professional to shine a light into the eye and see the details of the lens and retina. To do this effectively the ophthalmoscope has to be held very close to the eye and you may be asked to look in different directions. Eye drops, which dilate the pupil, may need to be used to allow a more thorough examination. In hospital tests more complex equipment may also be used.

• **Pressure test**
  This involves using a tonometer, a machine which blows a few puffs of air into the front of each eye. This measures the pressure inside the eye.

• **Adjustable frames and lenses**
  If glasses are likely to be useful, this will help the optician to find out which lenses are the right ones. Various lenses are tried for each eye in turn to see which gives the greatest improvement in vision.

For someone who is deafblind there are a number of problems with eye tests. For example, communication problems may mean that the person doesn't understand the test. They may also lack the necessary skills required to carry out the tests for example, reading.

Also, opticians or optometrist do not usually have the skills nor the experience in working with people who have a dual-sensory impairment and/or multiple disability, and so frequently don't provide the most appropriate test. Despite these problems, testing is still important and possible. No one is too disabled to have his or her eyesight tested.

For some deafblind people for example, people with Usher syndrome or older people with acquired dual sensory loss standard testing procedures may be
possible, although the particular circumstances of the individual will need to be taken into account.

For people who are born deafblind and those with additional disabilities, different tests may be necessary. It may be that for some people clinical testing may not give a satisfactory picture of their sight impairment. In these cases, functional testing is required to fully understand the difficulties faced by the individual and to enable them to overcome them.

**Getting your hearing tested**

The onset of hearing loss is often slow and it may not be obvious that there is a hearing loss. However, there are a number of indications that a person may need a hearing test. For example, they may be aware of difficulty in hearing as a result of a heavy cold, pain in the ears or discharge from the ear. Other indications include: having the TV turned up loud; not responding to sounds such as the phone or doorbell; or finding it difficult to follow a group conversation. A hearing test an audiological test is the only way to diagnose a hearing loss.

As with eye tests, there are clinical and functional tests. A clinical test will normally be carried out by an audiologist under soundproof conditions, comparing the hearing to ‘normal’ hearing. However, for some people it is more important to test ‘how’ they use their hearing.

The first place to go if a hearing problem is suspected is to a GP. They will be able to examine the ear for wax, ear infection, or other causes of temporary hearing loss, and will be able to treat these accordingly. If the cause of hearing loss is not so straightforward, but it is clear that there are no complications, the GP may refer the person directly to an audiology department, often based within a hospital. Alternatively they will refer the person on to an Ear, Nose and Throat (ENT) clinic/department at a hospital.

If a person is known to have a hearing loss or a known problem, then their hearing should be tested annually. Hearing tests should also be routine for people over the age of 60.

**What tests does an audiologist carry out?**

There are a variety of hearing tests some which require the person to cooperate, known as **subjective** tests, and others which can measure hearing
without cooperation, known as **objective** tests. These are some of the tests which may be used:

- **Pure tone audiometry**
  This uses a machine called an audiometer which produces accurately measured sounds across a range of different pitches, and volumes. Each ear is tested separately using headphones. The person has to indicate the softest level at which they can hear each pitch, and these results are marked on a chart, or **audiogram**. This can measure the hearing loss in each ear separately.

- **Free field audiometry**
  This is a similar test, but headphones are not used. This means that both ears are tested together, and even though the test will usually be done in a soundproof room, it gives an indication of how a person can hear in an everyday situation.

- **Distraction test**
  Low and high pitched sounds are made on each side of the person's head in line with their ears. They show they have heard the sound by turning to look at the source of sound. This test is used with young babies.

- **Bone conduction test**
  A **bone conductor** is placed behind the ear on the mastoid bone. Signals are passed directly to the inner ear or cochlea and bypass the middle ear. The cochlea may be functioning normally which would indicate that the child or adult has middle ear deafness.

- **Tympanometry**
  This test involves automatic examination of the middle ear using a probe which painlessly applies differing air pressure to the ear drum. The results can indicate the presence of a conductive hearing loss.

- **Evoked response test**
  A test of responses to sound utilising the measurement of brainwave activity by electrodes placed on the head. This does not require an active response from the child or adult.

- **Various other tests** can also be used, including some which are used specifically with children. For example, the Kendall Toy Test, aims to find
how loud speech needs to be for a child to hear vowels and consonants, and involves the child identifying, on request, one of a set of toys.

**Testing the hearing of someone who is deafblind**

There are a number of problems which may arise when an attempt is made to test the hearing of someone who is deafblind. To begin with there may be communication problems. The deafblind person may have difficulty in understanding the tests being carried out and in responding appropriately as the test proceeds. As with eye tests, the person may lack the necessary skills to respond appropriately.

Even if these difficulties are overcome, a lack of awareness on the part of the professional carrying out the test may lead to inappropriate testing or a misinterpretation of the responses to the test. Conditions under which the test is carried out may also not be appropriate, for instance the lighting may be wrong, and this makes testing much more difficult.

**How to make testing easier for people with acquired deafblindness**

1. **Choice of optician/audiologist**
   It may be worth searching around for a sympathetic optician/audiologist who is willing to take into account any specific needs the deafblind person may have. For example, they may want someone who will allow extra time, and take into consideration different communication methods, and who they feel comfortable with. A visit to the optician/audiologist to talk about the test prior to the appointment would be helpful.

2. **Appointment**
   Deafblind people should ask for a longer appointment if this will be helpful. The optician/audiologist need to be informed of any special needs prior to the appointment, so that they can take these into account

3. **Communication**
   It may be useful for someone who knows how to guide to accompany the deafblind person to make sure that they understand what is going on. If an interpreter is needed, arrange for this beforehand. This needs at least four weeks’ notice.
4. **Preparation prior to testing**
   Before their appointment, make sure the deafblind person understands the tests that will be carried out. They should not be afraid to ask the optician or audiologist about the tests so they know what to expect, and what will be expected of them. As well as finding out about the tests, the deafblind person should think about any particular problem areas (make notes if necessary), and make sure the professional concerned is told.

5. **Conditions**
   Deafblind people may have problems seeing in the usual conditions that are used for testing, and so may need to ask for them to be changed. For example, if they have problems seeing in the dark, ask that the lights are not put out. The charts used in the Distance Vision test may be illuminated and produce glare if this is a problem, ask for a different (printed) chart to be used.

6. **Environment**
   Make sure that the environment for testing is comfortable. If necessary visit beforehand to check what the place is like.

7. **Don't take NO for an answer.** If an optician/audiologist says they can't test a deafblind person's eyes/ears, or can't make any of the changes requested go elsewhere.

**How to make testing easier for a person born deafblind**

1. In order to make the testing easier it is important that the person being tested is comfortable. Make sure the test is not at the end of a long day or after a long wait for an appointment.

2. Try to get the professional performing the test to know the individual. This can be achieved through observation and by considering background information, including medical information.

3. If possible get the optician or audiologist to visit a person's home or day centre. If not, try to visit the clinic in advance to get them used to the environment.
4. It may be helpful for someone to ‘practise’ the test beforehand. For instance matching pictures, or sitting in the type of chair which the optician/audiologist might use while someone looks closely at their eyes or ears. This should help the person to know what to expect, and reduce fear.

5. Make sure anyone accompanying the person being tested knows them well and has information about how they use their vision and any problems that have been noted.

6. Good observation carried out before a test of how the deafblind person uses their functional vision/hearing in their usual environment may make the testing much more successful.

7. Where standard tests require certain skills (like reading), and cooperation from the person whose eyes/ears are being tested, they may need to be adapted to overcome any difficulties this presents. For example, someone who can't read could be asked to match objects/pictures instead.

8. If a deafblind person cannot cooperate with the usual sight/hearing tests, then testing will need to involve recording reflexes and involuntary movements in response to certain stimuli. These tests do not need the person to be able to understand or cooperate with the tests.

9. It may be useful to involve speech therapists, hearing therapists or other relevant professionals who know the individual.

Who are the professionals involved in testing sight and hearing?

- **Orthoptist** usually work in hospital eye departments under the supervision of an ophthalmologist. They are qualified to identify and treat certain eye conditions such as squints or double vision

- **Audiologists** are responsible for diagnostic tests of hearing, assessment for and provision of hearing aids,

- **Ophthalmologist** is a medically qualified doctor who has specialised in eyes. They are trained to diagnose and treat all eye problems.
• **Hearing therapists** provide prefitting and supportive counselling, programmes of rehabilitation, optimisation and fitting of hearing aids, and assessment for provision of assistive devices,

• **Speech and language therapist** responsible for providing speech therapy.

**For further information**

**Information on optical services:**

General Optical Council 41 Harley Street London, W1G 8DJ  
Tel: 020 7580 3898  
Fax: 020 436 3525  
Website: [www.optical.org](http://www.optical.org)  
Email: goc@optical.org

The Optical Consumer Complaints Service  
PO Box 219  
Petersfield  
GU32 9BY  
Tel: 0844 800 5071  
Fax: 01730 265 058  
Email: postbox@opticalcomplaints.co.uk  
Website: [www.opticalcomplaints.co.uk](http://www.opticalcomplaints.co.uk)

RNIB  
105, Judd Street  
London  
WC1H 9NE  
Tel: 0303 123 9999  
Email helpline@rnib.org.uk  
Website: [www.rnib.org.uk](http://www.rnib.org.uk)
Information on audiology services

Action on Hearing Loss
19 23 Featherstone Street
London, EC1Y 8SL
Tel: 0808 808 0123
Textphone: 0808 808 9000
Fax: 020 7296 8199
Email: informationline@hearingloss.org.uk
Website: www.actiononhearingloss.org.uk

Hearing Link
27-28 The Waterfront
Eastbourne
East Sussex
BN23 5UZ
Tel: 0300 111 1113
Fax: 01323 471260
Email: enquiries@hearinglink.org
Website: www.hearinglink.org

National Deaf Children’s Society (NDCS)
15 Dufferin Street
London
EC1Y 8UR
Tel: 0808 800 8880
Textphone: 0808 800 8880
Fax: 020 7251 5020
Email: helpline@ndcs.org.uk
Website: www.ndcs.org.uk

Where can I go for help?

If you:

• would like to find out more about deafblindness or the services for deafblind people in your area

• require information in alternative formats including braille, large print or audio
• would like this fact sheet to be translated into your first language, please contact Sense’s Information & Advice Service:

Telephone: 0845 127 0066 or 020 7520 0972
Text phone: 0845 127 0066 or 020 7520 0972
Fax: 0845 127 0061
Email: info@sense.org.uk
Website: www.sense.org.uk

If you have comments or suggestions about this information sheet, we’d love to hear from you.

This will help us ensure that we are providing as good a service as possible.

Please email publishing@sense.org.uk or telephone/textphone 0845 127 0066.