### **FACTSHEET**



# Facts and figures on hearing loss, deafness and tinnitus

This factsheet gives you information about the latest available figures on hearing loss, deafness and tinnitus among adults in the UK.

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If you'd like this factsheet in Braille, large print or audio, please contact our Information Line (see last page for contact details).



### **Our evidence sources**

The majority of statistics in this factsheet are from our 2015 report *Hearing Matters*, which you can download at <a href="www.actiononhearingloss.org.uk/hearingmatters">www.actiononhearingloss.org.uk/hearingmatters</a>
For a referenced version of this factsheet, email <a href="references@hearingloss.org.uk">references@hearingloss.org.uk</a>

## How is hearing loss measured?

Hearing loss is measured by finding the quietest sounds that someone can hear, when sounds of different frequencies (pitches) are played. The audiologist (hearing specialist) asks the person having their hearing tested to respond when they can hear a tone – usually by pressing a button – and they adjust the volume of the sound until they can just hear it. This is called the threshold.

Thresholds are measured in units called dBHL - dB stands for 'decibels' and HL stands for 'hearing level'. Anyone with thresholds between 0 and 20 dBHL across all the frequencies is considered to have 'normal' hearing. The greater the threshold level is - in dBHL - the greater the hearing loss.

### Hearing threshold: 20-34 dBHL

Someone with this level of hearing loss may not have problems in a quiet environment, but they may have real difficulty following or taking part in conversation in a noisy environment.

### Hearing threshold: 35-49 dBHL

Someone with this level of hearing loss may find it difficult to hear a normal

voice in a quiet environment. The person will have difficulty hearing and taking part in conversation in a noisy environment. Hearings aids may be helpful.

### Hearing threshold: 50-64 dBHL

Someone with this level of hearing loss can hear loud speech in a quiet environment, but they'll have real difficulty hearing and taking part in conversation in a noisy environment. Hearing aids are likely to be helpful.

### Hearing threshold: 65-79 dBHL

Someone with this level of hearing loss can hear loud speech if someone speaks directly into their ear in a quiet environment, but they are unlikely to be able to hear and take part in conversation in a noisy environment without a hearing aid. They will also rely on lipreading to help them understand speech.

### Hearing threshold: 80-94 dBHL

Someone with this level of hearing loss may only just be able to hear loud speech or sound in a quiet environment. British Sign Language (BSL) may be their first or preferred language, or they might communicate by lipreading and speech. Hearing aids are not always helpful. They may benefit from cochlear implants.

## What are the different types of hearing loss?

Hearing loss is either sensorineural, conductive or mixed.

Sensorineural hearing loss is caused by damage to the hair cells within the inner ear. It is permanent and most often caused by age-related 'wear and tear' within the inner ear.

Conductive hearing loss is caused when sound waves can't pass freely from the outer ear to the inner ear – for example, because of a blockage or infection in the ear canal. This type of hearing loss is usually temporary and can often be treated with medication or minor surgery. But, in some cases, it can be permanent.

Mixed hearing loss is a combination of sensorineural and conductive hearing loss.

## What causes hearing loss and deafness?

Age-related damage to the cochlea, known as presbycusis, is the single biggest cause of hearing loss. It is the result of a combination of environmental and genetic factors.

Other causes and triggers include:

- regular and prolonged exposure to loud sounds
- ototoxic drugs that harm the cochlea and/or hearing nerve

- genetic predisposition: at least half of all childhood deafness is inherited
- some infectious diseases including rubella
- complications at birth
- injury to the head
- benign tumours on the hearing nerve.

## How many people in the UK have some form of hearing loss?

Hearing loss is a major public health issue, which we estimate now affects more than 11 million people across the UK.



One in six of the population has hearing loss of at least 25dB in their better ear.

This estimate includes around 6.7 million people who could benefit from hearing aids (as they have hearing loss of at least 35dB in their better ear). It also includes an estimated 900,000 people in the UK who have severe or profound levels of deafness (hearing loss of at least 70dB in their better ear).

The table below shows the estimates of people with all levels of hearing loss and deafness and are based on the most robust and best available data for prevalence at each age group (Davis AC, 1995. *Hearing in adults*), updated with Office for National Statistics (ONS) population estimates for 2014 and rounded to the nearest 500.

### A growing issue

As our population ages, hearing loss will affect a growing number of people. We estimate that by 2035, there will be more

than **15.6 million** people with hearing loss in the UK – a fifth of the population.

### Childhood deafness

According to the National Deaf Children's Society (NDCS), there are more than **45,000** deaf children in the UK, plus many more who experience temporary hearing loss due to conditions such as glue ear.

Childhood deafness is either:

- congenital, which means it is present at birth or acquired soon after, or
- acquired, which results from an event in infancy or childhood.

### Congenital deafness

Congenital deafness can be caused by genetic factors or by complications during pregnancy and childbirth, including:

- maternal rubella, syphilis or certain other infections during pregnancy
- low birth weight

Table 1. People with hearing loss - by age and area

Age band	UK	England	Northern Ireland	Scotland	Wales
17-29	188,000	158,000	5,500	15,500	9,000
30-39	234,000	199,000	6,500	18,500	10,000
40-49	743,000	625,500	21,000	62,500	34,000
50-59	1,569,000	1,305,000	44,500	142,500	77,000
60-69	2,524,000	2,101,500	65,000	221,500	135,500
70-79	2,879,000	2,395,500	75,500	251,000	157,000
80+	2,887,000	2,434,500	68,500	232,000	152,000
All ages	11,043,000	9,235,000	287,500	945,000	575,500

- a lack of oxygen at birth
- inappropriate use of certain powerful drugs during pregnancy that treat life-threatening infections or diseases
- severe jaundice after birth, which can damage the baby's hearing nerve.

Around 60% of all permanent congenital deafness is genetic. So far, scientists have identified more than 100 genes that are associated with how we hear, and it's likely that there are many more that are yet to be identified. We have two copies of these genes – one from each parent. Changes in any one of these genes may cause deafness. See our factsheet *Genetic deafness* to find out more.

Historically, maternal infection during pregnancy, particularly viral infection, was a common cause of congenital deafness. There is a strong link between pregnant women catching rubella (German measles) during the first 20 weeks of pregnancy and newborn deafness. However, since the introduction of the MMR (measles, mumps and rubella) vaccine in 1988, it's now very rare for babies in the UK to be born deaf or have other birth defects (known as congenital rubella syndrome), as a result of rubella.

Premature babies are at increased risk of deafness. However, as the intensive care of pre-term babies has improved, the prognosis for even very low-weight babies is favourable, with less than 1% of premature babies becoming deaf due to problems associated with being born prematurely.

### Acquired childhood deafness

There are different causes of acquired sensorineural deafness in early childhood. The majority are uncommon when compared to the number of cases of conductive hearing loss caused by glue ear (otitis media with effusion).

Bacterial meningitis is the single most common cause of sensorineural deafness in childhood. Less common causes of early childhood deafness include head injury and ototoxic drugs (drugs used to treat life-threatening illnesses that damage the inner ear or hearing nerve).



For more information, contact NDCS (see page 10 for details).

### Deafened people

The term 'deafened' describes people who have become profoundly deaf in adult life – it is also known as acquired profound hearing loss. It can happen suddenly or gradually, as a result of trauma, infection or ototoxic drugs (drugs that damage the inner ear or hearing nerve).

There are an estimated 150,000 deafened adults in the UK. They often rely heavily on lipreading and written communication. They may require communication support, such as speech-to-text reporters, lipspeakers or notetakers, in situations where lipreading is difficult.

## How do age and gender affect the figures?

Most of the 11 million people in the UK with hearing loss developed it as part of the natural ageing process. Age-related damage to the cochlea, known as presbycusis, is the single biggest cause of hearing loss.

We estimate that there are 1.16 million people in the UK aged 17-49 with some level of hearing loss; 46,500 of whom are who are severely or profoundly deaf.

The vast majority of people with hearing loss are over 50 years old and the prevalence increases with age (see table 1, page 4.

Hearing loss affects:

- 41.7% of over 50-year-olds
- **71.1%** of over-70-year-olds.

From the age of 40 onwards, a higher proportion of men than women develop hearing loss. This may be because more men have been exposed to high levels of industrial noise.

Among people over the age of 80, more women than men have hearing loss, which is due to women living longer than men on average, not because women are more likely to become deaf.

## How many people in the UK have tinnitus?

Tinnitus is the word for noises that some people hear in one or both of their ears or in their head – buzzing, ringing, hissing or other sounds. Many people experience tinnitus at some time in their life, but for the majority it only lasts for a short time. For other people, it is permanent.

Around one in 10 UK adults has tinnitus, with recent data showing that this increases to nearly 17% of 40 to 69-year olds and 25-30% of over 70s.

An estimated **32,000** new cases of tinnitus were diagnosed in England in 2015.

## How many people in the UK are deafblind?

The Department of Health says people are deafblind 'if their combined sight and hearing impairment cause difficulties with communication, access to information and mobility'. According to national charity Sense, there are an estimated 250,000 deafblind people in the UK. Of these, 220,000 are aged 70 or over. This number is set to grow substantially over the next two decades as the population ages.

Some people who are deafblind are totally deaf and/or totally blind, but others have some hearing and/or some vision.



For more information, see our factsheet *Deafblindness* or contact Sense (see page 10).

## Is hearing loss linked to other health conditions?

New evidence shows that hearing loss increases the risk or impact of various other long-term conditions, and many health conditions are associated with ageing, so are likely to occur alongside hearing loss.

Research shows that hearing loss doubles the risk of developing depression and increases the risk of anxiety and other mental health issues, and that hearing aids reduce these risks.

Now there is also strong evidence that mild hearing loss doubles the risk of developing dementia, with moderate hearing loss leading to three times the risk, and severe hearing loss five times the risk. Researchers are looking into why there is such a strong link between dementia and hearing loss – some recent studies have shown that using hearing aids may reduce the risk. However, more in-depth research is needed to confirm this.

Recently, leading US and UK diabetes charities have highlighted the link between diabetes and hearing loss. In fact, you're twice as likely to have hearing loss if you have any form of diabetes.

There is also evidence that hearing loss is linked to cardiovascular disease, stroke and obesity. Some research suggests that vascular changes in the body related to diabetes, cardiovascular disease or obesity might contribute to the risk of age-related hearing loss.

Evidence suggests that up to 40% of people with a learning disability have some level of hearing loss, and that this often goes undiagnosed or is misdiagnosed.

There is some evidence suggesting that hearing loss in older people may be linked to sight loss and more frequent falls, and because most hearing loss is age-related, many people will also have other health conditions, from physical impairment or sight loss to dementia or cancer. This can cause complications – for example, hearing loss can be misdiagnosed as dementia or make the symptoms of dementia appear worse.

## How many people need hearing aids?

Out of the 11 million people with hearing loss in the UK, an estimated 6.7 million (6,699,500) would benefit from hearing aids (see table 2, page 8).

Hearing aids are most effective when fitted early – people who wait until they have severe hearing loss find it more difficult to adapt to them. But evidence shows that, on average, people wait 10 years before seeking help for their hearing loss. Even when they do take action, 45% of people with hearing aids say that their GP failed to refer them to an audiologist when they first mentioned their hearing loss.

Studies have consistently shown that **80–90%** of people use and get benefit from their hearing aids, and there's robust evidence that hearing aids improve the quality of life of people with hearing loss.

Table 2. People who need hearing aids

Age band	UK	England	Northern Ireland	Scotland	Wales
17-29	44,000	37,000	1,500	3,500	2,000
30-39	117,000	99,500	3,500	9,000	5,000
40-49	362,500	305,000	10,500	30,500	16,500
50-59	647,500	538,500	18,500	59,000	32,000
60-69	1,080,500	899,500	28,000	95,000	58,000
70-79	1,909,500	1,589,000	50,000	166,500	104,000
80+	2,518,500	2,124,000	59,500	202,500	132,500
All ages	6,699,500	5,609,000	171,500	567,500	351,000

Research shows that hearing aids enable people with hearing loss to stay socially active, reduce the risk of depression and may even reduce the risk of dementia.

# How many people use cochlear implants or bone-anchored hearing aids?

For people who gain little or no benefit from hearing aids, bone-conducting hearing devices, middle ear implants or cochlear implants may be appropriate. Bone-conducting hearing devices transmit sound directly to the cochlea (the hearing organ in the inner ear) by vibrating the skull and are used by about 15,000 people in the UK.

Middle ear implants help to transmit sound information to the inner ear, by mechanically vibrating the ossicles (the three tiny bones in the middle ear) or the cochlea itself.

People with a functioning hearing nerve who are severely or profoundly deaf – and who gain little benefit from hearing aids – can be referred to a specialist centre for an assessment for cochlear implants. There are more than 12,000 cochlear implant users in the UK. Around 650 adults and 500 children receive them each year.

## How many people use sign language as their main language?

Many people who are born deaf or are deafened early in life use sign language to communicate. Using the 2011 census, we can estimate that there are 24,326 people in the UK aged three and over who use sign language as their main language.

## What are the figures related to employment?

Figures from the Office of National Statistics show that people with hearing loss are less likely to be employed (65% are in employment) when compared with people with no long-term health issue or disability (79%).

Our research shows that developing hearing loss can lead to loss of employment and problems gaining employment. Our Hidden Disadvantage research, published in 2014, found that two-thirds of people with hearing loss (70%) felt their hearing loss sometimes prevented them from fulfilling their potential at work, and a similar proportion of respondents to the same survey (68%) said that it left them feeling isolated at work.

Attitudes to, and the impact of, hearing loss can also lead to people leaving the labour market. **Two-fifths (41%)** of those surveyed who had retired early said that this was related to their hearing loss.

In 2014, The Ear Foundation calculated that, on average, people with hearing loss are paid £2,000 less per year than the general population. This amounts to £4bn in lost income across the UK.

People with hearing loss consistently cite the attitude of employers as the most significant barrier to employment – our recent research found that 8 out of 10 people with hearing loss identified employer attitudes as the major barrier to employment.

## Where can I get further information?

The information in this factsheet is taken from our report *Hearing Matters: Why urgent action is needed on deafness, tinnitus and hearing loss across the UK.* This 2015 report outlines the prevalence and impact of hearing loss, deafness and tinnitus across the UK, then focuses on society's response and what needs to be done across three key areas – the growing level of need for better support and care, improved technology and treatments, and equality of access to services for people confronting deafness, tinnitus and hearing loss.

To download the report, visit <a href="https://www.actiononhearingloss.org.uk/">www.actiononhearingloss.org.uk/</a> hearingmatters

### Other information

Action on Hearing Loss has a wide range of expert information on deafness, tinnitus and hearing loss, and what can help you take control: choosing products, learning to lipread, using communication support, understanding your rights, and getting the right support.

Our leaflets are a good place to start, as they cover the basics, while our factsheets go into more detail. You can find our leaflets and factsheets on our website at <a href="www.actiononhearingloss.org.uk/factsheets">www.actiononhearingloss.org.uk/factsheets</a> or order copies from our Information Line (see last page).

You can also contact our Information Line or visit

### www.actiononhearingloss.org.uk

for free, reliable information, and to find out about: services in your area, becoming a member and receiving our award-winning magazine, the latest research developments, choosing the right products, and getting involved as a volunteer or supporter.

### Information you can trust

The Information Standard certifies us as producers of high-quality, evidence-based information. For a referenced version of this factsheet, please email references@hearingloss.org.uk

### Other organisations

### Medical Research Council Institute of Hearing Research

Carries out research into hearing and hearing disorders.

University Park, Nottingham NG7 2RD

Telephone 0115 922 3431 Fax 0115 951 8503 enquiries@ihr.mrc.ac.uk www.ihr.mrc.ac.uk

### National Deaf Children's Society (NDCS)

A national charity that works to remove the barriers to the achievement of deaf children throughout the world.

Ground Floor South, Castle House, 37–45 Paul Street, London EC2A 4LS Tel/textphone <u>0808 800 8880</u> <u>ndcs@ndcs.org.uk</u> <u>www.ndcs.org.uk</u>

### **NHS Choices**

Provides NHS information about health conditions and treatments relating to hearing and ears.

### www.nhs.uk

#### Sense

A national charity offering information resources for deafblind people, parents, professionals and the public.

101 Pentonville Road, London N1 9LG

Telephone **0300 330 9250**Textphone **0300 330 9252**<a href="mailto:info@sense.org.uk">info@sense.org.uk</a>
<a href="https://www.sense.org.uk">www.sense.org.uk</a>

### Did you find this information helpful?

We'd love to have your feedback – email us at <a href="mailto:reviewpanel@hearingloss.org.uk">reviewpanel@hearingloss.org.uk</a> or write to Publications, Action on Hearing Loss, 19–23 Featherstone Street, London EC1Y 8SL.

If you'd like to join our Readers' Panel, to help us create new publications and improve our existing ones, please let us know.

### Please help us support others

We provide our leaflets, factsheets and Information Line service free of charge to anyone affected by deafness, tinnitus or hearing loss in the UK, but we rely on the generosity of our supporters to help us do this. We would be very grateful if you would consider making a donation – of as little or as much as you can afford.

You can send a cheque/PO made payable to Action on Hearing Loss to: Action on Hearing Loss, FREEPOST LON13186, London EC1B 1AL

Or you can make a donation online using a credit card, debit card or charity card.

Please visit actiononhearingloss.org.uk/icanhelp

Thank you for your support.

Our purpose is to help people confronting deafness, tinnitus and hearing loss to live the life they choose. We enable them to take control of their lives and remove the barriers in their way.

To find out more about what we do and how you can support us, go to **www.actiononhearingloss.org.uk** 

### **Action on Hearing Loss Information Line**

Telephone: **0808 808 0123**Textphone: **0808 808 9000**SMS: **0780 000 0360** 

(standard text message rates apply)
information@hearingloss.org.uk

#### Join us

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