



## Hearing Impairment

There are 2 main types of hearing impairment:

### Conductive:

This is the most common type and occurs when sound cannot pass through the outer and middle ear to the cochlea and auditory nerve in the inner ear. This is often caused by fluid building up in the middle ear (also known as 'glue ear'). Glue ear can cause temporary deafness and either clears up naturally after a short period of time or can develop into a long-term condition requiring intervention, such as grommets, or wearing hearing aids.

### Sensori-Neural:

As sound passes through the outer and middle ear, tiny hair cells in the cochlea convert sound waves into electrical signals. These signals travel along the nerve of hearing to the brain.

Most cases of sensori-neural deafness are caused by loss of, or damage to the hair cells in the cochlea, so the cochlea does not process the sound effectively. The deafness can be genetic or caused by an infectious disease such as rubella, mumps, measles or meningitis and is permanent. A child may also be born deaf because of a shortage of oxygen in the bloodstream at birth or some other birth trauma.

'Mixed deafness' is when a child has a mixture of conductive and sensori-neural deafness.

### Degrees of deafness

There are different degrees of deafness and these are classified as mild, moderate, severe or profound. Some children have little or no hearing in one ear, and ordinary levels of hearing in the other ear – this is known as unilateral deafness.

**Mild deafness: 20-40 dB** could hear a baby crying or music, but maybe unable to hear whispered conversation.

**Moderate deafness: 41-70 dB** would hear a dog barking or telephone ringing but may be unable to hear a baby crying.

**Severe deafness: 71-95 dB** would be able to hear a chainsaw or drums being played but may be unable to hear a piano or a dog barking.

**Profound deafness: >95 dB** would be able to hear an articulated lorry or aeroplane but not hear a telephone ringing.

Deafness does not always fit into a particular category – a child may have a moderate to severe hearing loss, therefore features of both levels need to be considered.

### Further information:

<http://www.ndcs.org.uk/>