EWING FOUNDATION
for deaf children

Listening – what's it all about?

Learning to listen

How does listening develop?

Remember the ears are just the pathway for sound; the brain is where listening really happens.

As a function of the brain it is affected by cognitive or other central difficulties

The ability to discriminate, identify and comprehend sounds, including the sounds of language, requires the establishing of links (synapses) within the brain. Synapses grow at a very rapid pace in the early years of life which are the optimum years for learning. Neural plasticity is greatest in the early years of life.

However, whilst the number of synapses is increasing, some have to be pruned with weaker connections being deleted whilst stronger, more important connections are reinforced. For example, during the first year of life a baby's ability to discriminate between all speech sounds reduces so that they can concentrate on the phonemes of their mother tongue.

As listening develops, the following evidence emerges in the early stages:

It may relate to receptive skills:

- Interest in / turning towards sounds (detection)
- Increased interest when the sound changes (discrimination) and improvements in the ability to focus attention
- Responding in a way that shows identification of sounds
- Increasing oral language that demonstrates understanding (comprehension)

Or expressive skills:

- Increased vocalisation
- Emerging words
- Recollection of patterns of words / sentences

The ability to use the information from speech requires:

- Period of exposure to sound

- Developing sound awareness and interest in sound
- Discriminating sounds – environmental
- Discriminating supra-segmental, phonological speech information – nursery rhymes / syllabic patterns / rhyme & alliteration
- Discriminating individual speech sounds / phonemes
- Identifying the source and meaning of environmental sounds
- Identifying speech sounds leading to varied vocalisation, proto-words & language
- Listening, attending to and understanding sounds in the presence of competing noise
- Complex auditory comprehension combined with cognitive or other demands

Several perspectives or "hierarchies" of auditory development have been presented over the years, based on typical development.

Some terminology commonly seen in materials and resources related to auditory development in deaf includes:

- Auditory detection / awareness – presence / absence of sound
- Auditory attention – anticipation & attention to auditory signals (especially speech) over increasing length of time
- Distance hearing – attending to sounds at a distance
- Localisation – turning to find the sound source
- Auditory discrimination – perceiving and differentiating differences in sounds
- Auditory self-monitoring / auditory feedback – monitoring information through listening and modifying speech production based on what was heard especially as it relates to duration / rhythm / pitch / loudness / phonemes
- Auditory identification – recognising the source or meaning of a sound; association of objects etc. with a word or parts of words e.g. cats indicating plurality etc.
- Auditory memory – storing / remembering / recalling auditory information & language from listening
- Auditory sequential memory – as above but including the order in which items are presented
- Auditory processing – to make cognitive judgements about what was heard

- Auditory comprehension –to synthesise understanding of auditory information and relate it to known information in a variety of situations

Usually four basic stages of development are described:

- Detection
- Discrimination
- Identification
- Comprehension

However these are not hierarchical.

Listening becomes more complex as it develops, expanding in depth and breadth as auditory information becomes more meaningful. However it is not linear but inter-related - discrimination of more subtle differences interweaves with identification and comprehension

Children become increasingly able to meet the demands of listening alongside other cognitive / physical / sensory demands as other skills develop and Executive Function matures.