Cochlear Implant Listening Skills Development
Guide to Rate of Progress

Development timings are only indicative and will vary according to a number of factors. Ask your cochlear implant team about factors that may impact your child's rate of progress.

1-4 weeks after switch-on
Stage 1
Awareness of Sound
- Awareness of voice
- Awareness of environmental sounds (able to localise sound)
- Detection of Ling sounds (a 'ee' oo 'm' 'sh' 's')
- Respond to own name (through listening alone)

From 1-3 months: development of discrimination/identification** of Ling sounds
** Discrimination: the ability to perceive difference between two or more speech sounds.
Identification: the ability to recognise a sound by repeating, pointing, or writing what is heard.

2-5 months after switch-on
Stage 2
Suprasegmental Discrimination and Association
Pattern perception and non-language aspects of speech
- Discriminate changes in vocal length (duration: long & short)
- Discriminate intensity/pitch (loud & soft; high & low)
- Perceive difference in intonation/stress/rhythm/rate
- Imitating Learning to Listen sounds (Dog-woof! Cow-moo)
- Perceive difference in word length (1, 2, 3+ syllables)
- Discriminate sentence length (short phrases)

6-9 months after switch-on
Stage 3
Segmental Discrimination and Association
Follow developmental steps for listening, language, and speech (refer to Listen, Learn & Talk, Cochlear 2003)
- Discriminate consonant and vowel difference in 1, 2 & 3 syllable words (ball, apple, dinosaur)
- Discriminate between increasingly similar words:
  - Consonant same, vowel different (boat, bat; bus; cat, coat; car; hat, hit, hot)
  - Consonant only different by manner (house, mouse; bat, mat, fat, sat)

9-18 months post-implant
Stage 4
Identification
- Identify:
  - 1 key word in context, with & without suprasegmentals
  - 2 key words in context, in one sentence
  - 3 key words in context, in one sentence
  - 4+ words in context, in one sentence

18+ months post-implant
Stage 5
Processing and Comprehension
- Advanced vocabulary development (expand categories, abstracts)
- Increase word play association through listening
- Answer simple questions where, what, who
- Understand increasingly complex sentences with 3+ elements
- Listen to short paragraphs and answer simple questions
- Answer complex questions (how, why, what next)
- Listen to longer paragraphs and answer complex questions
- Sequence with and without visual support like pictures and cards
- Increase cognitive language skills (more complexity)
- Follow conversation with familiar topic
- Follow open-ended conversation (topic unknown; unfamiliar speaker)

Factors Affecting Progress
- Age at diagnosis and implantation
- Cause of hearing impairment
- Duration and degree of hearing impairment
- Audiological management
- Health of the child
- Family participation
- Child's intelligence and learning style

* Adapted from Shepherd Centre Clinical Interim AV course, 2003
  and from Children's Hospital Oakland, Rate of Progress