

THE IMPORTANCE OF TWO EARS



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Language acquisition occurs within a critical period in the early years of life and requires hearing and practise to develop. Most infants begin producing speech-like sounds (babbling) at around 7 months of age, but congenitally deaf infants show deficits in early vocalisations and fail to develop language if not provided with an early alternative (hearing aids, cochlear implants and/or sign language).

If provided with an alternative by approximately 6 months of age and before 12 months of age then congenitally deaf infants begin to 'babble' and soon catch up to their normal hearing peers.

Children who have acquired speech but lose their hearing before puberty suffer a substantial decline in spoken language, which is thought to be due to the absence of an effective auditory feedback loop (the ability to hear, monitor and adjust their own speech).

The effects of congenital unilateral deafness cannot be underestimated as studies have shown they demonstrate delays in speech and language comprehension as well as the likelihood of academic difficulty compared to normal hearing peers. Unilateral hearing requires an increased effort to understand speech in noisy environments.

Children with unilateral deafness are more likely to demonstrate attention fatigue, behaviour problems and academic weakness compared to bilaterally hearing peers.

Neonatal hearing screening is very effective in identifying congenital hearing loss in newborns. Genetics is thought to be responsible for 50-60% of children with a hearing loss, with about 20% of those having a 'syndrome' (Down syndrome, Usher's syndrome). For around 30% of babies with hearing loss, damage is caused by infections during pregnancy or complication at birth. Fourteen per cent of those exposed to CMV develop a sensorineural hearing loss of some degree.

For young children and infants under 3 years of age, typical in-office hearing screening methods have poor reliability and may miss children with a unilateral loss, therefore referral to a paediatric audiologist is necessary. All children with an identified risk factor for hearing loss should be monitored closely.