Genetic testing for hearing loss in children and subsequent treatment for hearing loss (CI)

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Abstract

Genetic defects are one of the most important etiologies of severe to profound [sensorineural hearing loss](https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/perception-deafness) and play an important role in determining [cochlear implantation](https://www.sciencedirect.com/topics/medicine-and-dentistry/cochlear-implantation) outcomes. While the pathogenic mutation types of a number of deafness genes have been cloned, the pathogenesis mechanisms and their relationship to the outcomes of [cochlear implantation](https://www.sciencedirect.com/topics/nursing-and-health-professions/cochlear-implantation) remain a hot research area. The auditory performance is considered to be affected by the etiology of hearing loss and the number of surviving [spiral ganglion](https://www.sciencedirect.com/topics/medicine-and-dentistry/spiral-ganglion) cells, as well as others. Current research advances in cochlear implantation for hereditary deafness, especially the relationship among clinic-types, genotypes and outcomes of cochlear implantation, will be discussed in this review.

Keywords

Connexin Cx26/Cx30, Non syndromic hearing loss , Mitochondria genes, gene therapy, Auditory neuropathy