

Audiology Services available at Nelson Hospital

Referrals are accepted for children and adults of all ages for hearing diagnosis and rehabilitation.

Hearing Assessment:

Children (0 – 5 years old)

- **Auditory Brainstem Response (ABR) (All ages)**

Electrophysiological measurement of activity in auditory nerve and brainstem pathways. Electrodes are placed on the head and insert earphones present sound. This assessment can be used to estimate hearing thresholds especially for at-risk infants.

Advantages: Ear-specific results. Multiple frequencies. Not dependent on patient co-operation. **Diagnostic.**

Limitations: Infant must be asleep or sedated. Does not assess cortical processing of sound.

- **Visual Reinforcement Audiometry (6 months to 2 ½ years old)**

A behavioural assessment in the sound-field. Child is seated on their parent's lap beside a loud speaker. Child is conditioned to associate frequency specific stimuli with a reinforcer e.g. a lighted puppet.

Advantages: Assesses auditory perception of child. **Diagnostic.**

Limitations: Sound-field testing only gives better-ear result. Insert earphones test ears separately.

- **Play Audiometry (2 ½ to 5 years old)**

A behavioural assessment. Child is conditioned to a play activity (e.g. putting a shape on the board) when they hear a sound. Usually under headphones to obtain individual ear and frequency specific information.

Advantages: Ear specific results. Assesses auditory perception of child. **Diagnostic.**

Limitations: Attention span of child and willingness may limit information gathered.

- **Distortion Product Otoacoustic Emissions (All ages)**

An objective assessment of the inner ear, specifically, outer hair cell activity. Can be used for any age.

Advantages: Ear specific, not dependent on sleep or wakefulness, quick. **Screening Test.**

Limitations: Child must be relatively inactive. Sensitive to middle ear effusions, cerumen and vernix. Does not assess cortical processing of sound.

- **Acoustic Immittance Testing (All ages)**

Tympanometry and acoustic reflex assessments measure middle ear functions.

Advantages: Tests for possible middle ear pathology and Eustachian tube function.

Limitations: Not a test of hearing. Requires high frequency probe tone for infants < 6 months.

Adults (Children 5 years+)

- **Conventional Audiometry**

Behavioural testing measuring auditory thresholds with air and bone conduction, speech audiometry and acoustic immittance testing.

Advantages: Ear specific results. Assesses auditory perception. **Diagnostic.**

Limitations: Depends on the level of understanding and co-operation of child/adult.

Hearing Rehabilitation:

Children (0 – 18 years old)

We provide a hearing aid fitting and review service for children. Hearing aids are funded by the Government via the Children's Hearing Aid Fund; there are no costs to the families. No waiting time.

Adults

We accept referrals for adult hearing aid assessment. The service is free but patients have to purchase their own hearing aids.

Funding options include, Government Hearing Aid Subsidy, Enable Funding, War Pensions, and ACC. There is a waiting time.

Nelson Hospital Audiology Services

Hours: 9am to 4pm, Phone: 546 1780, Fax: 546 1857, Location: Level 2, Main Entrance, Percy Brunette Building